



Water, Stakeholders and Common Ground

***Challenges for Multi-Stakeholder Platforms
in Water Resource Management in South Africa***

Eliab Simpungwe

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Abbreviations and Acronyms

ANC	African National Congress
CBNRM	Community-Based Natural Resource Management
CMA	Catchment Management Agency
CMF	Catchment Management Forum
DOA	Department of Agriculture
DEAT	Department for Environmental Affairs and Tourism
DPLG	Department for Provincial and Local Government
DWAF	Department of Water Affairs and Forestry
ECP	Eastern Cape Province
ESKOM	Electricity Company of South Africa
HDI	Historically Disadvantaged Individuals
ICM	Integrated Catchment Management
RBDPM	River Basin Development Planning and Management
IWMI	International Water Management Institute
IWRM	Integrated Water Resource Management
LHWP	Lesotho Highland Water Project
MDMC	Municipal Disaster Management Centres
MSP	Multi-Stakeholder Platform
NDMC	National Disaster Management Centre
NGO	Non-Governmental Organisations
NP	National Party
NRM	Natural Resource Management
NWA	National Water Act No. 36 of 1998
PDI	Previously Disadvantaged Individuals
PDMC	Provincial Disaster Management Centres
PNRM	Participatory Natural Resource Management
RSA	Republic South Africa
SANCO	South Africa National Community Organisation
SMME	Small, Medium and Micro Enterprise
SRBD	Sustainable River Basin Development
UDM	United Democratic Movement
UNITRA	University of Transkei
WMA	Water Management Area
WUA	Water User Associations
WWP	Working for Water Programme

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I think Multi-Stakeholder Platforms (MSPs) are an exciting development and a powerful concept that has happened in natural resource management in the recent years. The potential for a diverse group of stakeholders in a river basin to work together in consensual decision-making, when there is such a disparity in their interests and backgrounds, as can be observed in South Africa, is something to be inquisitive about. I am truly grateful to the chair of the Irrigation and Water Engineering Group for granting me the opportunity to study this phenomenon. The advertisement for a PhD study on emergence and functioning of Multi-Stakeholder Platforms in Water Resource Management in flood-prone catchments of Southern Africa reached me through Professor Pearson Mnkeni of University of Fort Hare in South Africa. I owe it to him for the integrated knowledge on water that I have acquired. The five years (and more) that I spent sitting in classrooms and with supervisors (to learn about water and to grasp socio-technical concepts), observing people at work, in meetings and everyday activities, and attending conferences, provided me with new insights and skills, which were also useful in arriving at analytical knowledge presented in this thesis. I see this thesis as a product of my willingness and enthusiasm to learn and understand the interactions that happen among people and how this translates into the use and management of natural resources (water in particular).

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CHAPTER ONE

RESEARCHING MSPs. AN INTRODUCTION

1.1 Introduction and problem context

The concept of Multi-Stakeholder Platform (MSP) has become popular as an institutional framework for resolving complex resource management problems. However, MSPs are a new phenomenon and the term is often applied to many different institutional forms involved in exploring and resolving such problems. In South African water resource management, the emergent Catchment Management Forums¹ (CMFs) are one of these new institutional forms being referred to as MSPs. This research takes a critical examination of the central issues relating to the emergence and operations of the CMFs in transforming water and land management. The terms MSP and CMF are used interchangeably in this thesis since they refer to the same phenomenon.

Fundamentally, the emergence of MSPs for water management in South Africa was ushered in by institutional and water reforms resulting from the transition made from the minority-led apartheid government to a majority-elected democratic government in 1994. The newly majority-elected democratic government embraced the emerging consensus that MSPs presented a relevant institutional framework through which holistic management of natural resources such as water could be promoted. Accordingly, South Africa's water law suggests the formation of participatory water institutions to be responsible for achieving three fundamental water resource management goals. These include:

- *Achieving equitable access to water;* that is, equity of access to water services, to the use of water resources, and to the benefits from the use of water resources.
- *Achieving sustainable use of water;* by making progressive adjustments to water use with the objectives of striking a balance between water availability and legitimate water requirements, and by implementing measures to protect water resources.
- *Achieving efficient and effective water use* for optimum social and economic benefit.

To achieve these goals, South Africa has paid special attention to transformation approaches that also help reach agreed governance principles for these goals. Three core governance principles stream through the National Water Policy (DWA 1997), the National Water Act (RSA 1998) and the National Water Resource Management Strategy (DWA 2004), which constitute fundamental strategies for achieving the above management goals. These core governance principles include regarding water as an indivisible national asset. National government will act as the custodian of the nation's water resources and its powers in this regard will be exercised as a public trust;

¹ Note the use of the word 'Forums' rather than Fora. In English, the word 'Fora' is popularly used for the plural term of Forum. In its plural term, the word 'Fora' connotes public places where topics of public concern are discussed and opinions expressed. The term "Forums" in this instance is preferred as a more contemporarily colloquial word that refers to 'organised groups.'

- (i) that water required to meet basic human needs and to maintain environmental sustainability will be guaranteed as a right, whilst water use for all other purposes will be subject to a system of administrative authorisations;
- (ii) the responsibility and authority for water resource management will be progressively decentralised by the establishment of suitable regional and local institutions. These will have appropriate community, racial and gender representation to enable all interested persons to participate.

The third governance principle, suggests the development of organisational capacity to achieve water resource management goals by introducing some form of institutional framework decentralised to suitable regional and local levels. Decentralisation of water management is understood as the devolution of management duties to relevant stakeholders in each predetermined hydrological boundary. Participation in water resource management by all local resource users might indeed offer tremendous scope for achieving a sustainable resource use. Moench *et al.* (1999) contend that effective water management is inherently a question of governance involving establishment and execution of roles and responsibilities by participants – who does what, how, where and to what end. Water related issues ripple throughout society and affect basic livelihoods and deeply embedded social values. As a result, they must be addressed at a societal level through the complex array of political, economic, institutional and social processes by which society governs itself. Mitchell (1990) asserts that water resource management is largely a human factor. He observes that people who are inclined to co-operate and are enthusiastic can often make a poor system work well. Conversely, a technically well-designed system may falter if the participants are determined not to work with each other. Indeed several discourses abound that assert that institutions with their actors are central to successful sustainable resource management (see Röling and Wagemakers 1998; Daniels and Walker 1997).

In this study MSPs are seen as public initiatives that bring together a diversity of actors in the water sector, to a common negotiating table, to undertake consensual decision making regarding the use and preservation of water in their designated area. How and if such MSPs can evolve in South Africa and link with wider norms and institutions and broker the local achievement of water resource management goals will remain an issue to which conclusions of this thesis can contribute. Thus the objective of this research was to contribute to the debate on whether and how MSPs can constitute approaches that build new institutions and governance structures to facilitate water governance and achieve management goals. Specifically, the research studied two Catchment Management Forums (CMFs) in the Eastern Cape Province (ECP) of South Africa - in the Mthatha and the Kat catchments, to see if these local participatory approaches will fundamentally change ways in which water resources are managed at river basin level. The purpose of studying two distinct CMFs was to learn about the practice of MSPs from different perspectives, including similarities and dissimilarities.

The diagnosis of these MSPs unfortunately does not generate prescriptions to the many dilemmas faced by these MSPs. However this research attempts to provide more clarity and probable explanations to the causes and nature of these dilemmas, which in itself is

the beginning of improving the practice of multi-stakeholder participation in water resource management. MSPs are a social phenomenon that presents complex and dynamic problems that may not have specific or definite explanations or solutions. However a clear understanding of the variables that influence multi-stakeholder participation in water resource management can provide an opportunity to reshape policy and practice in water resource management, particularly in developing countries for which this study is most relevant. This study has tried to provide a comprehensive contemporary description and analysis of the circumstances under which actors operate in a collective action to transform the management of a common pool resource² in a developing economy. Thus another intended purpose of this research is to contribute to the wealth of knowledge regarding the conditions under which multi-stakeholder participation in water resource management at catchment level can contribute to desired outcomes in resource development and management. This first chapter of the thesis attempts to familiarise the reader with the subject matter and the content of this thesis.

1.2 The rise and rise of MSPs

MSPs are being promoted across the globe as a solution for environmental management and sustainability issues. Rhoades (1998) contends that enthusiasm for participatory watershed management is so high that virtually all major development organisations are promoting the approach in hundreds of communities found throughout North and South America, Asia, Africa, Europe and Australia. Used as a form of participation by resource users in common pool natural resources management, MSPs are postulated to offer tremendous scope for achieving sustainable resource use. The idea is that multiple stakeholders, who have different interests and needs with respect to water, should organize and arrange water use and conservation issues amongst themselves. The popularity and mainstreaming of the MSP concept can be linked to the influence streaming mainly from the following three discourses:

(i) Stakeholder participatory discourse

MSP practice is largely influenced by a globally dominant liberal ideology, which recognises that the diversity of voices and values with respect to water use should include a wider circle than experts alone (Warner 2006). Management of water has for a long time been a technocratic affair controlled by the state, whereby water engineers and hydrologists have had an upper hand in determining the hydraulics, development and management of water resources. MSPs have emerged as the new exciting concept that is seen to challenge this status quo. This shift of policy from reliance on the state as an important force in water resource management towards an inclination to accord stakeholders a right to manage their resource is a widely spreading new agenda that was given impetus by Agenda 21 in the Rio discussions (Box 1.1). One important success of water resource management has come to be seen to lie in the setting up and facilitating processes that bring different groups into constructive engagement, dialogue and decision-making.

² This term is used repeatedly in this thesis in reference to water resources on the basis that the government owns them in trust for the community of all resource users.

Box 1.1 Agenda 21

Agenda 21 is a comprehensive blueprint for global action into 21st century designed to solve the twin problem of environmental destruction and the necessity for sustainable development. It was adopted by more than 178 governments at the United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro, Brazil from 3rd to 14th June 1992. Among key aspects of Agenda 21 are three chapters dealing with importance of increasing the roles of local actors such as women, youth, farmers, trade unions, NGOs, industry etc. working in partnership with governments. Agenda 21 specifies that participation of these groups in resource management is absolutely crucial. Many see Agenda 21 as the first United Nations document to address extensively the role of different stakeholders in the implementation of the global agreement on sustainable development.

Source: UN 2004.

(ii) Decentralisation and democratisation discourse

State governance strategies are shifting from central command and control to the reintegration of civil society. Politics of ‘good governance’ now recognise the importance of participation of beneficiaries in making management decisions. The changing role of the state from ‘provider’ and ‘defender’ to ‘promoter’ and ‘facilitator’ has brought about the need for strong tripartite³ institutions. Thus decentralisation and democratisation has entered governance discourse as the ultimate source of political legitimacy.

(iii) Stakeholder interdependencies in water resource use

MSPs have been particularly popular in Natural Resource Management (NRM) due to a growing recognition that natural resource management problems are the outcome of disjointed actions among resource users, and can only be solved by some form of cooperation. Natural resources are characterised by numerous users and uses. Water use for instance can be classified as either consumptive, or non-consumptive use. In consumptive use, a group of users withdraw water in such a way that it is no longer available to other users (e.g. municipal, agricultural, industrial and commercial). Thus competition for usage may occur across sectors (e.g. agriculture and industry), within sectors (e.g. allocation to one farm versus another farm) or regionally (e.g. upstream versus downstream users). In non-consumptive use, water use does not result in significant reduction in net stream flow, and depending on the type, may allow for multiple non-conflicting uses at the same time and location (e.g. reservoir storage with fish habitat and passive recreation such as swimming and fishing). However, even in non-consumptive uses, problematic situations may occur when usage interferes with or lowers the value of water precluding or impairing its use by others. For example, when water diversion for hydropower generation interferes with aquatic life in estuaries downstream or when the river is used to dispose of partially treated or untreated waste resulting in degradation of water quality at the expense of other uses.

³ Collaboration between state, private sector and civil society

As a result of this multifaceted characteristic of water, the management of water resources has been recognised to require collaboration among all users. It is argued that collaboration is achieved through the creation of collective actions and the building of capacity for collective learning and decision-making. This collaboration also creates social capital or the arrangement of human resources to improve flows of future benefits from the resource use (Ostrom 1992).

Since ambiguous terms often blur analytical and perspective clarity, it is important at this stage to proceed with further probing the concept of MSP to fully capture its origin, underlying principles and reasons behind its mainstreaming in water resource management. This will be achieved by exploring the discourses⁴ that shape the concept. After all “it is through discourse that people define their situation and assess possibilities for action” (Hilhorst 2000; p 37).

1.3 MSPs as ‘participatory’ initiatives

While the term ‘participation’ may not necessarily constitute part of the MSP acronym, it however constitutes the fundamental principle embedded in MSP concept. Since multi-actor collective initiatives invite diverse stakeholders to ‘participate’ in decision-making and in sharing management responsibilities, the term ‘participation’ constitutes a key concept in the MSP discourse.

Echoes from the era of participation

In many villages in Zambia⁵, when a young woman comes of age, the whole village celebrates with an initiation ceremony called “*icisungu*”. ‘Participation’, like a young woman from these villages, has also come of age and all countries, developed and underdeveloped are celebrating the “*icisungu*” of participation to an extent that Goddard and Cotter (1987) assert that participation is a development strategy that has been over-sold. In some form or other, participation is now a ‘must’ in most development planning and practice as well as in natural resource management. It is cited in all funding proposals to donor agencies and frequently features in government strategies and implementation plans, while all Non-Governmental Organisations (NGOs) claim to use participatory approaches. The adoption of participatory approaches as a resource management strategy can be seen as part of a broader consensus with extraordinary diverse buy-in.

Participation is a practice that has found acceptance both in the south and northern economies. In South Africa, participation has been enshrined in the national constitution (RSA 1996), requiring that people be allowed to participate in making decisions that

⁴ A discourse is considered herein to be an institutionalised way of thinking that also is responsible for the creation of a specific social perspective and thus affects the views on how things ought to be done. A set of statements and communicative language that constitute a discourse are most often organised by specific ideology(ies) which in turn provide cognitive foundation for the attitudes and actions of various groups in society as well as furtherance of their goals (Mills 2004, Blommaert 2005). In this context, the ‘MSP discourse’ can be viewed to be a set of communicative objects (such as text and language) that have influenced ‘beliefs’ about and responses to the management of natural resources.

⁵ Also true in many other countries throughout Africa.

will affect their lives. The European Water Framework Directive, under its Article 14 now asks for public participation in the establishment and updating of river basin management plans. For GTZ, the implementing agency for German Technical Co-operation, primary stakeholder participation has been one of five quality criteria as early as 1986 (Forster 1998).

What are the origins of participation and its meaning in resource management? The concept of participation has a long history. Frerks (1991; p14-23) traces the concept from as far back as the early 1940's. In his exploration of the practice of participation, Frerks shows that several early attempts of planned social change included forms of popular participation, such as community action in the United States since the civil war and community development in the Third World after World War II. He shows that during the 1970s and 1980s, participation of intended beneficiaries was a central issue in all development planning and implementation.

Mainstream development practitioners have gone in the annals as the first to institute and use the term participation in its current most popular context of community driven initiatives (Cohen and Uphoff, 1977). Participatory practices gave rise to the establishment of new local institutions through which people would participate collectively to improve their circumstances. In those early days, participatory approaches also won their support for their contribution to efficiency and effectiveness in enabling marginalised groups to strengthen their voice for their self-development. Experience gathered over the years by development practitioners shows that participation is an important factor contributing to success and sustainability of programmes but mainly under the following conditions (Frerks 1991, p 19),

- Participation is not a panacea
- Participation cannot be externally imposed
- Participation is a process which cannot be rushed
- People will not sacrifice to participate without rewards
- People will not be able to accept and sustain new activities unless they are given both initial and follow-up support.

These conditions can be summed into one sentence to define participation as a process that the participants identify with, which becomes their voice with a mandate to act on the outcomes of their decisions that result in beneficial outcomes. Others have described participation more in terms of analytical typologies (see Arnstein 1969, Pretty 1993 and Creighton 1998 for details on typologies of participation).

Historically, the state and its experts⁶ had kept their projects away from this form of participation by civil society, preferring control and predictability to the complexity of a crowded decision-making desk. In the field of water resources and flood disaster management, the huge investment costs of great projects (dams and flood control infrastructure) generated the desire to control the processes by the state and its experts. Thus participation efforts had for a long time been resolutely non-political. However,

⁶ The host of bureaucrats, consulting engineers and scientists.

following failures and defective development practice (around the world), participation of beneficiaries in the processes of management and shaping rural transformation begun to gain momentum. Community-based participatory development organisations started to emerge in the local institutional landscape. Gradually, as awareness grew among civil society, that good governance constituted input from stakeholders, participation filtered into the politics of governance. Images of participation as a mechanism for social inclusion started to emerge and public participation had entered governance discourse as the ultimate source of political legitimacy. Wood (1997; p 79) asserts that participation is now a claim for '*good governance*', which is interpreted as wider involvement of citizenry in managing their own affairs.

As participation became normalized and bureaucratized through the exercise of mainstreaming, participatory approaches became tainted with discordances. Some practitioners, especially government bureaucrats currently pay little attention to the conditions for participation. Motivated by the need to meet the goals promised to the electorate, the state is most often lured into dictating the terms for participation. In South Africa for example, where participative and community based approaches to development are being advocated, there is also a growing need in government departments to spend, show results and avoid roll-overs. The pressure to produce results has led governments into labeling mere consultation processes with civil society as a form of participation. As a result, participation has recently been labeled as "The New Tyranny" (Cooke and Kothari 2002). In Cooke and Kothari's book, 12 different writers took a rigorous and critical insight into development participation discourse. Three sets of tyrannies could be identified from the writers: (i) the tyranny of decision-making and control, which includes the illegitimate and/or unjust exercise of power, (ii) the tyranny of the group, whereby the heterogeneity of actors is ignored consequently masking the processes of conflict and negotiation, inclusion and exclusion, and (iii) the tyranny of method which imposes particular participatory approaches as suitable in all situations.

In concluding this section on participation, it is important to observe that the inclusion of participatory approaches in development practice does not always build the social ideal. Participation as a practice has several challenges to deal with. The dissonances that can occur in participatory approaches are warning lights to remind us that participation, in which the MSP concept is rooted, should not be taken for granted, but is something about which to be a little more circumspect. Modern democracies are faced with an unusual social conflict which involves balancing the freedom of individuals or groups to determine their welfare on one hand against the need for the state to predict and control 'for the benefit of all' on the other. In using participatory approaches to broker this dilemma, modern democracies are confronted with several pitfalls, such as obstacles of power, social exclusion, coercion of participants into programmes not necessarily intended for their benefit and opportunism on the part of the poor to gain access to the much needed scarce resources. As a result, the participatory content of most resource management initiatives remain more symbolic than substantive. Ahmed (1994) has argued that several participatory initiatives have engaged the public, community based institutions or local people to have some input into their plans and projects for reasons of legitimisation or just to make political gains. When practice is

pitted against rhetoric, the articulated ‘participatory’ ideology by the state is little more than an elaborate and consciously formulated cover to advance the political self-interest of the state.

The meaning of participation in the context of the MSPs is one of the issues addressed by this thesis. While South Africa set out its policy to create participatory institutions, the underlying motive was to bridge the divides in society and empower those people who had been marginalised hitherto. It could be argued that in the years following, participation has become part of a neo-liberal agenda where participation means in the first place that people themselves have to bear the brunt of sharing the costs of development.

The era of participation echoes dissonances that the new consensus on participatory natural resources management needed to circumvent. Thus neoclassical discourses in natural resource management appear to have reinvented ‘participation’ by taking on fresh terms and hopefully new meaning and actions. The new terms have repackaged ‘participation’ into new ideological constructs with broad-based appeal. They have come to promise an entirely different way of doing business. One such term that constitutes an important ideological construct within the MSP concept, which can also reinvigorate public action in resource management is ‘*Stakeholder Participation*’.

Stakeholder participation

There are many subtle forms of usage of the term *stakeholder*, but I would like to suggest that the popular and general image that streams through most definitions within Natural Resource Management field is that of an individual or sector who has control over or access to a resource or service and/or holds some form of legitimate knowledge that can be brought to a negotiating table. Bruce (2001) for instance identifies ‘stakeholders’ as individuals or groups who possess some form of personal investment in natural resource management outcomes and thus stand to lose or gain from management processes of the resource. Ramirez (1999) asserts that the term ‘stakeholder’ transcends several fields of study, including business management, international relations, policy development, participatory research, ecology and NRM. However, the origin of the term ‘stakeholder’ is credited to students of business administration and corporate management, who defined it as any group or individual who can affect or is affected by the achievement of the firm’s objective (Freeman 1984; p 25, 46). Thus, while mainstream stakeholder theory refers more to the stakes in the firm, ‘stakeholder’ in the NRM field refers to stakes in the resource rather than the institution (firm). While a ‘stakeholder’ in the context of a firm exerts influence on the operations of the firm, stakeholders in NRM exert influence on the resource and retrogressively on the institution responsible for managing the resource. Thus in NRM discourses, often this ‘stake’ considered is a livelihood dependence on the resource in question. Hence Roling and Wagemakers (1998; p 7) identify stakeholders simply as natural resource users and managers.

Stakeholder participation underscores the importance of involving ‘all’ concerned individuals and groups in the management of a resource. In NRM, where community

participation and farmer-centered agricultural resource management has already a long history, multi-level and multi-actor partnerships are rather a new paradigm shift embedded in stakeholder participation. Participatory Natural Resource Management (PNRM) discourses assert that involving (all) stakeholders in natural resource management leads to more profitable and lasting solutions resulting from consensual decision-making regarding management of natural resources.

Historically, stakeholder participatory approaches in NRM were largely community based, considering mainly local actors as the sole stakeholders, hence the title Community-Based Natural Resource Management (CBNRM). This was because natural resources were considered to be a primary source of livelihood for local communities upon which they heavily relied. However, recently reworked terms such as PNRM have assumed new meanings, recognizing the complexity of natural resource management and therefore requiring multi-actor approaches that facilitate joint learning and action between local actors, government, NGOs, private firms and sometimes international actors such as donors.

In water resource management, stakeholder participation has largely been influenced by a broader debate on participatory development and driven by ascendance of new paradigms of public action and the role of the state in resource governance. These include liberalism – market deregulation and privatization, state decentralisation and democratisation of local institutions, co-management of natural resources, reduced political intervention in national economies and devolution of decision-making powers to stakeholders (Mollinga and Narain 2001). The late twentieth century was an era of a new realisation that civil society too had ideas, management skills, technical insights and uncontextualised local knowledge to contribute to the development process. More generally, it was recognised that each community has its own competencies and capacities that can be drawn on to sustain development projects. This ‘social capital’ potential can be tapped to supplement societal governance needs (Abrams and Warner 1997).

The increasing integration of civil society into the politics of state governance has positioned stakeholder participation in neo-liberal democratic thinking that it is a democratic right of citizens to be involved in influencing decisions that affect them. This debate argues that participation of stakeholders is a democratic ideal that provides freedom of the individual or group to grow and develop as functional systems. In this sense, the term participation is used in a more normative or ideological perspective, in which participation is viewed as a desirable, if not essential element of development strategies and approaches (Frerks 1991; p 191).

International donor agencies and financial institutions that have recognised and emphasised the limited ability of most governments to deliver goods and services to their citizenry popularly support this view. It is a contemporary debate rooted in the paradigm of governing failures and leadership incompetence. This debate asserts that the state, because of the inherent shortcomings of its traditional instruments, is not able (any more) to solve the economic and social problems it has identified. Since the state is

not able to steer social development in a preferred direction, in order to prevent unwanted developments, it is either necessary to look for alternative instruments or to lower the aspirations of central-state control (Mayntz 1993; p 10). In this instance, stakeholder participation is considered as an alternative and desirable instrument.

Stakeholder participation is now increasingly emerging as the hoped-for panacea for resolving complex and often subtle and ‘wicked’⁷ water and environmental problems. Since ‘wicked problems’ are understood to be socially defined (Roberts 2005), getting the ‘whole system’ on one table to enable people to learn from one another is found to be useful in reaching widely accepted resolutions. Proponents of stakeholder participation claim that it allows multiple users of common pool resources to move from a conflicting position towards cooperation, collaboration, partnership and that it is consensus building and promotes social learning (Woodhill 2004). The stakeholder participation discourse presents high hopes and noble goals. Hence stakeholder participation literature is littered with examples of ‘success stories’ resulting from participative processes (Uphoff *et al.* 1998). Some researchers even argue that stakeholder participation has a statistically significant relationship to successful watershed management (Duram and Brown 1999; p 455 – 467).

On the other hand, Vanderwal (1999) in his analysis of public participation in environmental management presents a gloomy side of the theory. In affirmation of my earlier insinuations regarding pitfalls in participatory practice, Vanderwal argues that a closer examination of stakeholder participation discourse reveals that this “involvement” is often on the terms of the bureaucracy, which wants to know what the public values, but does not want to lose control. Arnstein (1969), whom Vanderwal (1999) describes as one of the most widely cited references in public participation literature, shows through her typology of participation and case studies that the ideal and genuine stakeholder (or public) participation is highly elusive due to the potential for corruption and the downloading of responsibilities without requisite resources. She argues that many public participation efforts were simply either forms of non-participation or tokenism, with only a few resulting in any shared decision-making. Indeed, just as there are numerous success stories of stakeholder participation, so are

⁷ Wikipedia, the free encyclopaedia online, explains that the concept of ‘wicked problems’ was originally proposed by H.J. Rittel (a pioneering theorist of design and planning, and late professor at the University of California, Berkeley) and M. Webber in a seminal treatise for social planning to contrast difficult problems which have incomplete, contradictory, and changing requirements and solutions to them, against the relatively ‘tame’ problems such as mathematics and puzzle solving. Many writers have since described ‘wicked problems’ in varying ways. According to Conklin (2003) for instance, the four defining characteristics of wicked problems are (i) the problem is not understood until after formulation of a solution, (ii) Stakeholders have radically different world views and different frames for understanding the problem, (iii) Constraints and resources to solve the problem change over time and (iv) The problem is never solved. Waalewijn *et al.* (2005) describe wicked problems as clusters of interrelated problems, characterized by high levels of uncertainty and a diversity of competing values and decision stakes. Crucially, wicked problems cannot be solved by any single organization acting alone and are intractable, since what constitutes a solution for one group of individuals entails the generation of a new problem for another.

there also many illustrations of pitfalls in stakeholder participation (Long 1977; Robertson 1984; Chambers 1983; 1993; 1997; Cooke and Kothari 2002).

Most often, it is the state regulated or top-down approaches that are the culprits for failed stakeholder participative processes. This could be attributed to the fact that the state has targets to reach in its governing mission and reaching those targets is crucial to its staying in power which is determined by its electorate. Stakeholder participation in the management of water resources is indeed played in a complex and dynamic sphere, particularly when the approaches are implemented as state regulations. Pitfalls of such approaches may emanate from either or both sides of the coin: the state on one side and participating stakeholders on the other. The state politicians and government bureaucrats may lack innovation and skills to facilitate genuine⁸ participation. Their policies, implementation strategies and resource allocation may promote stereotyped participation that flouts many of the conditions under which participation makes a meaningful contribution to development. Participating stakeholders on their part may not perform sufficiently well in ensuring the effectiveness of the newly constituted participatory institutions. The complexity of the situation may further be confounded by the characteristics of the resource being managed. Water for instance is a natural resource with multiple claims, multiple uses and multiple users. In the collective management of water resources in a catchment, stakeholders face no risks of exclusion (from water and services) or punishment if they choose not to participate in the collective management of the resource. This situation is explored in Chapter Six as a contributory factor to poor stakeholder participation in CMFs.

Having traced the trajectory of MSP discourse from the core principles of participation to stakeholder participation, the next section proceeds with the investigation of the emergence of the term '*multi*' as an additional construct in this (fundamentally) participatory discourse.

1.4 '*Multi*'-Stakeholder Platform (MSP)

(Multi)Stakeholder Platforms and other variants, (Multi)Stakeholder Processes, (Multi)Stakeholder Partnerships, (Multi)Stakeholder Dialogues and (Multi)Stakeholder Participatory Process are all forms of stakeholder participation rooted in the principles of participation discussed in the preceding sections. Even though the term '*multi*' has not (yet) infiltrated the terrain of NRM to generate terms such as 'Multi-Stakeholder Natural Resource Management, it has however recently gained considerable importance in the mainstream natural resource management discourse. Put together, the terms '*multi*', '*stakeholder*' and '*participation*' have come to evoke a (new) world where everyone (especially including the poor) gets a chance to take part in decision-making. The words have found themselves in a new alliance of terms that work together to evoke meanings that rationalise policies that call for the building of stakeholder participatory institutional frameworks. In some way, they promise optimism and purpose and appear to represent considerable shift in the natural resource management

⁸ Genuine participation is here defined as the ability of local people to exercise influence on upward decision-making process as well as the ability to act on their concerns.

approaches. For instance, even though the term '*Multi-Stakeholder*' is linked to '*participation*', a term that has recently earned a reputation for dissonance, the newly configured 'buzzword' – 'Multi-Stakeholder Platform' (MSP) has come to evoke a different set of possibilities. It carries a new chain of equivalence that contrasts significantly in function and tactics from the previously known participatory approaches.

The term '*Multi-Stakeholder Platform*' (MSP) may not necessarily be formally in use in South African philosophy or indeed in the philosophy of many other water resource management initiatives. It is nonetheless generic in its usage. The notion of '*multi-stakeholder*' is derived from the existence of a variety of water users who, aware or unaware, have a '*stake*' in a common pool resource in their operational area or domicile, who may also use or promote different knowledge systems. The '*multi*' term refers specifically to the diversity of identities of stakeholders rather than 'multiple stakes' (Warner 2006). The '*multi*' prefix connotes there being both different levels to be represented (such as local community people and community organisations at micro-level, local government and private sector at meso-level and national government, national NGOs and international representation at macro-level) as well as representation from a diverse sectors of society (e.g. industry, agriculture, leisure, mining, both private and public). Warner (2006) contends that a rough measure of the '*multi*' inclusiveness of an MSP is whether state, civil-society and private sector actors at several levels are represented. Others even refer to it as a '*multi-angled*' partnership (Caplan *et al.* 2001). This is specifically the reason why this process presents a unique and challenging situation, since in a multi-angled partnership, partners can hold strong and divergent values and perceptions about what is at stake. In South Africa, the '*multi*' concept in participation presents new and complex challenges. As a country with a long history of ethnic, racial and economic segregation, a cooperative initiative between upstream, downstream, farmers, ordinary residents, local government, industry, black and white people, men and women, varying goals, wealth disparities, culture and norms is overly challenging. Chapter Three explores these challenges extensively by tracing South Africa's socio-economic history to show how it has played a role in breeding prejudices, creating gaps in information and knowledge and in inducing social divides.

The term '*platform*' in the MSP acronym refers to a forum for negotiation, a space where people interact and may share resource management responsibilities, knowledge and information. '*Platform*' connotes a level playing field signifying equity in access to a common pool resource and the role of negotiation in resource use. '*Platform*' is explained in the Oxford English dictionary as a flat surface raised at a higher level. In this sense, I see multi-stakeholder water institutions being created in South Africa as raised in terms inclusivity (open participation for all) and functionality (catchment rather than sub-region or local). Warner (2006) sees '*platform*' as connoting the conspicuous nature of MSPs, which act in the public space and are therefore open to public scrutiny.

Unlike its predecessors, Water User Associations (WUA) and Participatory Irrigation Management (PIM), which tend to be sector specific, e.g. involving the agricultural

sector only and which are often group membership based organisations, Multi-Stakeholder Platforms ideally deal with holistic management, representing multiple economic sectors, diverse public action groups and ideally public, private and civil-society interest. In so doing, they aim to manage multiple-use water conflict, promote more integrated forms of water management and facilitate social learning (Warner, 2006). They are popularly applied to common-pool resource management such as water resource management, coastal management, forestry and fisheries resources. The empirical focus of this research is on MSPs for Water Resource Management. These are Multi-Stakeholder Platforms that bring together a diversity of actors in the water sector, to a common negotiating table, to undertake consensual decision making regarding the use and preservation of water in their designated area. Röling (1994) perceives MSPs as adaptive processes in which actors faced with a changing environment, realise their common predicament and mutual interdependence in realising solutions and decide to take joint action. As they start talking, a process of learning by doing takes place in which power gaps and institutional hindrances are broken down. If they see the interdependencies of their stakes in the shared resource, and agree to sit together to negotiate about pressing issues, they might develop the sense of ownership required to manage these issues, and manage the resource in a more sustainable way. Warner (2006) views MSP as a *belief* inspired by Habermas theory of communicative rationality, which believes in the power of dialogue and consensus-building to break down institutional and power barriers, and the ability of stakeholders to take the lead in managing local negotiation and learn together. While MSPs can emerge as a result of active internal actor(s) (bottom-up), Warner (2006) notes that MSPs are almost invariably set up because of external enthusiasm on the part of external, third-party actors such as national governments (South Africa and Zimbabwe's Catchment Councils), donors (the EU in Mozambique, the Inter-American Development Bank in Bolivia) and NGOs (India and Peru). Nonetheless, MSPs, directed by principles of participation, draw on the self-organising capacity of actors. Warner contends that participation of actors can be particularly difficult when systemic legitimacy is low. He argues that there is an intimate link between water resource and the state since the water system is associated with the government. If a government is seen to be illegitimate, so will be the water system. Using South Africa's apartheid government as an example, he notes that a large section of the population refused to accept piped water because the government was perceived as illegitimate. They preferred exploiting their own marginal natural resources rather than integrating with a system that they rejected. For a government to support an MSP initiative means accepting interactions and preferences of civil society, which are to a great extent unpredictable.

Improved management, social learning and empowerment are anticipated outcomes of MSP initiatives. MSPs have promised increased visibility, consensus and democratic decision-making in relations among different interest groups. (Borrini-Feyerabend 1997; FAO 1999; Ramírez 2001). Trust, legitimacy, authenticity, diversity, openness, communication and collective commitment are some popular terms used in the MSP discourse to describe the advantages of the concept.

Notwithstanding, incorporating diversity makes for a far more complex system of governance. It includes the loss of control and predictability, and includes the difficulty of resolving issues contended by multiple heterogeneous voices and interests. Thus involving multiple identity groups may not serve the interests of everyone involved. Warner (2006) contends that the prospects of consensual decision making and action in an MSP is threatened by clashes of identity, economic disparities and power gaps. Then there is also the possibility of an MSP being driven by opportunity, which is exploited by the state or powerful individual(s) rather than by the group. As argued earlier, in state sponsored MSP initiatives, state bureaucrats are known to succumb to the temptation of cooptation and coercion (capture) of stakeholders since the mere formation of an MSP is a measure of success of their endeavours.

To conclude this exploration of the MSP discourse, it could be useful to reflect on whether the construction of the ('new') term (MSP) will lead to meaningful change in the condition of the resources and the users. Cornwall and Brock (2005) argue that as ways of world making, policies combine buzzwords into chains of equivalence; strings of words work together to evoke a particular set of meanings. As a word comes to be included in a chain of equivalence, they argue, those meanings that are consistent with other words in the chain come to take precedence over other more dissonant meanings. The more words that become part of the chain, the more that meaning resides in the connections between them. Could this be the case with the newly emerging terminological constructs in the field of natural resource management? The exploration of the MSP discourse has shown how the age-old concept of 'participation' along with its known dissonances has now been enshrined into newly constructed terms including PNRM, which in turn have come to evoke particular set of meaning that assume equivalencies with terms such as social learning, empowerment, consensus building, collaboration and democratic decision-making. It is important to investigate whether this reconfiguring and repackaging of '*participation*' can make a difference in practice. It was the mission of this research to undertake a comprehensive look at what was being achieved by MSPs in South Africa.

1.5 Selecting the object of study. Why CMFs?

In South Africa's water resource management arena, Catchment Management Agencies (CMAs), Water User Associations (WUAs) and Catchment Management Forums (CMFs) are all recognised institutional arrangements for water resource management, all of which might be considered as forms of MSPs. What then was the rationale behind the choice of CMFs as the object of my study, and more so, CMFs in the Eastern Cape Province, particularly when CMAs and WUAs are the only legislated water resource management institutions?

Following South Africa's successful review of its water policies and laws, a lot of research interest has been drawn towards the emergence and functioning of CMAs and WUAs (Wester *et al.* 2003; Waalewijn 2002; Faysse 2004; Waalewijn *et al.* 2005; Anderson 2005). This interest has been concentrated in areas where there has been more public action such as in the Olifants and Nkomati catchments in the Northeastern parts of the country. Relatively little attention has been paid to participatory initiatives in

marginalised areas such as the Eastern Cape Province, where the majority of the poor reside. This is the first study that comes out of Eastern Cape Province and that focuses on CMFs as a form of MSP. Albeit so masked, this research argues that CMFs have surprisingly the most important lessons to offer in the practice of stakeholder participatory water resource management at catchment level. My personal experience of having lived in the research area for at least eight years, together with my literature reviews revealed that there was a unique story to tell from these marginalized areas. It is apparent that these areas offer great potential for evaluating the difference that MSPs can make to local poor populations. I was moved with the conviction that lessons emerging from areas such as this will contribute to the practice of water resource management in more regions of the developing world than Eastern Cape Province alone. In my opinion, most catchments in the developing world exhibit the political and socio-economic conditions that obtain in South Africa's Eastern Cape Province.

There are more than 200 CMFs that have emerged in various catchments in South Africa. They have become the first level of participatory catchment management. Ironically however, the current South Africa's National Water Act No. 36 of 1998 (NWA) makes no mention of CMFs specifically, except that section 90 (1b) mentions the requirement to establish 'consultative forums'. Nonetheless, this research asserts that CMFs represent the only water institution in South Africa capable of achieving the NWA's appeal for maximum participation in the decision-making process by representatives of all water users. The intended level of participation in water resource management hinted by the law is very high. An ideal situation is asserted to be a level where all residents of a catchment are in a position to negotiate water allocations and resolve resource based conflicts in an equitable way, through democratic channels. The Act requires, in section 2, that all institutions must have "appropriate community, racial and gender representation" Currently, I see CMFs as the only medium through which this expectation could be achieved.

Research scope for Catchment Management Agencies as MSPs

Catchment Management Agencies (CMAs) are legislated stakeholder participative water institutions in South Africa that operate at a hydrological scale referred to as a Water Management Area (WMA)⁹. I see that several factors render CMAs questionable MSPs for water resource management. First and foremost, Water Management Areas (WMAs), at which spatial scale CMAs are supposed to function, are highly diverse in terms of their geology, ecology, and demography. Most of them encompass more than three major catchments. Such spatial heterogeneity implies that management issues in one area will not be comparable to issues in another area in the same WMA. Given such broad spatial scale, the complexity of issues within one WMA makes it extremely difficult to genuinely involve the full range of stakeholders, their interests and concerns. The vast disparities in population densities and demographic resource endowments within one area for example, would make it near impossible to reach consensus on how water should be managed in a given WMA to meet food, ecological and other needs. As a matter of fact, some researchers have raised doubts about the success of

⁹ A more detailed explanation can be found in Chapter Three.

catchment-wide participatory resource management initiatives, arguing that despite their logical appeal, they have a high probability of failure (Rhoades *et al. quoted in*: Frost 1999; p.2). What chance then, do CMAs, which span several catchments, have? Second, even if CMAs are statutory self-regulatory authorities, participation processes in their formation exhibited a strong top-down “directive” approach. For instance, the Minister of the Department of Water Affairs and Forestry (DWAF), the Department that oversees water resource management in South Africa, is given the authority to appoint the board of the CMA (NWA section 63 (2)). Since an appointed governing board ultimately runs CMAs, participation of a wider range of stakeholders happens only through consultations during the formation phases. This approach is in contrast to MSP concepts in which governance processes are expected to reside with stakeholders. Third, DWAF was to build the capacity of CMAs by transferring its staff and other resources to the CMA management to help with its establishment and running. Such an arrangement makes it unclear whether CMAs are state agencies or stakeholder-based, self-regulatory institutions rooted in stakeholder participation. This elementary examination of the CMAs shows that the substance in the practice of multi-stakeholder participation was in conflict with the underlying principles of MSP in water resource management. For this reason, CMAs did not appear to offer sufficient research scope for this MSP study.

Research scope for Water User Associations as MSPs

A WUA will normally operate at local level within a given catchment and be concerned with a single purpose such as regulating water use among a group of farmers. The NWA (p. 98) states that although WUAs are water management institutions, their primary purpose, unlike CMAs is *not essentially water management* (emphasis supplied). They operate at a restricted localised level, and are effectively cooperative associations of single-sector water users who wish to undertake water related activities for their mutual benefit. Thus in the South African context, WUAs may not meet the inclusivity¹⁰ principle that is desirable for an MSP. Since WUAs operate at a local level within a catchment, while CMFs jurisdiction covers an entire catchment or sub-catchment, WUAs can then be considered subordinate to CMFs and thus require representation as a water user sector on the CMF. Essentially, WUAs are to be subsumed by CMFs with regards to the management of water at catchment level. Like CMAs therefore, WUAs too did not appear to offer sufficient research scope for this MSP study.

Research scope for Catchment Management Forums as MSPs

CMFs on the other hand, were organised on the principles of stakeholder forums organised on the basis of the strength of the mutual interests of stakeholders. Following the promulgation of the current NWA in 1998, CMFs evolved out of a realisation that there was limited capacity at grassroot level (mainly among the black rural population), to make a meaningful contribution at the scale of Water Management Areas (WMAs) at which the regulatory CMAs were to operate. This realisation became more apparent

¹⁰ Inclusivity here refers to involving all affected water users. WUAs are not necessarily representative bodies, as they do not represent all water users in a given area. In South Africa, most WUAs have only just been reconstituted and are still struggling to achieve a full transformation that offers genuine participation of all water users in their designated area.

with the formation of the first CMA in South Africa¹¹. That process which took well over five years proved that extensive capacity-building, funding and empowerment processes were required in order to comply with the demands of the consultation processes for the formation of CMAs¹². Establishment of the Inkomati CMA proceeded without an initial involvement of a CMF in the area. The involvement of CMFs, rooted in grassroot structures as they are, could have provided the needed grassroot-wide participation of stakeholders in the consultation process for the formation of the Inkomati CMA. Reports (Wester *et al.* 2003; Waalewijn 2002; Faysse; 2004) from Inkomati indicate that participatory processes in the formation of the CMA were derisory, as marginalized groups or less formally constituted user groups were reported to have failed to make any considerable input to the process.

The major reason cited to have impeded a smooth establishment of an MSP at WMA level was seen to be the gaps that existed between stakeholders, whereby the process was driven by a minority of socio-economically well-resourced white commercial farmers and industries when the majority water users were black rural people with poor education and a massive skills deficit, whose water use was limited mainly to domestic purposes and small-scale irrigation. Nonetheless, this group could not be ignored, sidelined or indeed silenced on the pretext that they held an insignificant consumptive stake. When South Africa attained a new political dispensation in 1994, this group began to lay vociferous claims to their previously denied water entitlements. Thus their participation in the negotiations on catchment water use became crucial.

The difficulties associated with formation of a CMA in the Inkomati area of South Africa testify to the fact that a multi-stakeholder participatory approach should recognise the crucial role of the poor local communities. CMFs remain the best prospect for achieving this ambition. CMFs apply themselves to catchment-wide (and sub-catchment) issues and provide opportunity for a long-standing collective identity. Catchments, at which spatial scale CMFs operate, afford a closer association of people with their environment than WMAs would. At CMF level, stakeholders make a better-informed agreement to the management strategy since they have a fair understanding of biophysical characteristics of their area. This is critical where water sharing and transfer are to be negotiated. Since CMFs are located largely in civil society and operate at catchment level, they offer a better opportunity (than CMAs) for the grassroots to make a meaningful contribution to water management. They provide non-discriminatory entry points for civil society to participate in water resources management. While only one CMA may operate in a given WMA, there can be several CMFs operating at different hydro-physiographic level such as catchment and sub-catchments. They take up responsibility and accountability at local level. They provide a mechanism through which a broader range of stakeholders can be included. In other terms, CMFs constitute the decentralisation of functions to a catchment level with a significant role for civil

¹¹ This was in Water Management Area 5 (The Inkomati CMA).

¹² Consultative processes demanded that as much as possible, all stakeholders, especially the rural poor black population, were fully involved in the processes of forming a Catchment Management Agency (CMA).

society in water resource management. They provide an effective platform particularly for grassroot stakeholders to voice their needs and requirements for socio-ecological protection and socio-economic development. CMFs can and have worked as building blocks towards development and constitution of larger catchment authorities such as CMAs, whose legal, executive and fund-raising status would retrospectively depend on local needs. As a matter of fact, DWAF admits in its National Water Strategy (DWAF 2004) that in its own experience, bodies such as CMFs have proved to be of great value in initiatives leading to the creation of CMAs and in addressing local water management issues. Without CMFs, a large operational gap could exist between water users in the catchment and a CMA since CMAs are not necessarily rooted in the grassroots. The emergence of CMF therefore facilitated the closing of this institutional gap between lower grassroot levels and CMAs operating at Water Management Area scale.

It clear from this examination of existing stakeholder participatory water resource management institutions in South Africa that WUAs and CMAs offered very limited research scope in studying the dynamics of multi-actor processes, which also include poor local communities. Strong justification pointed to CMFs as the most legitimate MSP approaches in South Africa's water resource management. CMFs have provided a focus for public consultation and for integrating the water-related activities of government, nongovernmental and community-based organisations, which constitutes an essential qualification for a Multi-Stakeholder Platform.

On the other hand, one wonders whether the fact that CMFs are not statutory initiatives, would render them to be temporal and haphazard institutions that do not merit scientific study. On the contrary, one of the NWA's main objectives is to progressively decentralise the responsibility and authority for water resource management to appropriate regional and local institutions in order, among other things, to enable water users and other stakeholders to participate more effectively in the management of water resources. Some of these institutions have to be created, whilst some of the existing institutions had to be transformed to reflect new or changed responsibilities in terms of the new approach embodied in the Act. This is where the CMFs fit as institutional spaces where emergent representational possibilities and participatory action can shape new institutional forms and programmes. I see the role of CMFs maintained for as long as the stakes of poor local community stakeholders exist and are protected. DWAF, through its National Water Resources Management Strategy (DWAF 2004; p. 4) recognises the importance of CMFs and promises its continued support:

"The Department will continue to support existing forums and encourage the creation of new ones where the need arises."

1.6 Positioning CMFs

Is catchment management, from which CMFs derive their title, the anticipated responsibility of these MSPs? What form of resource management can these MSPs be identified with? Since MSPs can be often confronted with wide-ranging problem domains within the domain of natural resources management, this section attempts to position the study of CMFs by clarifying the central concern of these MSPs. This

exercise will go a long way in avoiding ambiguous assessment of their achievements at later stages of the discussions.

Olson (1965, p 1) contends that one way of identifying an institution is with its purpose. However, due to the many approaches to water resource management that have evolved over the past 300 years, it is not easy to ascribe a specific purpose to a natural resource management institution. Over the past 300 years, several approaches to water resource management, in which stakeholder organisations have played a central role, have been advocated and tried. Most popular ones have included River Basin Development, Planning and Management (RBDPM), Integrated Catchment Management (ICM), Integrated Water Resource Management (IWRM) and other variants such as Sustainable River Basin Development (SRBD). All these facets encompass water resource management. The task at hand is to establish what the central concern of the study CMFs is, in relation to the above approaches, and to establish how and why MSPs have come to occupy a central position in undertaking planning and management tasks in these approaches. This section will review the debate from South Africa in how it tries to rethink how management tasks can be applied to achieve the desired goals in water resource management. The section will look at concepts and debates that have emerged from ideas about river basin management and how these link with more recent approaches being debated of River Basin Development, Planning and Management (RBDPM), of Integrated Water Resources Management (IWRM) and of Integrated Catchment Management (ICM) and how these have shaped water resources management in South Africa.

The RBDPM, ICM and IWRM concepts recognise river basins (or catchments) as the most appropriate spatial units for natural resource development and management. The reasoning behind this recognition is beyond the scope of this research. Suffice to mention that the suggestion that a river basin is the most appropriate planning and administrative unit is over three centuries old (Chorley 1969). Barrow (1998) contends that most of the land surface, with the exception of most arid and cold areas, is divisible into river basins whose boundaries are normally distinct, easily mapped and stable and therefore have sufficient commonality of hydrological, geomorphological and ecological characteristics for them to serve as widely applicable operational landscape units for planning and management. Teclaff (1996) asserts that river basins found expression as functional units for human institutions long before they were fully understood. On the other hand, Wester and Warner (2002) contend that the choice to manage water on the basis of river basins is only a political choice and Jinapala *et al.* (1996) have argued that catchments as closed human units are external bureaucratic or researcher fantasies, not indigenous ones. Whatever the case maybe, it is a matter of fact that there is growing pressure on water resources and that there exists hydrological, social and ecological interdependencies between upstream and downstream water users that have led to a widespread recognition of the need for integrated approaches to natural resource management within a recognisable geophysical boundary. The term 'integrated' that emerges in all these approaches refers to the act of 'bringing together' into 'one whole' all perspectives relating to the development and management of environmental resources within the context of a catchment. Generally, the term

‘integrated’ renders the distinction between the ‘different’ approaches (RBDPM, ICM and IWRM) blurred. The term tends to expand resource planning in all approaches to encompass planning and management of all aspects of natural resources including socio-economic and institutional management. Nonetheless, it is the shifts in emphasis and application that have come to distinguish these approaches one from the other.

RBDPM

RBDPM is advocated as a basin-wide development strategy for optimum beneficial uses of a river system and its watershed (White 1957). White contends that the concept has come, during the past sixty years, to be employed widely as a technical tool for achieving social change. It encompasses three component ideas, which have come to be associated with each other in present-day theory and practice. These are the ideas of (i) multi-purpose storage (a concept in which a number of water development goals, such as irrigation, hydroelectricity generation, navigation, flood control, municipal water supply etc, are simultaneously pursued by the use of a single dam) (ii) comprehensive development approach (a planned, complex, continuous and interdisciplinary process which is controlled on a systems analysis basis intended to improve living conditions for river basin residents through social and economic development) and (iii) basin-wide programme (a concept which seeks to coordinate development and management plans for a river system from its headwaters to its mouth as a single unit).

RBDPM is advocated as a vehicle with which to address a wide range of development issues. Even though each of the three ideas above may be differentiated by the extent to which they encompass priorities and development and management actions, the underlying strategy in this approach is taking a broader view of water resource planning to encompass all aspects of natural resources as related to socioeconomic growth and cultural conditions of society. However, where there is still a gap in rethinking how to plan, develop and manage the local scale infrastructure for people’s livelihoods and social needs – for drinking water and sanitation, for local irrigation, for roads and for reduction of vulnerability to hazards of floods and pollution. While RBDPM models are being promoted, these also have still lingering association with interest of large-scale infrastructure development agencies and models. There is still a struggle to meet these broader development needs. The struggle on how to formulate agency capable for this still remains, not only in breadth of action but in the civil and private bodies that might be involved. It is here that MSPs such as the study CMFs are hoped to begin a new integrative water management option if they can be institutionalised.

ICM

ICM is a concept that recognises that a catchment is a living ecosystem in which a large, interconnected web of land, water, vegetation, structural habitats, biota and the many physical, chemical and biological processes exist in mutual inter-dependence. The joint management of all these facets of an environment has come to be known as Integrated Catchment Management (ICM). It is one in which a catchment or sub-catchment (a physiographically defined drainage area) serves as the territorial unit for achieving integrated management of all environmental resources (Ewert *et al.* 2005; Lal 1999; Heathcote 1998 and Abernethy 2001). The core of the ICM concept is the recognition of

the need to integrate all environmental, economic and social issues into one overall management process. To achieve this management process, a multi-stakeholder participatory management approach is recommended for designing and implementing a strategy that allows equitable access to and sustainable use of natural resources (Lal 1999). For instance, the Murray-Darlington Basin Committee in Australia recognises, in its policy statement¹³, that ICM is a process through which people can develop a vision, agree on shared values and behaviours, make informed decisions and act together to manage the natural resources of their catchment.

IWRM

IWRM is based on the perception of *water* as an integral part of the ecosystem, a natural resource and a social and economic good (UNDP 1990; p 3). In South African philosophy, IWRM is defined as 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 (WISA 2000). Murty (1995) observes that IWRM focuses on the maximum development of *water resources*, entailing conjunctive use of water, flood management (or storm water control), water and sanitation facilities along with socio-economic considerations and policy formulation. Similarly, Mitchell (1990) explains three ways in which IWRM may be contemplated: (i) it implies the systematic consideration of the *various dimensions of water*; surface and groundwater, quantity and quality. IWRM concept encompasses types of water (such as surface water and groundwater, brackish and fresh water), combining both quantitative (e.g. floods, droughts, consumption) and qualitative aspects (e.g. pollution, water temperature changes, ecological functions). (ii) is a component which interacts with other systems such as land and the environment and (iii) IWRM interrelates between social and economic development of water, offering a platform for managing actual and potential conflicts among various interests and users (e.g. households, industries, agriculture, nature, fisheries, energy and navigation. This is where MSPs plug in by creating an institutional space for collaboration of stakeholders to ensure that the spatial and sectoral views from each sector are shared at the catchment scale.

As can be noticed from the descriptions of the three concepts, the approaches to river basin management have been broadening over the years to include emphasis on the values of biodiversity, a shift from state dominated and single-sector institutional responsibilities and decision-making, towards more integrated, multi-sector decision-making processes and a focus on stakeholder participation in the management of water resources. The concept of stakeholder participation has brought with it innovations in institutional arrangements that bring together diverse stakeholders to a joint water management initiatives identified herein as ‘collective actions’ (Chapter Two).

¹³ This policy statement can also be found on their website:
www.mdbc.gov.au/naturalresources/icm/icm_framework.htm

Recently, ICM and IWRM, which have come to incorporate these values, have enjoyed greater popularity and found expression in many country programmes including South Africa. South Africa's white paper (DWAF 1997) argues that water resources cannot be managed in isolation from other natural resources. The complexity of all these interactions calls for a complex and integrated approach to water management. However, Görgens *et al.* (1997), in their suggested guidelines for implementing ICM in South Africa, noted that the goal of ICM is difficult to achieve and that the more realistic goal of Integrated Water Resources Management (IWRM) should provide the focus for current developments in natural resources management. Their point of view elucidates the argument that while ICM is conceptually attractive, its implementation in operational terms leaves much to be desired. The creation of multi-actor platforms that could deal with joint management of water, land, biota and aquatic ecology could be far more challenging than anticipated. The potential for such stakeholder institutions to achieve holistic resource management could be too hard or could at least take much time and effort to explore and operationalise. White (1998) also asserts that experience shows that it is extremely difficult for any organisation engaged in water management, to examine and deal effectively with the whole range of choice theoretically open to it in pursuing the public interest. He argues that the effective management of river basins encompasses many different sectors such as agriculture, energy and transportation, and it is difficult to undertake a truly comprehensive analysis. He contends that the constraints of professional training and competence, the limits of organisational authority and the ignorance of the outcomes of many actions, past and future, impede the balanced formulation of all potential solutions dealing with such aims as efficient use of water for food production, or for transportation or for ecosystem health.

As a result, the management of water resources specifically, has remained the focal point of catchment management in South Africa. This is proven by the fact that all catchment management action, which includes institutional building, is translated from the National Water Act, implying that all forms of participation in catchment management is essentially water resource management. Hence the core responsibility of Catchment Management institutions is the management of water resources (DWAF, 1998a). Management practices are extended to other resources, such as land and forestry, but only to the extent of constraining the impacts created by these resources on the quality of water resources. This implies that the MSPs studied in this research were not aimed at becoming comprehensive frameworks that would deal with the entire range of environmental issues in a catchment but rather were fundamentally water resource management institutions, even though they may pursue other aims such as environmental sustainability and livelihood development.

IWRM and flood hazard management

The concept of IWRM essentially tries to provide solutions to complex challenges facing water management and sustainable livelihood systems. One specific water status that introduces insecurity to livelihoods is a flood disaster scenario. Recent socio-economic developments that have occurred in several developing countries have resulted in the settlement of poor people in potentially dangerous flood zones. This is also evident in both the Mthatha and Kat catchments.

Recent developments in sustainable utilisation of water to accelerate social and economic progress have come to include the safety of riparian human life and property. In averting flood disasters and securing local peoples' livelihoods, flood hazard management can be considered as a crucial component of water management in a river basin. Flood hazard management is a form of water management since a flood is essentially storm water or an unusually high-water scenario. Logically, a catchment and its river(s) and floodplain(s) are closely linked. River channels lie within catchments and transport water and sediment loads. Lying adjacent or away from the river channels are floodplains that act as temporary stores of higher flows. Occasionally "overspills" (a term from Bishop and Prosser, 2001. p 107) occur in which water overflows its natural or artificial banks onto normally dry land, causing a flood event that may or may not become hazardous to the residents of the floodplain. This link places flood disasters in the geo-hydrology of the catchment. Since a flood may cause environmental disruptions within a given catchment, flood mitigation planning will obviously involve integrated catchment management. Reduction of flood losses can therefore be considered using a river basin as the basic planning unit and generating knowledge of water uses, diversions, storage, and management practices in all parts of the basin, as well as the antecedent, present, and forecasted meteorological and hydrological conditions. Thus concerns of flood-risk management can be sufficiently tackled within the concept IWRM, since this concept integrates all perspectives relating to the development and management of water resources within the context of a catchment.

Bandyopadhyay (2004) comments on the pitfalls of separating the management of water resources from prevention, adaptation and mitigation approaches for sustainable flood management. He argues that it is the reductionist paradigm of traditional engineering that categorises situations of inundation as natural disasters and hence official steps get limited to providing relief. He contends that the new paradigms for integrated management of water systems offers top priority to the ecological understanding of hydrological extremes and preparedness of the people. Hence it was also in the interest of this research to investigate whether or not there was a role to be played by CMFs in flood hazard management in Mthatha and the Kat catchments, as a contributory strategy towards flood disaster management. One of the key strategies for flood disaster management is risk reduction. In this context, flood hazard management is seen as a strategic approach to risk reduction and ultimately to flood disaster management.

While water deficit situation is the norm in South Africa, responses in my interviews and documents on flood disasters pointed to a situation where a large majority of catchment residents were vulnerable to flood hazards and therefore were at risk to flood disasters. Since popular responses to flood hazards often include the participation of the victims, and particularly through relevant local institutions, it was in the interest of this research to examine whether and how CMFs' agenda could include flood hazard management. Water institutions worldwide are known to tackle storm water control measures within the broader aims of water management. Box 1.2, which shows the involvement of water agencies in flood hazard management in different countries, confirms that flood hazard management is also a concern of water management institutions.

Box 1.2 How flood risk reduction strategies are related to water management

Strategies undertaken by governments across the globe, to implement flood mitigation and risk management, testify to the appropriateness of integrating flood disaster management strategies into overall water resource management strategies. Water sectors take the lead in the implementation of flood mitigation strategies and the strategies themselves are focussed on water and land management in catchments. The following examples from reports presented at the Ministerial Conference during the 3rd World Water Forum in Japan in 2003 illustrate this argument:

- Zambia (Leading sector - Ministry of Energy and Water Development)
Flood mitigation strategy - Riverine/River banks conservation.
- China: (Leading sector - Ministry of Water Resources)
Flood mitigation strategy - Implement plans for utilizing rain and flood resources, intercept water in lowland areas as is demanded by the occasion, recharge groundwater, conduct dynamic research of water level below the flood-control standard of large reservoirs, appropriately adjust the means of reservoir scheduling and operation, and make efforts to utilize rain and flood resources.
- Indonesia: (Leading sector - Directorate General of Water Resources)
Flood mitigation strategy - support comprehensive flood management plan for the basins in Java by strengthening the capacity for Integrated River Basin Management (IBRM).
- Papua New Guinea. (Leading sector - Laloki Water Resources Management Project)
Flood mitigation strategy - Protect water quality of the Laloki River. Install flood-warning systems and control land-uses; and ensure sustainable use of the water resources from the catchment.
- Greece - Region of Crete (Leading sector - Dept. of Water Management and Dept. of Development Planning)
Flood mitigation strategy - Develop and implement a plan for integrated management of water resources by introducing the concept of risk management.

1.7 Positioning CMFs within sociotechnical research on local water management

In addition to reflection on water resource management concepts, I also reflected on interdisciplinary research approaches to water management. For this I drew on the sociotechnical approach of the Irrigation and Water Engineering Group, and the actor-oriented approach of the Rural Development Sociology Group at Wageningen University, and their joint work in the Zimwesi project in Zimbabwe - particularly the research related on institutional reform and organisational dynamics in resource and system management. This has influenced my recognition of the importance to recognise the social context of reforms, and the need to understand social construction, social conditions of use and social effects of new policies shaping resource management. It has also shaped my attention to the process of institutional change and agency action consequent to reforms (Mollinga and Bolding, 2004) and of how newly formed institutions struggle to merge and gain legitimacy and viability (Kloezen, 2002; Zawe forthcoming).

Studies of institutional models for irrigation management reveal that management capacity to control and utilise water require clear supporting and enabling policies that will safeguards stakeholders. (Khanal 2003, Bolding 2004, Chidenga 2003; Manzungu 1999). Thus paradigm changes have occurred also in irrigation management, shifting from the traditionally centrally controlled and expert dominated approaches to ‘new’ stakeholder holder participatory management approaches referred to as Participatory Irrigation Management (PIM) and also joint management models between the state and farmers. These models, like the MSPs, also proclaim devolution of decision-making power to groups of Water Users. However, as Khanal (2003) argues in his research study in Nepal, these models, many of which are propelled by state policies, have also not been spared from the pitfalls of implementing supply-driven, top-down developments using ‘designer participation’ models. Failure of participatory irrigation models has also been linked to failure to link projects with broader development objectives. These diverse lessons in water management institutions will serve as flags in understanding the operations and social dynamics faced by MSPs in water resource management. For instance, since it was observed that failure of participatory irrigation models could be linked to failure to link projects with broader development objectives, Chapter Six of this thesis also evaluates the relevance of MSPs to broader local development needs within areas in which they are implemented.

I took up Kloezen’s point (Kloezen 2002, p.232) to analyse processes and mechanisms by which institutions work, rather than by focusing on only the manifestations of institutions (such as rules in use etc). It is by observing practices, strategies and interactions between all actors involved in constructing, implementing and applying new institutional arrangements, that it can be explained why and how these arrangements are adopted and reformed (or not). Kloezen noted that this was why new institutions, once implemented and really running, manifested themselves as being contingent rather than static structures. Processes are more important than arrangements by recommended design in shaping viability and accountability. Manzungu (1999) also noted how the smallholder irrigation systems he studied in Zimbabwe practised contingent management, as needed rather than following given institutional designs. These approaches were studied in the two organisations (CMFs) studied here.

Looking further to the Southern African researchers from this group, I noted Manzungu’s (2004. p. 29) argument about the weaknesses in main theories driving institutional reforms (in Zimbabwe), such that new policies and organisations were invoked without real understanding of the temporal and social challenges in structuring new social action. Chidenga and Vincent (2004) and Vincent and Manzungu (2004) also show how both existing and new water organisations have often not been realistically understood in their capabilities to take up new responsibilities. Such findings shape discussion in Chapter Two and Six. I also followed Manzungu’s approach to the methodological challenges in analysis of institutions (Manzungu, 2004 p. 30) in which he argues that ‘if institutions exist because they facilitate the resolution of given and perceived problems, then problem identification and articulation by the institutions was a legitimate entry point to understanding how they work’. I also noted the work of Moyo (2004), that showed the struggle to build adequate participation where there is:

unequal bargaining power between different types of farmers; literacy and communication problems limit wider knowledge of reforms; equitable representation is weak in existing water organisations; and relations between higher-level established agencies and new organisations are unclear. These shaped my study of stakeholders in subsequent chapters.

1.8 Common ground

The term ‘common ground’ which appears in the title of this thesis came about when I remembered a specific incident that happened to me several years ago. In Zambia’s first multi-party elections in 1991, Kenneth Kaunda, the first national president, lost his presidency. One of the policies that made him overly unpopular was the nationalisation of foreign owned companies. As a result of that policy, many foreign owned companies including the giant international soft-drink manufacturing company - Coca Cola, left the country. The soft drink industry collapsed for a while, but the beer industry remained sustained by the state. However, the poor quality of the beer made by the new parastatal¹⁴ breweries was evident from the fact that at every purchase of a beer bottle, the imbiber had to lift the bottle up against light to lookout for impurities floating in the beer. It was during this period that as a young Zambian student, I travelled to England for studies and had an opportunity to visit a pub in the company of another Zambian colleague. Upon entering the pub, as a teetotaler, I quickly bought myself a Coke, which I had greatly missed. My colleague bought himself a beer. Instinctively he lifted the beer bottle against the light to lookout for impurities. The bartender quickly noticed the practice and pointing to a gentleman sitting alone in the corner of the pub, he said, “there is a friend of yours seated in that corner.” We both turned and took a careful look at the gentleman seated in the corner of the pub enjoying his beer unperturbed. Even though he was black, as we were, we could not recognise him as someone we knew, let alone a “friend” of ours. My colleague, suspecting that the bartender was being racist, demanded to know why the bartender assumed that the gentleman seated in the corner of the pub was our friend. The bartender innocently replied, “he prayed to the same god as you did upon receiving the beer bottle”.

Apparently, the other gentleman in the pub, even though we did not know him, came from Zambia. He too had instinctively lifted his beer-bottle against light, to lookout for impurities, before he sat to drink his beer. The bartender did not understand the reason behind the ritual. A common norm streamed through these two actors. They shared a common culture, which dictated coherent values and behaviour. Their responses had been moulded by a shared life-world.

The main picture emerging from my field data indicates that MSPs can make meaningful difference to actors and their environment only when a common culture amongst them begins to form. Beginning with formation of a group, the process of institutionalisation, which is a process of internalising the rules and norms, reaches a desirable stage where stakeholders begin to share a “*common ground*” which is a shared frame of reference and shared values. A shared frame of reference or indeed shared

¹⁴ A company owned or controlled wholly or partly by the government.

values facilitate internal collaboration and coherence within the group. Thus common ground is the *sine qua non* of successful MSPs.

Notwithstanding, the study reveals that achieving a common ground among highly differentiated actors, divided by gaps in wealth, race and the many forms of political and socio-economic divides can be elusive. Cleaver (1999, p 602) asserts that institutions of water governance depend on too many grey areas and ambiguities regarding issues such as rights of access, compliance rules, and the whole unpredictable outcomes of social interfaces. This study is an attempt to unravel some of these predicaments that confront participatory water governance. South Africa presented me with two interesting cases where I observed how these factors played themselves out.

1.9 Rationale behind this research in MSPs

An MSP is still an unknown theoretical and management entity. Little is known about the potential of establishing institutional designs based on participatory approaches at levels as high as catchments (and higher), with actors from extremely diverse socio-economic and cultural backgrounds. Rhoades (1998) claims that the newness, complexity and ambition of multi-purpose, multi-scale and multi-stakeholder watershed approaches make success elusive even in the best of circumstance. Project implementers have to manage an organisational complexity hitherto unheard of in their field. Rhoades further contends that the practice of stakeholder participation in water resource management also appears to be anchored on serious presumptive discourse about human behaviour, by assuming that state bureaucrats and stakeholders will act with noblest of intentions without breaching the intended group interests for a collaborative and consensual collective initiative. Furthermore, water itself presents stakeholders with diverse and extreme challenges ranging from multiple uses, seasonal and spatial variability, to drought and flood disaster situations. It is in the light of these challenges and predicaments that in the recent years, a growing body of progressive analysis on MSP approaches has emerged and this thesis makes its contribution to this body.

By requiring that multi-stakeholder institutions manage hydrological zones and catchments, South Africa's has subscribed to the MSP ideology. The National Water Act 36 of 1998 (hereafter referred to as the NWA) requires that stakeholder participatory institutions be established at delineated hydrological zones called Water Management Areas (WMA) and at catchment and local levels¹⁵. The newly created institutions become responsible for drafting and implementing water management strategies for their designated areas. The assertion is that by mobilising participation of stakeholders through recognised and legislated institutions, the desired water management goals will be achieved. This research examines how plausible such an assertion is by studying the following research questions:

- *How and why have CMFs developed as an institutional arrangement for water resource management?*

¹⁵ Details of these are the subject of Chapter Three.

- *What problems have CMFs acted upon and how has this impacted on the process of institutionalisation as legitimate groups capable of achieving water management goals and satisfying peoples' needs?*
- *What potential exists for MSPs that emerge as the study CMFs, to pursue a holistic water management approach that also incorporates flood risk reduction?*

The focus of the study is on MSPs as an institutional framework for action in water resource management. The study tracks two Multi-Stakeholder Platforms in the Eastern Cape Province of South Africa, investigating their emergence, operations and the results they have achieved.

This research was commissioned as a result of the interest that Wageningen University's Irrigation and Water Engineering Group took in exploring the concept of MSP. As part of the University's *Water for Food and Ecosystems* research programme, the MSP project was launched with the financial support from the Dutch Ministry of Agriculture, Nature and Fisheries, to draw lessons from different case studies situated in four continents, to see if there were common potentials and pitfalls or striking differences. Three PhD researchers were recruited, including myself, and one Master of Science degree candidate. The research was conducted in North West Europe (River Scheldt basin), South East Asia (Sabermati basin, Gujarat), Latin America (Andean watersheds, Peru) and this one from Southern Africa (Mthatha and Kat river basins, Eastern Cape Province, South Africa). The idea was to investigate how the MSP concept was conceived and practiced in different socio-cultural and political environments and to analyse reasons why MSPs in water management are promoted and the results they achieve.

Context-independent outcomes were expected from these studies. Generation of a typology of MSPs in Integrated Catchment Management was also embedded in the objective of the project. As a result, at the end of three years of research, a list of descriptors was derived, from which important dimensions were generated, on which the functioning of MSPs could be assessed. This research has therefore made a contribution towards the development of an analytical tool for generating a typology of MSPs (see Warner and Verhallen 2005, for this tool).

1.10 Research methodology

Research methodology here refers to the framework for and the methods used in collecting data and the manner in which data was handled to make sense out of it. A strong justification for selecting CMFs as the unit of analysis has already been presented in the preceding sections. Having selected CMFs as the unit of analysis, stakeholder groups and individuals participating in the Forums became the units of observation. The conceptual framework for the study is outlined in Chapter Two.

The procedure followed to accomplish this study, made use of several methods for collecting information and for learning. Participant observation was the main approach for learning. As a researcher based in the field for at least three years on a part-time basis, I had several opportunities of being in contact with stakeholders and individuals. I

observed the procedures and actions during their official meetings, workshops, tours and informal gatherings. I took notes relating to what was being discussed during meetings, while specific issues of interest that emerged during meetings were followed up after meetings with more concise interviews with relevant members. Interviewing more than one member from the same organisation or village allowed the exploration of various interpretations and points of view. Interviews provided the basis for understanding and clarifying the observed phenomena and many are quoted in the thesis. Since lengthy and multiple interviews can be cumbersome, the interviews were condensed using exclusively the words and expressions of the interviewee. During meetings, I made notes on modes of communication, who spoke most, and why, what the body language could imply. During gatherings I noted the attendance distribution i.e. stakeholder representation, including the ratio of women to men and what roles different participants were playing (their mode of participation). I did not restrict my observations to the functions of the Forums alone. I also attended other public events such as cultural day celebrations, launching of a water week, and municipal consultation meetings etc. to capture the many dimensions in which water issues emerged and were shaped by social, cultural and economic practices.

The desk study involved the collection, collation and perusal of available published (research papers, books, journals, government gazettes, newsletters) and unpublished reports, maps, drilling logs, test pumping data, groundwater quality data and documents obtained from various sources including the Department of Water Affairs and Forestry (DWAF), Council for Geosciences and Hydrogeological Consultants. This information provided me with a deeper understanding of the technical characteristics of the hydrological situation and biophysical characteristics of the areas, policy backgrounds and insights to the socio-economics and history of the area.

To obtain a wider view of the issues at stake in a catchment and to capture a diversity of perspectives, I tried not to limit my research to stakeholders participating in the CMFs. I undertook an informal survey that included those members of the community who and organisations that were not directly in CMF activities. The survey yielded useful information on what were regarded as the most contentious issues regarding water resource management in the catchment.

Workshops as a form of action research

From the conception of my research, it was my desire to give a practical relevance to my research work. Having worked as a rural development practitioner in my personal career, I was not one to be content with pure academic research albeit its valuable purpose of generating useful scientific knowledge. It was my desire to engage with action research with the aim of contributing both to the practical concerns of the people I was researching and to the goals of social science by engaging in a joint collaboration (between me and research participants) within a mutually acceptable ethical framework. Action research in this case is interpreted as research that seeks not only to develop understandings of social settings but also to intervene in those settings in ways likely to be helpful to those people being studied. Since a fully-fledged action research approach was not possible due to limited research funds and timeframe, I utilised workshops as

tools not only through which I could validate my research but also a means through which my subjects could reflect on their actions and take interventionary strategies to their practices. I consider myself to have been extremely fortunate to be readily accepted by the two Forums within a short space of time. I credit this to the *ubuntu*¹⁶ culture that exists in South Africa. My suggestions for workshops and meetings presented to participants were readily adopted and ownership¹⁷ of the entire workshop processes remained with the participants.

Three workshops, whose details are discussed in Chapter Five, were held throughout the field study period. My strategy for achieving action research was to initiate joint workshops that brought together diverse actors from two separate and different environments. This approach was an extremely beneficial one considering that the two Forums emerged in different styles, and their mode of emergence had profound impact on their ensuing operations. The Kat CMF hosted the first workshop. The choice of the Kat catchment as the first workshop venue was deliberate, as the Kat Forum had gained sufficient experience in undertaking such events and was more familiar with their catchment than the Mthatha CMF was with theirs. The first workshop took an exploratory stance whereby an understanding of the problems relating to the emergence and functioning of the Forums was explored. It was a two-day workshop that begun with a tour of the Kat catchment on the first day. On the second day, Forum members, joined by international and national researchers, national and local government officials and other water resource management practitioners, shared experiences and reflected on their purpose as constituted water institutions. Beginning the workshop with a catchment tour was specifically useful in that participants could relate their opinions to real life situations seen in the field. For instance, participants discovered that the surface area of the Kat dam had expanded to an extent where dam water had covered some old graves. This was obviously a traumatizing experience for some participants considering the importance that local people attached to their ancestors. This experience raised interesting debate regarding roles of a CMF and emphasizing the critical task that such institutions could play in guiding the cultural dimension of water resource management. As a matter of fact, as a result of that tour, the Kat CMF worked in close collaboration with DWAF to arrange for the removal of human remains from the bottom of the dam. Therefore in some way, this research could be seen to have made a practical contribution towards achieving this outcome. The immediate research objective for the workshop was to accord me an opportunity to see issues from the perspective of the stakeholders and understand how and why CMFs had come into being.

The idea and desire to hold a second joint workshop emerged from the Mthatha group. The experience of a catchment tour in the Kat catchment spurred the Mthatha Forum to

¹⁶ Which I can explain in simple and uncomplicated terms as 'humanism' - every person is important and the centre of life. Every person should therefore be accorded support and attention.

¹⁷ The Kat CMF demonstrated 'ownership' of entire workshop processes through the handling of workshop preparations and activities. The CMF prepared the workshop programme, which was reviewed and agreed upon by all participants on the opening day. The venue and the meals were all arranged by the CMF. The CMF members drew up the first-day tour programme and they worked as tour guides for other participants.

conduct a similar tour of their own catchment which they had never done since the formation their CMF. The second joint workshop occurred two years later. This one took on an analytical stance, whereby the two groups of CMFs took a tour of the Mthatha catchment and discussed how geophysical characteristics of the catchment impacted on the functioning of a CMF. The third and last workshop was designed to be innovative research that would observe the capacity of local stakeholders to act on their voices. The strategy was to identify and fund a water resource management initiative originating from the community that the community had failed to implement due to limited resources. The objective of the research was to test the assertion that local people were interested partners in water resource management and that given the means, they are capable of implementing projects and programmes that addressed local needs in water resource management. The beneficial outcome of this research was intended to be the strengthening of organizational capacity of local community stakeholders for identifying priority needs and implementing their water resource management strategies.

Workshop proceedings from the three workshops have been summarised and presented in Chapter Five. While they constitute useful data source for research purpose, I see that the most beneficial outcomes of these workshops was the twinning of the two Forums that occurred and the social learning that occurred through the creation of intimate knowledge of the catchments by members and the camaraderie created across race, ethnic and professional boundaries.

Stakeholder analysis

Stakeholder analysis was a useful tool for gaining an understanding of the operations of the Forums by means of identifying the key actors or stakeholders and assessing respective interests and the value that each stakeholder group or individual brought to the platform. This was done by identifying participating organisations and interviewing their respective representatives who attended CMF meetings as well as some members of those organisations and groups who were not mandated to attend CMF meetings. Details of how stakeholder analysis was accomplished and the data it generated can be found in Chapter Five.

Data analysis and presentation

From the foregoing, it can be noted that I utilised a multi-method approach to learning and data collection with the aim of achieving a holistic understanding of the environment in which CMFs operated. All textual data in my field notes – arising from interviews and observations and the many heaps of published papers, minutes of meetings and articles collected – were analysed by comparing and contrasting to find patterns and interconnectedness of facts as a way of understanding how the CMFs emerged and why they functioned the way they did. Lessons learned through narratives and empirical data from my interviews, informal surveys, workshops and participant observation were used to explain what was happening and to arrive at conclusions

The presentation of information took the format of explanation building technique (Yin 2003; p 120-137). This is an iterative process consisting of gradual description of the

case, constantly returning to important details and filling in additional information to explain the arguments. For instance, even though most of historical perspectives are discussed in Chapter Three, additional historical details necessary for analysing specific outcomes are discussed again in Chapters Four and Six.

Although the research covers two case studies from two different areas within Eastern Cape Province of South Africa and there are succinct differences between the two case studies, I avoided making a separate analysis of each individual case in my analytical approach. This was to avoid making the discussion monotonous. Rather, I chose to use a cross-case analysis so that the fundamental drivers that shaped action, which happened to be similar in both cases, were not continuously repeated in the discussion. In cross-case analysis, individual cases were used as sources of evidence from where examples were drawn to give insight of what was happening.

1.11 Thesis structure

Chapter One was used to acquaint the reader with the scope of this research by attempting to clarify the why and how questions that it addresses. In this chapter, I examined the theoretical discourses and debates that shape MSP practice, starting with participation wherein the MSPs discourse is rooted. I further explored the origins of participation and how the concept has found renewed acceptance through the newly emerging participatory approaches such as MSP. I raised questions that the study explores in the analytical chapters regarding whether such approaches represent considerable shift in the practice of natural resource management.

Chapter Two develops an approach for studying MSPs by analysing why and how collective action happens in natural resources management. It then proceeds with a detailed explanation of the analytical framework developed for learning about 'group' action. Since this study of MSPs was approached from an institutional perspective, Chapter Two also presents a synthesis of some relevant institutional analytical approaches, from which a unique analytical framework that better fitted this case study was developed. It was an integration of relevant principles drawn from different approaches to institutional analysis. In Chapter Three, the South African socio-economic, political and resource environment in which the MSPs are embedded is presented. This chapter is crucial in capturing how water resource governance is shaped and reshaped by biophysical conditions, history and social dynamics. A clear understanding of the accounts of this chapter provides an appreciation of the practices that are described in the subsequent chapters.

Chapter Four presents the study areas and their respective CMFs. It provides a full description of socio-economic and biophysical conditions and the emergence processes of the two CMFs, which constitute the units of analysis. Whether MSPs do exist and how their creators perceive them is discussed in Chapter Five where the data collection methods are described to show how learning about CMFs was achieved through the use of multi-method research approach. Chapter Six presents the core empirical findings of the study and goes beyond mere provision of descriptive knowledge. Using the cross-case analytical approach, Chapter Six pools experiences from both the Mthatha and Kat

catchments. It introduces some additional information to unravel the reasons behind specific practices and attempts to find factors and variables that influenced the functioning of the CMFs. Chapter Seven examines the flood disaster management framework in South Africa with the aim of assessing whether a potential role existed for CMFs to contribute towards flood risk reduction through their actions of water management in the catchments. This is an interesting chapter in that it examines whether water institutions have a predetermined role to play in flood disaster management based on the principles of integrated water resource management.

Chapter Eight examines the institutionalisation processes of the CMFs as a way of determining whether these institutions are capable of meeting their purpose and consequently earning their legitimacy. In conclusion, Chapter Nine is both (i) a reflection on whether the MSPs that emerged in the Eastern Cape Province of South Africa are those that could broker local water resource management and (ii) a review and discussion of some crucial factors that emerged in the thesis that seem to impede the attainment of a '*common ground*' among participants of the studied MSPs.

Although a few comparative lessons on the functioning of MSPs are beginning to emerge, most research projects still start out in a vacuum, with seemingly little experiences to digest from earlier studies. Chapter Ten was included to share insights into the approaches of researching multi-actor collective actions. Since MSPs are a social phenomenon, the researchers world-view plays a crucial role in finding meaning in the ongoing practices and interpreting data. Chapter Ten provides insightful personal experiences and approaches and how these can influence a researcher's analysis and conclusions. It is my aspiration that, through a clear, simple and insightful explanation of methods, analysis and discussion of scientific and personal views, the contents of this thesis will provide not only meaningful reading but also insightful knowledge regarding stakeholder participatory water resource management. In this context, this thesis will have achieved its purpose if it contributes to a broader understanding of the complex factors involved in stakeholder participatory water resource management.

CHAPTER TWO

RESEARCHING MSPs: CONCEPTUAL DEBATES AND ANALYTICAL FRAMEWORK

Knowledge can be acquired from diverse sources, including sources such as amusing stories, which on face value may seem trivial. There is a joke, which is told from an African village perspective whereby a village boy fails to distinguish a school ‘ruler’ from a traditional ‘ruler’. Though trivial, this joke reminds me to always keep my arguments in context to avoid being misunderstood. The joke proceeds that a young boy from the village turned up in his class with his village headman. Surprised at the presence of the elderly man dressed in traditional leaders’ gear, the teacher asked the boy why he had brought with him the honorable village leader. The boy excitedly responded that the teacher had requested the class to bring with them a ‘ruler’ for the following days class exercise. The man who sat next to him was a ‘ruler’, but of course not the ruler that the teacher meant. In analysing this joke, I assume the teacher had announced that the exercise would involve measurements of areas. In the African village setting, village headmen are responsible for allocation of areas, either for settlement or cultivation. Perhaps therefore the boy was not completely mistaken in his conclusion to bring a traditional leader instead of a school ruler since to him, the measurement of areas required the presence of a traditional ruler.

Indeed, all experience is embedded in context. To situate my MSPs in context and rationalise my analytical approach, this chapter first explores conceptual debates concerning collective initiatives in NRM and then proceeds with providing rationale for considering these collective initiatives as ‘*institutions*’ and consequently why and how they render themselves to institutional analysis as an analytical framework.

2.1 Why and how people work together in resource management.

Can an MSP be considered as a collective action? ‘Collective initiative’ or ‘collective action’ arises when the effort of more than one individual is needed to accomplish an outcome. The Oxford Dictionary of Sociology describes the term ‘collective action’ as “action taken by a group (either directly or on its behalf through an organisation) in pursuit of members’ perceived interests”. Wikipedia encyclopaedia online defines ‘collective action’ as simply “a pursuit of a goal or set of goals by more than one person”.

MSPs in natural resource management constitute stakeholders who pursue joint decision-making and action. They represent cooperative behaviour among actors faced with a common predicament, which in this case is a shared water resource. Whether or not the members of the MSP form a group with a certain level of shared interest is one of the questions this thesis wants to address. Yet, to understand the collaboration around a common pool resource, in the case of this research, water, it is useful to take into account the literature on collective action. The task for this section is first to explore

theoretical notions regarding whether and how individuals can cooperatively debate and decide to resolve a complex problem with interdependencies, and how common action becomes an 'institution'. Then the discussion proceeds with the establishment of how empirical research that studies factual existence and functioning of group activity can be conducted. A substantial body of theoretical and empirical research that discusses the existence and performance of 'institutions' for managing natural resources already exists (see Ostrom 1990; Ostrom *et al.* 1994; North 1990; Sandler 1992). However, Ostrom (1990; p 25) notes that theoretical explanation, based on human choice for self-organised and self-governed enterprises is not yet fully developed and accepted. As a result, major policy decisions have continued to be justified on the presumption that individuals cannot organise themselves optimally for new initiatives, and therefore always need to be organised by external authorities.

Several theoretical notions postulate that individuals are unable to bring about a desired situation by themselves. The tragedy of the commons (Hardin 1968), the prisoner's dilemma (Harding 1982) and the logic of collective action (Olson 1965) are examples of closely related theoretical concepts that have influenced the views on how individuals behave in their attempts to achieve collective benefits. Under the 'logic of collective action' for instance, Olson explores the difficulty of getting individuals to pursue their joint welfare as contrasted to individual welfare. He challenges the optimism expressed in group theory that individuals with 'common interest' would voluntarily act so as to try to further these interests. Ostrom (1990) identifies free-riding and opportunistic behaviour of actors as central problems defined in these theoretical notions on collective action. Whenever a person cannot be excluded from the benefit that others provide, each person is motivated not to contribute to the joint effort, but to free ride on the effort of others. Implicitly, this notion postulates that a potential situation exists in the management of common pool resources whereby all or a significant number of stakeholders choose to free-ride and the collective benefit cannot be achieved. Also implicit in this concept is a situation in which individuals are not motivated to participate in a collective endeavour to manage a common pool resource in which there is no possibility of excluding someone once it is efficiently conserved.

Such theoretical notions have been associated with policy decisions that lead to centralised control of natural resource systems. Ophuls for instance (*quoted in*: Ostrom 1990; p 8) has argued that because of the tragedy of the commons, environmental problems cannot be solved through cooperation and therefore the rationale for government with major coercive powers to act centrally is overwhelming. This argument concludes that common pool resources require central government control if economic efficiency is to result from their development. Such arguments have been linked to centralised control of natural resources such as the nationalisation of forests in some third-world countries.

Notwithstanding, other schools of thought argue that uncertainty about the decision of others prompts interdependencies among users of a common pool resource and can motivate resource users to participate in a collective action especially when transactional costs involved are manageable. North (1990; p 13) for instance refers to

Axelrod's book on the evolution of cooperation alludes to the ability of human beings to devise cooperative solutions to problems without the intervention of a coercive state. However, most empirical research that proves the existence of cooperative behaviour among stakeholders of a common pool resource also shows that it occurs mainly under 'certain conditions'. Galjart (1976) for example, based on his studies on the peasant mobilisation and solidarity in Chile, argues that solidarity behaviour was noticeable whenever there was a clear identity between self-interest and communal interest. He observed that the main reason why agricultural workers accepted a communal farm was their expectation of material progress for themselves. The *economic success* (emphasis supplied) of a cooperative was chiefly important because on it depended the acceptance of the organisation by members. Olson (1965; p 34) accepts the possibility of collective action happening without external coercive powers, but mainly in small groups. He argues that the attraction of group membership is not so much in sheer belonging but rather in *attaining something* (emphasis supplied) by means of this membership. Ostrom (1990) affirms this argument when she states that the motivation for participating in a collective action by individuals is in the economic returns gained from the common pool resource and hence individuals join the collective action to enhance their productivity. She argues that stakeholders are tied together in a lattice of interdependence as long as they continue to share a single resource. When they act independently in relation to the resource generating scarce resource units, the total net benefit they obtain usually will be less than could be achieved if they had coordinated their strategies in some way. As long as stakeholders stay 'unorganised' they cannot achieve a joint return as high as they could have received if they had organised in some way. To this, Olson (1995; p 1) would add that individuals must be able to discern that the collective benefit is achievable only through a collective action. Otherwise participants would see no purpose of a collective action when individual, unorganised action can serve the interests of the individual as well as or better than an organisation. Potential members may also have reservation on or feel unable to help build new collective organisations if the transaction costs are too high. I have alluded to both arguments as basis for analytical thought in studying whether and how stakeholder participation could happen in water resource management in the Mthatha and Kat catchments (Chapter Six).

Responses to collective action by stakeholders in water management are further complicated by the fact that interest of participants may not necessarily be 'common'. Blomqvist (1996; p 22) for instance argues that in most instances, the interests of stakeholders are not common but rather divergent since an individual's way (or group) of viewing the world is to some extent dependent on the interest s/he represents. Based on her study on collective action among irrigation farmers and textile industrialists in India, she argues that it is reasonable to believe that a dyeing industrialist perceives the effects of industrial pollution as being less negative than an affected farmer would, because he knows that a part of his profit is dependent on the continuation of discharging effluents into the river. She continues that similarly, a head-reach farmer with good water supply may be inclined to point at badly maintained irrigation infrastructure and other similar factors outside his control as the main reasons for water

scarcity at the tail end, rather than admitting that he is benefiting from the unequal distribution of water.

Thus theoretical notions regarding the ability of stakeholders to work together to address an interdependent problem show the uncertainty and complexity associated with the practice and consequently the difficulty of analysis of institutions for natural resource management. Nonetheless, these theories also help to bring into focus some important issues and make it possible to isolate relevant phenomena at a desirable level for detailed analysis. The question therefore becomes what concepts are helpful in addressing the research questions. For instance one fundamental situation that challenges collective action theory is how individuals or stakeholders who are in an interdependent situation can organise and govern themselves to obtain joint benefits when they are faced with temptation to free ride or become opportunistic or feel they face impossible costs in participating. As argued in Chapter One, a key feature of collective actions is the assumption that they will promote collaboration and consensual decision-making with regards to natural resource management. In this context, free riding would challenge this noble goal of collective action. I will return to this argument in Chapter Six when I discuss the varying responses of two contrasted groups of stakeholders (Organisational Stakeholders and Community Stakeholders). Ostrom (1990; p 27) contends that the common set of problems that collective actions have to deal with include (i) free-riding, (ii) solving commitment problems, (iii) arranging for the supply of new institutions and (iv) monitoring individual compliance with sets of rules. These arguments constitute some entry and focal points in studying MSPs are common regardless of whether the collective action is arranged by an external ruler, an entrepreneur or a set of principals (whom I identify as stakeholders). These arguments constitute some entry and focal points for studying groups such as MSPs and are constantly revisited throughout the empirical chapters. For instance, the concept that participants of a collective action are fundamentally motivated by a 'collective benefit', which is achievable only through interdependent action, is extensively explored in Chapters Six and Nine. Also emerging from these arguments is that, in studying MSPs, establishing the purpose of the collectivity is crucial. Olson (1965; p 1) contends that the logical place to begin any systematic study of organisations is with their purpose and one purpose that characterises most organisations is the furtherance of the interests of their members. Chapter Six has therefore explored the issue of 'purpose' of MSPs from perspective of different stakeholders to establish how and why stakeholders have taken (or lost) interest in the collectivity.

2.2 Seeing MSPs as 'emergent' institutions

I have clarified in the preceding section that the focus of this research is on collective action in the management of water, studied here as a common pool resource. In this section, I discuss why I view these collective actions as 'institutions' and why I chose to utilise an institutional analysis approach to explain my observations.

Several definitions of '*institution*' abound in the sociology literature (see Ostrom 1992; Ostrom *et al.* 2002; Rowe 1989; Saleth and Dinar 2004; Fafchamps 2004; Lane and Erssons 1999; North 1990 etc). However, the common understanding that streams

through all definitions is that institutions are rules-in-use, regulations and norms, which govern members of the institution and sometimes may provide a structure to human interaction. Of useful and additional consideration is Hospes (2000) understanding of institutions, which he derives from the Oxford English Dictionary. ‘*Institution*’ in the English dictionary has been described as (1) instituting or being instituted, (2) long established law, custom or practice, and (3) (building of an) organisation with a charitable purpose or for social welfare (e.g. an orphanage). Hospes asserts that three concepts that can be deduced from this description include (1) the activity of instituting, establishing or forming, (2) normative and/or cognitive elements transported in cultural carriers and (3) a socially constructed group within a geographical location. Thus according to Hospes, the concept of ‘*institution*’ denotes a process, an object and a subject, all at the same time. Accordingly the definition of ‘*institution*’ utilised in this research is rather a “common sense” one, emphasizing the process of *instituting rules of action* (externally imposed as well as internally generated) transported in a *formal or informal structure* and operationalised by a group of willing participants within a geographical location.

Based on the above descriptions of how an ‘institution’ can be defined, one can investigate whether CMFs are emergent institutions and evaluate the extent to which they are institutionalised. CMFs emerged following the promulgation of the NWA in 1998 and they exist within a legal framework that provided a structure for human interaction over the use of water resources. The requirements for stakeholder participation were built into the water law and were backed by participation guidelines issued by DWAF (DWAF 2001c) along with a time frame for the establishment of these participatory institutions. Through the NWA, the government made provision for the emergence of ‘institutions’ and established working rules that dictated which individuals and organisations interacted over which resources and space. The government therefore recognised that the institutional framework was one of the most important aspects of water resource management. DWAF asserts in its participation guidelines (DWAF 2001c) that ‘institutions’ are important in determining the effectiveness of policy implementation and providing an avenue for a wide consultation with water users.

The emergence of CMFs and their organisational structures provided actors with rules that shape interaction over water resources and actors were also in return subject to rules set by higher levels such as the NWA. Olson (1965) asserts that when a collectivity attains mechanisms for direct or indirect co-ordination of action, it becomes an organised group. In this sense, CMFs can be viewed as organised groups, considering that through the establishment of management committees, they attained mechanisms for coordination of action. Since most descriptions of what an ‘institution’ is can also be ascribed to CMFs, the studied CMFs can therefore be viewed as ‘institutions’. CMFs are purposeful (wherein a group of actors is accorded authority to manage a national resource), externally induced, structured and role bound, wherein actors are expected to get together to carry out specified functions. They operate under specified geographical and functional boundaries. I do not see CMFs as ‘organisations’ because this term most often takes a more formal meaning whereby organisations are perceived as more

permanent and systematically controlled (by management) groups. The term 'institution' rather connotes that the groups can be informal, unpredictable and even temporary.

Institutions are more readily identifiable and can be used as an explanatory variable in understanding how and why a group of actors cooperate to manage a given resource. Vanderwal (1999) who undertook a similar study in British Columbia, indicates in his analysis that individuals often use their organisation as a reference point in explaining who they are, why they have acted in a certain way, and in evaluating the behaviour of others. In my analytical framework, I focus on how these institutions operate, the results they generate and how they exert their influence on water resources. Institutional analysis therefore became the preferred framework for the description of my empirical material for this thesis.

2.3 Understanding institutions

Institutions are faced with uncertainty and an enormous amount of variables that impinge on their functioning. Hence institutions do not assume predictable outcomes that would render themselves to easy analysis. I suppose that if one set out into the study of MSPs with the broad and popular definition in mind that there were a form of institutions governed by rules-in-use, regulations and norms - and therefore hoped that s/he would find people's behaviour governed by rules, regulations and norms as immutable as the laws of physical science govern nature - one would be met with great disappointment and disillusionment. Hence the study of how a given 'group' or 'institution' functions has been approached from a number of different perspectives. Entire textbooks have been written on this subject alone (Peters 1999 and 2000) and I cannot attempt to review them all. Rather, I have selected approaches that best demonstrate the potential for application to my case study. In this section I discuss theoretical notions that became key to the construction of my analytical framework.

Having come from an Agricultural Economics background, I was greatly influenced by the rational choice theory whose underlying logic describes institutions as arrangements of rules and incentives, and members of the institution as rational actors who behave in response to those basic components of institutional structure, choosing the alternative that is likely to give them the greatest satisfaction (Heath 1976). Actors in these structures are seen as motivated by the wants or goals that express their preferences. Rational choice theorists see social interactions that occur in these structures as a social exchange of rewards and punishments (or costs) just like goods and services constitute factors of exchange in economic action. Action of individuals is motivated by pursuit of a 'profitable' balance of rewards over costs. The threat of punishment or the promise of reward may motivate an actor. The '*profit*' that a person gains in interaction is measured by the rewards received minus the costs incurred. Homans (1961) argues that no exchange continues unless both parties are making a profit. Thus individuals will continuously pursue goals that are important to them, but ignorance and limited computational capabilities do not enable them to act as they would with full rationality. Nonetheless, sometimes individuals may also be influenced by intrinsic values such as fairness and reciprocity. Such theoretical notions imply that actors of a collective action

may participate only for as long as they find it profitable, i.e. when the rewards received exceed the costs incurred in the process of participating. An actor who experiences a 'loss' finds interaction (participation) more costly than rewarding and so will have an incentive to withdraw. Therefore the interaction will continue only if all participants are making a 'profit.' Institutional analysis rooted in this theory focuses on exploring the appropriateness of existing rules and incentives and how changing the rules and incentives could alter the behaviours of individuals.

Notions from this theory largely influenced my conclusions discussed in Chapter Six and Nine. This is because collective initiatives in South Africa that bring diverse actors together have not happened before and are unlikely to happen spontaneously in the absence of a purposeful and deliberate scheme with incentives. Empirical data was therefore put under critical scrutiny to establish motivation for participation or the lack of it by stakeholders. Consideration of the historical and current social-economic environment in which actors operated pointed to a situation where actors' rational rule following was found to be the basis for their participation or dissention. Generally, as argued under section 2.1, rational considerations are intrinsic in stakeholders' decision to participate in collective actions. Therefore ultimately, stakeholder participation in resource management is ideally a rational choice (Rowe 1989), even though many institutional authors also argue that there are also moral, cultural or altruistic dimensions of human behaviours that may influence decision to participate (Ostrom 1990).

The other theory I found relevant to my work is the actor-oriented perspective (Long 1989; p 245-256), which gives priority to individuals as social actors in the institution. Long emphasises the need to enter the actors "life-worlds" to understand the way individuals manipulate norms, values and development to create space for their 'own projects'. In my analysis, I used this perspective to qualify the perspective of rational choice at individual level. While rational choice theory assumes that actors respond solely on the basis of their interests, the actor-oriented approach perceives of actors as social beings whose perceptions and strategies are shaped in social processes and negotiations. Applying this perspective in institutional analysis implies focusing on individuals (or actors) who are constituents of the institution - understanding how their interactions and the social order shape their behaviours. The actor-oriented perspective provided insights in understanding how actors from different backgrounds develop entirely different notions on the meaning of the MSPs, despite the common interests they apparently seemed to share. The conceptual frameworks of rational choice and actor-oriented analysis are not normally considered together or as compatible. However, I think that this "logic of appropriateness" is very important in studying people's action in the harsh economic realities of the ex-homelands, while I also acknowledge that actor-oriented approaches also yield much more information on the wider strategies and experiences of individuals and political dynamics and evolution of organisations. I return to this in Chapter Six.

Another useful perspective was North's view of structures as the primary carriers of institutional rules. North (1990) tends to emphasize the role of rules and laws embedded in cultural carriers. DiMaggio and Powell (1983) present a coercive institutional

typology explaining that a powerful actor or coalition of actors, who enforce rules that forge their interests, often establish(es) institutions. Huntington (1965; 1968) seems to present a similar argument, but places his concern primarily with formal government institutions as coercive institutions. He argues for the importance of structures in civil society for developing stable and effective democracy. These perspectives view institutions as structures and place the focus of study on structural arrangements and operations of the institutions. These perspectives were useful in developing arguments regarding the performance of CMFs since the Mthatha CMF in particular exhibited a coercive institutional typology whereby government bureaucrats emerged as powerful actors who enforced rules that forged their interests.

The final theoretical notion that attracted my attention could be labelled as the historical approach expounded upon by Steinmo *et al.* (1992). The main argument of this approach is that policy and structural choices made at the inception of the institution will have a persistent influence over its behaviour for the remainder of its existence. This is referred to as the behaviour of “path dependency”. This approach tends to be useful in explaining how the direction of government policies influence emergence of institutions. This approach lays emphasis on policy analysis with regards to institutional reforms as the focus of study to understand institutions. Influenced by these notions, my analytical framework included an extensive analysis of South Africa’s history and policy environment (Chapters Three and Four) to gain insights on the influence of these factors on the emergence and functioning of the CMFs studied. Path dependence can be imputed on the emergence of MSPs in South Africa since current policy and structural choices have been influenced by the desire to correct historical mistakes.

A careful consideration of the theories presented above shows that there are some features that unify the approaches just as there are also important differences. In my opinion, the unifying features can be used to develop a unified approach, which interacts theoretical concerns, and helps to proceed with empirical analysis. The different perspectives will be used as sets of lenses to illuminate different aspects of institutions because after all, they all say something about what institutions are and how they affect actor behaviour in resource management.

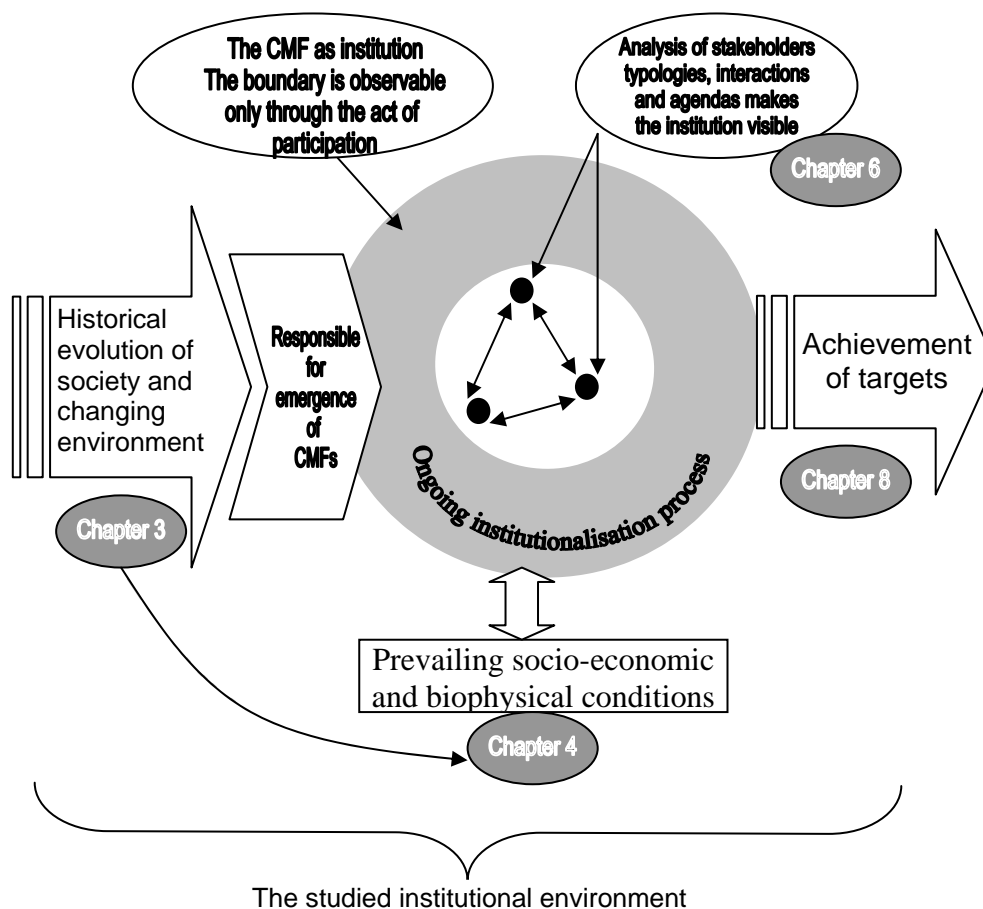
2.4 Analytical framework

The complexity of variables that affect the emergence and functioning of an institution, as revealed in the foregoing discussion, is overwhelming. My task was to arrive at an analytical framework that could unlock the multiplicity of dilemmas presented in this field. If detailed understanding of the phenomena were to be achieved, it would be necessary to specialise in a single perspective. Notwithstanding, specialisation in itself is flawed as all institutional analysis perspectives obviously influence and inform one another. Just as there are important differences between the different perspectives discussed above, so are there elements that unify the approaches. Therefore, in arriving at a relevant analytical framework, I opted for an eclectic approach, whereby relevant elements from each perspective are used to inform the analysis. Different aspects from each perspective elucidated different aspects of MSPs.

The different aspects from the various institutional analysis approaches discussed in the foregoing were used to arrive at a single analytical framework relevant for this study. Notwithstanding, a unified framework to institutional analysis already exists, developed by scholars of Indiana University at a workshop in political theory and political analysis in 1973. It is called the Institutional Analysis and Development (IAD). The approach was intended to provide a theoretical foundation for analysing institutional performance using a multidisciplinary approach (Oakerson 1992; p 41-59; Ostrom *et al.* 1994). It takes into consideration concerns from sociology (human relationships) economics (efficient use of resources) anthropology and history (the context within which a situation is located) and political science (power relations and conflicts among participants). (Ostrom *et al.* 2002; p 273).

To achieve a holistic view of my unit of analysis, I needed an approach that encompassed the principles of IAD. Therefore the IAD framework became a relevant entry point for me. I integrated concepts and ideas streaming through most institutional analysis theories into the IAD framework to arrive at a unique framework that suited my case study. The framework in Figure 2.1 was developed to

Figure 2.1 Analytical framework.



capture the complex interplay of factors in my case studies. The focus of the framework is the holistic analysis of the institutional environment in which MSPs are embedded. This involves studying both the MSPs as institutions (structure, actor behaviour, processes and outputs) and their environment (historical evolution and prevailing socio-economic and biophysical conditions). In my analysis for instance, I have presented evidence to show that the mode of participation by stakeholders is largely influenced by historical factors as well as the prevailing socio-economic circumstances. The overarching premise upon which I have cast my analytical framework is that the capacity of CMFs to achieve their intended targets is influenced at least by three realities: historical reality (political and socio-economic evolution), prevailing socio-economic and hydro-ecological reality and internal institutional dynamics. Each of these realities will be discussed extensively in its own chapter as shown in Figure 2.1. The discussion is then brought together in Chapters Eight and Nine.

The institutionalisation process

Institutional analysis can be complete only when one captures the extent to which the institution creates meaning to stakeholders. To achieve this, I found the concept of ‘*institutionalisation*’ particularly useful. I utilised Uphoff’s (1995) definition of institutionalisation whereby institutionalisation is described as a process, which earns an institution legitimacy for having satisfied people’s needs. ‘*Institutionalisation*’ can be understood as a process of internalisation of institutional norms and behaviours over time. A given cooperative initiative can become institutional over time to the extent that it enjoys special status and legitimacy. Selznick (1957) explains that institutionalisation involves “infusing a structure with value”. The more legitimacy an institution enjoys from various sectors of the public, the more it will be able to command respect and other resources that raise the level of compliance and hence be said to be ‘*effective*’. Formation of values and norms that become embedded in social relations and valued by society occurs over time, it is part of the institutionalisation process.

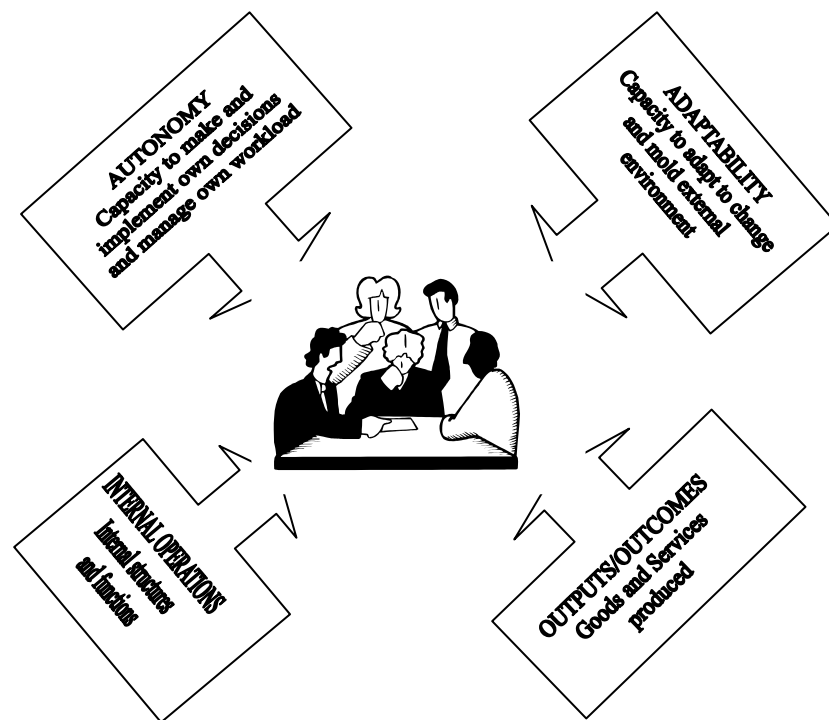
This concept emerged as most relevant because first, it was congruent with the concept of ‘*common ground*’ developed as part of the theme and title of the study. I have argued in Chapter One, that beginning with formation of a group, the process of ‘*institutionalisation*’, which is also a process of internalising the rules and norms, reaches a desirable stage where stakeholders begin to share a ‘*common ground*,’ which is a shared frame of reference and shared values. Secondly, the concept is well suited for understanding whether the structure and functions of any institution concerned with the management of common pool resources can achieve the desired results. To study the process of institutionalisation, I developed criteria by adapting analytical concepts that study institutions. On the basis of the focus of my study as explained in the preceding paragraph, I adapted three of the four dimensions presented by Huntington (1968)¹⁸ and one from Watson (2000)¹⁹ to arrive at a unique combination of four

¹⁸ Huntington’s criteria included *adaptability-rigidity*, *complexity-simplicity*, *autonomy-subordination* and *coherence-disunity*. Huntington’s content of each criterion is slightly different from my own because Huntington’s interest was with the evaluation of political organisations.

¹⁹ Watson (2000) utilises the ‘*outputs*’ criterion to argue that participation in collective action will be sustainable only when actors see tangible benefits in doing so. He however does not consider ‘*processes*’

dimensions through which the process of institutionalisation of the CMFs could be examined (Figure 2.2 below). These include ‘*autonomy*’ which represents a concern with the capacity of an institution to make and implement its own decisions, ‘*adaptability*’ which measures the extent to which an institution is capable of adapting to changes in the socio-economic and political arenas or more importantly capable of molding that environment, ‘*internal operations*’ which demonstrates the capacity of the institution to construct internal structures to fulfill its goals and cope with its business environment and finally ‘*outputs and outcomes*’.

Figure 2.2 Framework for studying the process of institutionalisation.



Each of these criterion have been applied to several types of institutional arrangements in different combinations and meanings (Huntington 1968; Polsby 1968; Watson 2000) and they do provide one avenue for understanding the transformation that structures must make in order to survive and to be able to influence their members and their environment.

To be able to make the assessments in line with each of these criteria, a set of key observation points where used for each criterion as follows:

as a form of ‘output’ as I do. In my criterion of ‘outputs and outcomes’, I argue that in addition to tangible benefits, such as financial rewards to participants or an improvement to the environment, non-tangible benefits constitute an important contribution of MSP processes. These are considered as ‘outcomes’ as opposed to ‘outputs.’ Examples include experience gained from participating in an MSP project or the development of a new way of doing things.

- (i) *Autonomy* was explored using the following key observation points:
 - Examining management structures.
 - Establishing the available physical resources to conduct business.
 - Observing the decision-making processes to establish the source of influence for CMF's actions.
 - Establishing what mandate the CMF had for its decisions.
- (ii) *Adaptability* was assessed using the following key observation points:
 - Observing whether and how political dynamics influenced the operations of the CMF.
 - Determining response time to problems, the process of problem identification, resolution and action.
 - Observing how the CMF responded to the emergence and existence of other similar institutions and organisations in order to position themselves as legitimate players in water resource management.
- (iii) *Internal operations* were observed by using four key variables:
 - Studying the operational rules of the CMFs
 - Membership forms and roles (reviewing the representation of stakeholders on the MSP and public participation processes. Establishing how equity was achieved through expression of opinion, in access to information and in influencing decisions).
 - Establishing financial resources available to accomplish assignments.
 - Personnel to carryout CMF functions
- (iv) *Outputs and Outcomes* were assessed using the following key observations:
 - Observing of goods and services directly attributable to MSP activities.
 - Taking stock of planning initiatives and processes put in place by MSP.

I also recognised that the process of institutionalisation was not only affected by the internal environment of the CMF as described through the above parameters. There were several external factors that influenced the functioning of the CMFs. A careful observation of the CMF operations yielded three crucial impediments to the smooth running of the CMFs; (i) stakeholder representation in CMFs (ii) the spatial scale at which CMFs were expected to operate and (iii) water rights and title deeds that local people enjoyed. These three factors fell outside the jurisdiction of the CMF but had a direct impact on what the CMF could do or could not do. They therefore form part of the discussion of the institutionalisation process in Chapter Eight.

2.5 Conclusion

It can be observed that the analytical framework adopted is one that takes into consideration both the external and internal environments of the institutions being studied. This approach will allow for a holistic understanding of the variables that shape the structure and functioning of CMFs both from outside and inside. The theoretical notions discussed in section 2.3 inform the analysis in understanding and explaining the

underlying forces that shape behaviour and decision-making of stakeholders. While the external environment was one that could be studied and explained without much assistance from CMF members, the internal environment required diligent observation and much interaction with actors in the CMFs to understand and explain the actions and underlying reasons for observed phenomena. The methods used to understand both the external and internal environment and how these methods produced the understanding is the subject of Chapter Five.

CHAPTER THREE

THE CMFs' ENVIRONMENT

Since people exist within an environment and all behaviour and attitudes take place within the environment, understanding the environment is important in positioning actor behaviour and attitudes and how these in return shape and reshape institutions. This chapter explores the interactions between people (history, culture, attitudes) and their environment (land, water and institutions). It highlights how history has influenced the prevailing ideologies in water resources management in South Africa. I begin by focusing on social-political and policy developments with the objective of establishing how these developments can be linked to the manner in which participatory water institutions have emerged and function in South Africa. This exploration will provide insights to the underlying influences and socio-economic and political drivers in participatory water resource management.

3.1 How history matters

There is one specific English idiom that reminds me of my high school English teacher. He always alluded to an English idiom “dead men tell tales” whenever we did something in the present unaware of the consequences that may come in the future. The idiom asserts that bygones can have influence in the present. An author unknown to me stated “*History matters in a specific manner. It matters in the sense that events in the distant past can initiate particular chains of causation that have effects in the present*”. Indeed, societies are the products of their history and circumstance.

I have chosen to go far back in the history of South Africa to demonstrate how the historical development of events shape current social battles fought over access to resources and to show how current practices of resource management is intimately intertwined with South Africa's colonial history. The history of South Africa can be told in varying details. Since it is not necessary, for the purpose of this research, to provide a detailed and fully comprehensive account of South Africa's history, I have chosen to paint in extremely broad strokes only those forces of history that could be seen to be impacting on the current participatory policy formulations and social behaviours. I see my study of MSPs as an analysis of social interactions, actor behaviour and how these feed into institutional functioning. My historical exploration therefore deliberately focuses on those forces that were responsible for changes in the manner in which people interacted. These relate to the polarization of South Africa's population and creation of ethnic tension. It would not be a mistake to look at this exploration as a polarization discourse considering that the legacy of apartheid has left South Africa polarized between white and black, rich and poor, republic and Bantustan, the urban and the rural (Nauta 2001; p 78). Indeed South Africa is a social structure divided by huge extremes of wealth and poverty, by racial and ethnic animosities, and by deep-rooted administrative fragmentation and incapacity to the extent that Cousins (1995) asserts

that the current new majority-rule government faces an '*unenviable and daunting task*' of ushering in radical reforms.

South African society emerges from a highly skewed and greatly politicised background. The current contest on water resources can be traced back to a troubled social history. It is a history that dates back to the mid 1600s, when the Dutch East India Company (VOC) set up a station in Table Bay (currently Cape Town) to service passing ships. Beginning in 1657, European settlers were allotted farms by the colonial authorities in the arable regions around Cape Town, where wine and wheat became the major products. In response to the 'colonists' demand for labour, the VOC imported slaves from East Africa, Madagascar and the East Indies. By the early 1700s, the colonists had begun to spread into the hinterland beyond the nearest mountain ranges. As they intruded further upon the land and water sources, and stepped up their demands for livestock and labour, more and more of the indigenous inhabitants were dispossessed and incorporated into the colonial economy as servants (Mbeki 1997). Trade with the indigenous people for slaughter stock soon degenerated into raiding and warfare. The advanced weaponry that the Europeans used in the warfare, together with diseases such as smallpox, which they introduced, decimated the indigenous communities, contributing to the decline of their cultures (O'Meara 1996).

The economy was boosted by the development of sugar plantations in the subtropical coastal lowlands of the current KwaZulu Natal Province. Labourers were imported from India to work the plantations and many Indian traders and market gardeners followed. These Indians, who were segregated and discriminated against from the start, became a further important element in South Africa's population. It was in South Africa that Mahatma Gandhi refined the techniques of passive resistance, which he practised later in India (Freund 1998). The discovery of dry deposits of diamonds at what became the city of Kimberley drew tens of thousands of people, black and white, to the first great industrial hub in Africa, and the largest diamond deposit in the world. The mineral discoveries had a radical impact on every sphere of society. Labour was required on a massive scale and could only be provided by black Africans, who had to be drawn away from the land. While the white settlers expanded their farm areas and agricultural production, a substantial black peasantry arose, often by means of sharecropping or labour tenancy on white-owned farms. At the same time, African communal struggles to maintain access to the land in rural areas posed a powerful challenge to the white state.

During the period 1934 – 1948, the official government policy towards black and coloured Africans had become that of segregation (Liebenberg and Spies 1993). It was a policy that politically excluded Africans from meaningful participation in the affairs of the state while it sought to consolidate white supremacy in the face of a growing African proletariat. Liebenberg and Spies (1993) also report that in the field of education, the Bantu Education Act of 1953 was labelled by the Methodists church as directed at conditioning the African people to a predetermined position of subordination in the state, a criticism voiced even by a host of other church bodies and educational

institutes. To this date, South Africa's black population²⁰ lags behind other races in literacy rates and in their capacity to assert their rights. This is an important point to note since Multi-Stakeholder processes involve negotiation processes, which should result in consensus-based solutions. How this can be achieved in approaches that bring together actors with diverse backgrounds as this history is unravelling is the challenge that this research attempts to explore.

As a result of laws and regulations mooted by the state, such as the Natives Law Amendment Act of 1937, South Africa has to date inherited a legacy of segregated settlements where blacks, coloured and whites reside in different settlements. The classification of people into black, coloureds and whites was a social apartheid Act²¹, which provided for the classification of people. The racial group of an individual was determined by his or her appearance and by general acceptance and repute. In spite of the anguish and hardship that such laws brought, the apartheid leaders saw it as a small price to pay for the "advantage" to be accrued in a strict separated society.

According to Liebenberg and Spies (1993), the Group Areas Act of 1950, which cut across all traditional property rights and led to the eviction of thousands of blacks, Indians and coloureds from their homes, was the cornerstone of apartheid and became a source of deep resentment. In 1913, the first Union Government enacted the seminal Natives Land Act. This Act defined ancestral lands and declared illegal all land purchases or rent tenancy outside these lands. These lands were subsequently called 'homelands' and "*bantustans*" and eventually comprised about 13% of South Africa's land surface. Large-scale forced removals from 'white' areas affected some 3,5 million people²² and vast rural slums were created in the homelands, resulting in overcrowding and impoverishment. Development investment was neglected in these areas. Both Mthatha and Kat catchments lie in former homelands then called Transkei and Ciskei respectively. The Border Corridor, which was an area that fell into the Republic of South Africa, separated Transkei and Ciskei. It included white owned farmland and the city of East London.

As a result of migration laws, which restricted black people to their homelands, high densities and communal land ownerships meant that limited and marginal land was farmed and harvested more intensively, resulting in degradation of the natural environment. To this day, these areas suffer from the legacy of inappropriate production and investment decisions left by the former apartheid government. For many people in these areas, economic and social decisions remain conditioned by the unequal and distorted access to natural resources, markets and opportunities. Economic power and privileges had been concentrated in the hands of the minority white population to the

²⁰ It is important from this point to state that 'black' is used more as a political than an ethnic connotation. It transcends racial boundaries to include coloureds and Indians. This assertion is supported by Berger and Godsell (1998; p 138).

²¹ Registration Act of 1950

²² Nauta (2001; p.7) obtained this figure from the Surplus People Project (SPP) which was an initiative of concerned academics from several universities in South Africa. The SPP was established in February of 1980 to coordinate and initiate research projects into population relocation in South Africa.

extent that the disparity between white and black is described to be one of the most inequitable in the world (Venter 1998). For instance, white farmers who numbered only 70 000 in 1998 owned almost 70 percent of South Africa's total arable land which was estimated at 86 million hectares. A notable South African politician summed up this colonial history as follows:

"It is about 500 years since the first foreign traveller Vasco da Gama, arrived here and about 350 years since the Dutch followed him. It is 150 years since the British decided to take our country and more than 40 years since the most vicious system visited this country - apartheid. An entire country was taken away from its owner's just like that. That is the history of this country. There was legalised plunder of resources, land, forests, water, the riches of the soil – all were taken away. We now have political democracy but we do not yet have economic democracy. Economic democracy presupposes that land, water and other resources must be redistributed, and that people must have access to the means of production and capital". (Tokyo Sexwale, in Sunday Times. April 2005)

In 1912, the current ruling party, The African National Congress (ANC) was founded mainly with constitutional protest as its main concern. After a long negotiation and bloody conflict, South Africa held its first democratic election in April 1994 under an Interim Constitution (RSA 1993). The African National Congress (ANC) emerged with a 62 percent majority. Its main opposition came from the National Party (NP) constituting mainly of white population and supported strongly by coloured voters. South Africa was then divided into nine new administrative boundaries (provinces) in place of the four old provinces and ten 'homelands' that existed previously. Nonetheless, to this date, as a result of the imbalances in investments by the apartheid government, South Africa still exhibits the characteristics of both the first world and third world countries. Berger and Godsell (1998; p 285) put it this way:

"In many respects, South Africa does appear like an Australia superimposed on a Nigeria. White fertility rates exhibit a first world pattern of very slow growth with white schools facing a decline. South Africa's spatial reality combines modern cities, which look like Boston and Sydney, with typical third world squatter settlements and rural wastelands."

The length, intensity and impact of colonial and settler interventions severely undermined indigenous structures and social networks as well as created deep racial schisms. Post-apartheid strategy therefore became that of creating economic equity and consensus, which meant creating a non-racial society and one in which the dominant, but marginalised black people were reflected in public and resource-use institutions. This called for the simultaneous pursuit of democratisation and socio-economic change, as well as reconciliation (Davenport 1998, 1991).

This historical exploration provides the premise for understanding the rationales that lie behind the current actions of the state and connections between decision-making, changes in structures guiding resource flows and the structure and functioning of

institutions and society at large. For instance, the rationale behind the elaborate institutional framework in the water sector, and the participatory approaches being instituted cannot be viewed as solely an exclusive efficiency strategy for economic development and the sustainable management of natural resources. Since the entire history of black protest was directed at control over or inclusion and integration into the institutions of resource management and control, equity in resource use and empowerment of formerly disadvantaged stakeholders, form a significant, if not overriding underlying principle. The attainment of freedom unshackled people's identities and aspirations. The black population could now stake their claims to their long lost entitlements.

The current government has put emphasis on soliciting genuine participation and representation of the majority black and poor community members. Challenges for the government, as an initiator of collective action in water management, are immense particularly because one group of stakeholders that the government wants to ensure their participation is an emasculated group of stakeholders now referred to as the Historically Disadvantaged Individuals (HDIs) or Previously Disadvantaged Individuals (PDIs) (Faysse 2002). HDIs are defined as South African citizens, who due to the apartheid policy that had been in place had no franchise in national election prior to the introduction of the Constitution of the Republic of South Africa. Past apartheid policies completely removed opportunities for consensual and mutual understanding among different races. As a result, the marginalized groups, specifically the black majority, having been excluded from decision-making processes for a long time, were disenfranchised to the extent that they are unable to make a meaningful contribution to the current situation without having to undergo some form of capacity building and empowerment.

3.2 Path finding: Water reforms in South Africa

Thus the preceding exploration of South Africa's history can be seen as the general context, which gave rise to the development of policies that underpin the shift to more participatory water resources management. However, did the attainment of freedom create sufficient space for local people to assert themselves in the management of natural resources? Judging from the long list of policies and Acts calling for participation of civil society in resource management, it is apparent that resource management strategies were to be politically driven and ideologically motivated. It was assumed that institutional reforms could unleash potential economic capacity through productive participation by the ordinary people who have for a long time been relegated to the subsistence sector, or to informal sector.

The empowerment campaign through civil society participation was mainly fueled by a largely socialist vision underpinned by calls for socio-economic equity and environmental sustainability, seemingly addressing the real issue of poverty and inclusion of the formally disadvantaged into the mainstream economy. It was a policy strategy that claimed to start from the needs of the people, all the people, and attempted to make the economy cater for people's needs.

On the other hand, to achieve the much-needed economic growth, others argued that South Africa needed to heed to the voice of the international community to keep in step with internationally promoted norms. Thus a neoliberal approach seemed inevitable. Balancing the need to increase productivity and the need to increase expenditure on caring activities (which include the cost of caring for the ever increasing HIV/AIDs burden, social grants, housing, improving access to cheaper education etc) for the ever-expanding population, made the economic 'burden' ever more challenging to carry. As it was discovered in due course, neoliberalism had no answer to the problem of poor people's inability to pay for services and to support environmental regulation. Such policies also gave little new framework for building new local organisations for resource management and services, leaving politicians and researchers to explore existing and new institutional frameworks that might help (Schreiner *et al.* 2002. Bond 2006).

The policy support for water management can be seen against two ever-evolving contexts. The first of these is the constitutional responsibility allocated to national government for the provision of adequate and affordable infrastructure to all people. This implies establishing an environment in which no parties feel excluded from the decision-making processes. In the realm of equity, the White Paper (DWA 1997) declared that:

In the context of the reform of the water law, the right to equality requires equal access by all South Africans to, and benefit from the nation's water resources, and an end to discrimination with regard to access to water on the basis of race, class or gender.

This definition of and commitment to equity was then given operational content through several Acts and activities. For instance, as a basic need, citizens had a *right* to water whether they could afford it or not. In response to this right, the state president Mr. Thabo Mbeki made a promise of 6 kiloliters of free basic water per household per month. Municipalities had to bear the responsibility for financing free basic water. Thus the free basic water policy became a tool to alleviate poverty and improve the lives of the poorest. Policy documents stress that urgent attention should be given to the 'poorest of the poor' including those who do not have any access to a safe supply of water although municipalities that were able to, could supply free basic water to all citizens. This happened at great financial cost to the government.

The second context, was the implementation of neoliberal reforms in an effort to avoid 'going against the grain' knowing that donors may not be willing to fund projects that did not operate within the neo-liberal paradigm. As a matter of fact, the extent of international opposition to free basic water was evident in the World Bank's sourcebook on Community Driven Development in Africa, which argued that 'work is still needed with political leaders in some national governments to move away from the concept of free water for all'²³. Thus South Africa also ventured on the path towards privatisation

²³ P. Bond 'The benefits of lifeline water being ignored' in *Mail and Guardian* 29/3/2001

of water supply and sanitation, through the public-private partnerships in municipal water delivery. This was necessary because many local governments in South Africa, which sat with the burden of meeting water supply and sanitation services, also lacked resources to do so efficiently. Thus private sector investment into this service was seen as leverage to the financial and human resources at the disposal of multinational companies. In due course, private sector involvement in the supply of water and sanitation services came to be blamed for the problem of high water prices reflected in the ten million water disconnections during the late 1990s (Bond 2004).

Given the massive inequality and poverty, not to mention an upsurge of anti-privatisation protests around the world, the concept of privatisation in effect came to be seen as a drift away from serving the interests of poor people and playing into the circuit of global neo-liberal power, and hence begun to attract formidable protests through popular mass action – with slogans such as “destroy the meter, enjoy the water” (Bond 2006). Many civic groups also protested intensifying municipal water cut-offs, with especially fierce demonstrations in townships of Soweto, Alexandra, Thembisa, and in some Durban and Cape Town townships (Bond 2004) and recently in a number of towns of Eastern Cape Province (Pauw 2006).

Given the strength of this sort of critique and a realisation of the possibility of social polarization, which the president Thabo Mbeki at one time termed ‘water apartheid’²⁴, politicians begun to adjust their formerly pro-partnership rhetoric. Thus actual social struggles for basic needs, underway across rural and poor urban areas, began to be seen as important as inspirational goals such as equity and sustainable water resources.

Thus, there are considerable challenges in the realm of resource management that raise questions as to whether the South African government can remain committed and garner capacities for representative and participatory policies to bring much needed local change. This quick glance at the struggles around water reforms reveals that there are social and political hurdles to be overcome in the implementation of institutional reforms for water resource management, and set the backdrop to later chapters of this study.

3.3 South Africa's water situation

In general, South Africa's water situation presents a strong justification for urgent and comprehensive management interventions. The use of fresh water is quickly outstripping the available water while the potential for recharge from natural precipitation regimes is extremely low. This is evident from the following account.

Covering an area of 1 221 000km², South Africa lies in a semi-arid to arid subtropical climate with a highly variable rainfall pattern and high evaporation rates. Average

²⁴ Welcome speech at the World Summit on Sustainable Development in Johannesburg. August-September 2002

annual rainfall is estimated at 497 mm per annum²⁵ with the Eastern Cape Province, where this study is focused, lying on the drier side, even though there are pockets of fairly wet areas. Only 25 percent of South Africa's rivers are perennial most of which are irregular. Four major river basins, which together cover about 60 percent of South Africa's land area and account for around 40 percent of the total surface runoff, are shared with neighbouring countries. Turton *et al.* (2003) report that with a combined mean annual flow of 49 000 million m³ for all rivers in the country, South Africa has less than half of water yield flowing in the Zambezi River, the closest large river in Southern Africa. Groundwater plays a pivotal role in especially rural water supplies. Because of the predominantly hard rock nature of the South African geology, only about 20 percent of groundwater occurs in major aquifer systems (DWA 2004).

The natural temporal variation in water supply means the conversion of rainfall to runoff is among the lowest in the world, hence South Africa has become a major dam builder, being listed by the World Commission on Dams among the top 20 countries in the world (Turton *et al.* 2003; p 54). About 320 major dams, each with a full supply capacity exceeding 1 million m³, have a total capacity of more than 32 400 million m³ (DWA 2004). Inter-catchment transfers constitute another important strategy employed to address the water stress situation. The quantity of water physically transferred from one catchment to another amounted to about 3 000 million m³ in the year 2000.

Gakp *et al.* (2000) and Basson *et al.* (1997) contend that South Africa's water economy has already reached its mature stage. Physical data available indicate that full utilisation of water resources has been reached and even exceeded in many parts of the country. Now looming is the complete depletion of the overall conventional water resources of the country, which is likely to occur in about 30 years should the efficiencies of water utilisation by different water user sectors not be dramatically improved and should the current growth trends in primary and urban (domestic and industrial) water requirements, mainly as a result of population growth, remain unchanged. Evidently there is an increasing pressure on the country's scarce fresh water resources. The growing pressure coupled with the challenges resulting from the dawning of the new South Africa's pose further demands on the reallocation and sustainable use of the nation's water resources leading to dramatic changes in the ways that the country wants its water resources managed. These changes are being driven by the desire to improve efficiency, equity, sustainable use and ecological health of rivers.

At South Africa's attainment of freedom in 1994, 12 million people (over 40 percent of the total black population) had no access to domestic water supplies while 20 million (roughly 75 percent of black population) lacked basic sanitation (White paper 1995; p 5. *quoted in:* Mukherjee 1996). These figures improved by 1999 to 12 percent of the population without access to clean water and 30 percent still dependent on pit latrines

²⁵ This is said to be well under the world average, which is estimated at 860mm per annum (Turton *et al.* 2003).

and a further 14 percent using bucket system²⁶. The bucket system was considered the only accepted form of sanitation service for black people during the apartheid era. To date, 231 000 households in the Eastern Cape Province are considered to still use buckets as toilets²⁷. In informal settlements, most of which can be found in towns such as Mthatha, the percentage of those using pit latrines stands at 44 percent. (Napier and Rubin 2002).

Irrigation represents more than 60 percent of the total water requirements in the country, urban requirements constitute about 23 percent and the remaining 15 percent is shared by the other four sectors, mining, manufacturing, forestry and tourism. Commercial white farmers were the largest users of river water with an estimated gross average application of about 8 000m³ per hectare on a total irrigable area of 1.3million hectares. They accounted for 67 percent of all directly used water in South Africa (Koch 1996). Backerberg (*quoted in*: Mukherjee 1996) asserts that irrigation efficiency is quite poor in South Africa as it wastes half of the water released from the dams. Forestry is viewed as a major threat to water resources as it is blamed for severe reductions in surface water. Estuaries constitute the other major water users.

A DWAF draft position paper (*quoted in*: James 2003) highlights the main issues concerning water supply at national level as being:

- **Lack of equitable access to potable water and sanitation, particularly in rural areas** (hence greater time and effort spent on water collection by vulnerable groups including women, the poor, the aged, infirm and children).
- **Increased water demand from competing users** (i.e. agriculture, industry, domestic and ecosystems, leading to sectoral and cross-border tensions, impediments to economic growth and development and degradation of ecosystems).
- **Unsustainable funding schemes for the provision of water and sanitation infrastructure and services**, and hence a concentration on delivery with limited attention to issues of sustainability.

The South African government has committed itself towards clearing the backlog of people without access to clean water by the year 2008. During the campaign for local government elections in September 2000, the state president Mr. Thabo Mbeki made a promise of 6 kiloliters of free basic water per household per month. For an average South African household of eight people, this translated to 25 litres of free water per person per day. Any consumption beyond this provision was to be paid for. This was a government attempt to ensure that the poor had access to water. Free basic water for the poor was a legal provision of the Water Services Act of 1997, which states that a basic level of water should be provided to those who cannot afford to pay. Since the provision of free basic water was a responsibility of municipalities who are obliged by the

²⁶ The bucket system is a method of using a bucket as a toilet, which is covered and later emptied when full.

²⁷ Statement made by the Minister of DWAF Ms. Buyelwa Sonjica captured by the Representative (Queenstown local Newspaper) of Friday March 10th 2006.

constitution to supply water to their constituencies, this provision can be seen to have had serious ramifications to poorly resourced municipalities such as OR Tambo in Mthatha and Nkonkobe in the Kat catchment.

As will be elaborated upon in Chapter Four, both the Mthatha and Kat catchments, the study areas, are still 'open' catchments in that they are not (yet) faced with water deficit and there is potential for mobilising new water regimes. For these areas therefore, the important challenge for water institutions lies in evolving strategies that will address the above three problems identified by DWAF, particularly as new water users and uses are mobilised.

3.4 Hydro-policies

Three major phases can be identified in relation to water policies in South Africa; (i) an early phase in which agricultural needs dominated water policy; (ii) a second phase in which industrial needs were dominant and (iii) third (the current) phase in which water resources (and demand) management and water provision to disadvantaged communities took priority. The first and second phases were characterised by a dominant role of the central government while socio-economic imperatives and international trends have influenced the government to engage stakeholder participation in the third phase.

Of courses it would be difficult to assign clear dates to these phases of water management since they tend to blur into one another as priorities and emphasis shift and change. From early 1913, agricultural needs dominated water policy decisions largely because the then ruling National Party government was not only heavily dependent upon the political support of farmers to keep it in power, but also relied on agricultural capital to finance the small, but rapidly expanding Afrikaner²⁸ business sector. Not surprisingly, the government department responsible for water management in South Africa until 1950 was called the 'Department of Irrigation' (DWAF 1986). It was only with the implementation of the 1956 Water Act that an attempt was made to statutorily recognise water user sectors other than agriculture. The promulgation of the Water Act of 1956 was therefore indicative of the transition from the first phase to the second phase, which gained momentum in the 1960s and 1970s as industrial development assumed increasing economic and political importance. Towards the 1990s, the growing public dissatisfaction over poor water and sanitation services increasingly drew the attention of the state and local authorities towards this problem and soon after 1994, it became a priority as the ensuing state policies indicate. The new national constitution (RSA 1996) provides all citizens of South Africa with the right to sufficient water and obliges the state to take legislative and other measures within its available resources to progressively realize this right. In response to this constitutional requirement, three important legislations with respect to water use and management that emerged included the National Water Policy of 1997, the Water Services Act of 1997 and the National Water Act of 1998.

²⁸ This is a term generally used to refer to white settlers of mainly Dutch descent whose adopted language became Afrikaans.

Historically, the segregational policies of the apartheid government that were enshrined in the Irrigation and Conservation Water Act of 1912 and later the Water Act No. 54 of 1956, led to an extreme bias against the majority black population. The right to abstract water was principally riparian, giving water-use rights only to those who had access to water through ownership of land adjacent to watercourses. The state had little control over how private and riparian water rights were used. For non-riparian land, water allocation could only be obtained by court order. This led to heavily skewed access to water in favour of whites, who constituted a privileged minority of private landowners. The 1956 Water Act made no mention or considerations for participation of all races in water resource management. Agricultural water users, who constituted white commercial farmers, established Irrigation Boards to manage water for their own mutual benefit.

At the advent of democracy in 1994, the ANC government seized the opportunity to formulate policies that could achieve an equitable and sustainable resource development. Institutions became the instrument through which the injustices of the apartheid era could be redressed and resources could be relocated equitably. The process of formulating the current National Water Act (1998) began in earnest soon after 1994 with the involvement of civil society. Consultative meetings were held in all the new nine provinces, organised in such manner that as much as possible, voices of the rural poor (the disadvantaged) could be heard and taken into consideration. The consultations were concluded in October 1996 and subsequently led to Cabinet approval of the Fundamental Principles and Objectives for a new Water Law for South Africa (Anderson 2000). In 1997, the government adopted a National Water Policy whose overriding principle was to ensure that the quality, quantity and reliability of the national water resources achieved optimum long-term, environmentally sustainable, social and economic benefits for the society. The new National Water Act (Act No. 36 of 1998) became the legal instrument for implementing the National Water Policy. The Act states that the National Government, acting through the Minister of the Department of Water Affairs and Forestry (DWAF), is the public trustee of the nation's water resources and will ensure that water is protected, used, developed, conserved, managed and controlled in a sustainable and equitable manner, for the benefit of all persons and in accordance with its constitutional mandate (RSA 1998). The NWA describes public trusteeship as mere custody of water resources and not ownership, since the preamble to the Act recognizes that "water is a natural resource that belongs to all people". However the Minister has overall responsibility and, importantly, the authority to ensure that all water everywhere in the country is managed for the benefit of all persons. This responsibility includes ensuring that water is allocated equitably, and that environmental values are promoted. In recognition of the '*public utility*' property of water, the Act also provided for reservation of minimum flows (the reserve) for environmental purposes and basic human needs. It allows free access for anyone who wishes to use river water for reasonable domestic use, gardening, stock watering and recreation.

Policy principles

In line with the Reconstruction and Development Program (RDP) that the government embarked upon in 1994, some of the principles adopted as the basis for the water supply policy were:²⁹

- Development should be demand-driven and community-based. Decision-making and control must be devolved as far as possible to accountable local structures. There should be a reciprocal obligation on communities to accept responsibility for their own development and governance, with the assistance of the State.
- Basic services, which include water and sanitation, are a human right.
- “*Some for all*” rather than “*All for some*”. To give expression to the constitutional requirements, priority in planning and allocation of public funds will be given to those who are at present inadequately served.
- Water has an economic value. The way in which water services are provided must reflect the growing scarcity and value of good quality water in South Africa without undermining long-term sustainability and economic growth.
- Integrated development. Water development is not possible in isolation from development in other sectors.

Notwithstanding, some researchers observed that conversion of all water rights to public property subject to governmental control has led to water rights not being adapted to hydrological circumstances. The lack of enforcement of legislation has led to encroachment of surface water rights, treatment of groundwater as open-access and therefore, overexploitation of water resources (Beckerberg 1997). A specific incident is recited in Chapter Four in which a community member in the Kat Catchment expressed his newly found ‘freedom’ to pump water from the Kat River without fear of conviction.

3.5 Hydro-institutional map

Generally, institutional reforms constitute the core of post-apartheid resource management initiatives in South Africa. The initiatives have an underlying political connotation. They are seen to provide mechanisms through which power, formerly concentrated within the ruling white minority, can now be distributed to a majority of citizens. The initiatives are also intended to fulfill the ANC political slogan ‘*Amandla Awetu*’ (power is ours or power belongs to the masses) used during the fight for freedom. Institutions are seen as the means through which the masses can gain access to national resources as well as participate in the governance of the country.

Institutions concerned with management of water resources may be divided into three broad categories; national government institutions, stakeholder participatory water management institutions (statutory and non-statutory) and water services institutions (under the wing of local government district and sub-district levels).

²⁹ Adapted from Thomson *et al.* (2001).

National government institutions

The 1996 constitution of the Republic of South Africa indicates that the government is constituted into National, Provincial and Local spheres. The constitution states that these spheres are distinct, interdependent, but also interrelated, and sets out the functional areas for each. Water resources management is an exclusively national government function. Managing waste-generating activities and the waste generated and regulating land uses that might affect water resources could, just as the provision of water services, be either an exclusively national, concurrently national and provincial, exclusively provincial or a local government function, depending on which sector and activities are involved (Thomson *et al.* 2001).

There are nine provincial governments across the country, which are political entities with their own provincial administration. These Provincial governments relate to the National government above them and to local governments below them. DWAF constitutes the highest national level government institution concerned with water management. It is responsible for carrying out constitutional as well as legislated provisions for sustainable, equitable and efficient use of the country's water resources and sanitation. Thus the overall responsibility for water management in the country lies with DWAF. DWAF performs its duties through several directorates. The Directorate for Catchment Management was created *inter alia* to address the past inequalities in accessing water and to oversee implementation and running of catchment management processes. For each of DWAF directorates, there is some devolution of responsibility from national level to nine regional offices, which function as satellite offices for the Head Office and lie within the Water Management Areas and thus their functions traverse provincial and local administrative boundaries.

Apart from DWAF, several other government departments control issues that impact directly and indirectly on water resource management, most notably the Department for Provincial and Local Government (DPLG), the Department for Environmental Affairs and Tourism (DEAT) and the Department of Agriculture (DOA). Communal irrigation schemes that were developed by the state government, or the former 'homeland' governments, are now the responsibility of the Departments of Agriculture. The DOA is also responsible for setting norms and standards for designing drainage systems. The Conservation of Agricultural Resources Act No. 43 of 1983 makes specific reference to the sustainable use of water and land. The Department of Environmental Affairs and Tourism, which controls environmental conservation-related issues is responsible for monitoring and management of estuaries and aquatic life. The National Environmental Management Act of 1998 (NEMA), which is overseen and implemented by DEAT, governs the overall conservation and correct utilisation of natural resources. It obliges DEAT to take an active role in the management of water resources. The NEMA embodies amongst others, principles of cooperative environmental governance, polluter pays, a people-focused approach and sustainable development.

A statutory requirement of NEMA is the development of Environmental Implementation Plans and Environmental Management Plans for environmental resource management. This is parallel to the Catchment Management Strategy

requirement of the National Water Act (NWA). However, the relationship between Environmental Implementation Plans and Management Plans and Catchment Management Strategies still needs to be clarified. NEMA, like the NWA, also makes provision for the establishment of institutions like the National Environmental Advisory Forum for policy issues and the Committee for Environmental Coordination.

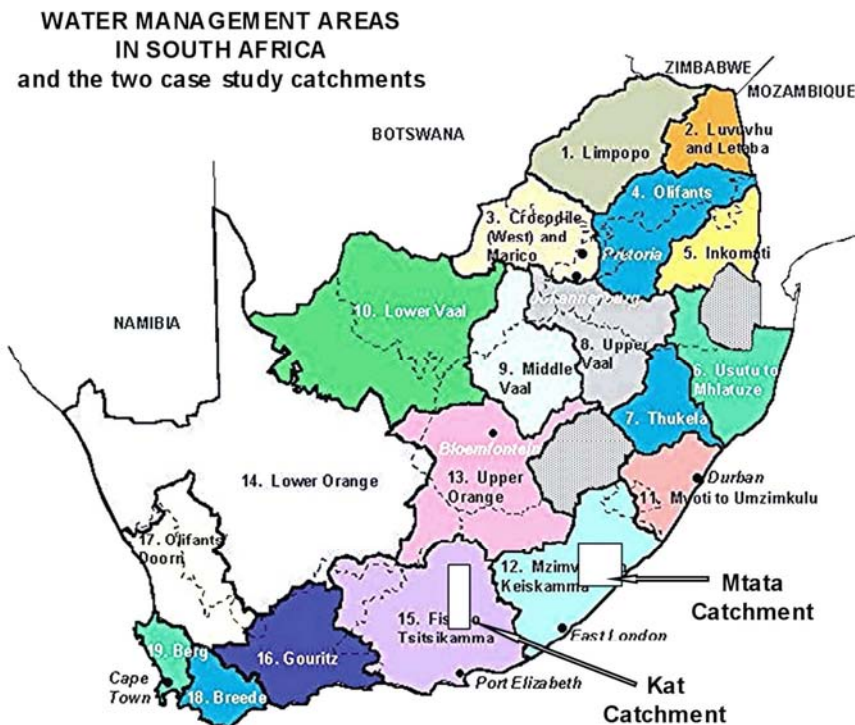
Stakeholder participatory water management institutions

The NWA recognises the importance of involving civil society, private sector, industry and NGOs in the management of water resources. Statutory stakeholder participatory water management institutions specified by the NWA include CMAs, WUAs and international bodies such as the Lesotho Highland Water Project (LHWP). Organisations that exercise public powers or perform public functions in terms of the water legislation are considered as organs of the state and therefore fall within the ambit of DWAF. Civil society also participates in water management through non-statutory institutions such as CMFs, Farmers' Unions, village level water committees and other lobby organisations such as the South Africa National Community Organisation (SANCO).

Through the promulgation of the NWA in 1998, the government declared the establishment of water management institutions and the "catchment"³⁰, became the primary unit for participatory water resources management. As an organisational strategy, South Africa was demarcated into 19 hydrological boundaries called Water Management Areas (WMA) whose boundaries traverse provincial and local government boundaries (Map 3.1).

A **Water Management Area** became a large-scale contiguous region of the country, defined by macro-hydrological boundaries, which provides the focus for national water balance planning under the National Water Resources Strategy (DWAF 1998a). Within each of the Water Management Area, a Catchment Management Agency (CMA) is required to be established. A **Catchment Management Agency** is a self-regulatory corporate body with a Governing Board and an executive or administrative structure that has the statutory responsibility, power and financial autonomy to perform a range of catchment management functions in a declared Water Management Area. Section 80 of the NWA describes the functions of catchment management agencies as to (a) investigate and advise interested persons on the protection, use, development, conservation, management and control of the water resources in its water management area; (b) develop a catchment management strategy; (c) co-ordinate the related activities of water users and of the water management institutions within its water management area; (d) promote the co-ordination of its implementation with the implementation of any applicable development plan established in terms of the Water Services Act, 1997 (Act No. 108 of 1997); and (e) promote community participation in the protection, use, development, conservation, management and control of the water resources in its water management area. The CMA was to be assisted in operation by Catchment Steering Committees and Advisory Committees.

³⁰ A catchment in South Africa context is equivalent to a river basin as well as part of a river basin.

Map 3.1 Water Management Areas and the study areas.

Source: DWAF

To sufficiently allow for micro level participation in the establishment of CMA, DWAF promoted the formation of a micro-level water institution referred to as the Catchment Management Forum (CMF). A *Catchment Management Forum (CMF)* became a non-statutory body, representative of stakeholders and organs of state in a declared Catchment Management Area or part thereof, which promotes catchment management implementation through consensual participation. In addition to CMAs, the Act requires the formation of new Water Users Associations (WUA) or transformation of the old water user boards such as Irrigation Boards (IBs) that existed during the apartheid government, to be reconstituted in accordance with the new regulations. A *Water User Association (WUA)* is a statutory body, representative of water users in a declared Catchment Management Area or part thereof, which have the power to develop and operate individual water supply schemes or engage in any (operational) water-related activity. A Water User Association falls under the authority of the Catchment Management Agency in whose area of jurisdiction it operates to the extent that the agency has received delegated powers from the Minister to direct the association's activities. An association may receive delegated powers and duties from, or be contracted by, the Catchment Management Agency to undertake activities that are within its capacity to perform.

The Department of Water and Forestry (DWAF), which on behalf of the state is the custodian of water resources, was mandated to ensure the implementation of this elaborate institutional infrastructure. CMFs became the first water management institutions to be established since their establishment required no state registration and was not dictated by any accompanying strict guidelines and stringent regulations. The process of establishing CMAs and WUAs posed unsuspected challenges. Only a few completed proposals for the establishment of CMAs had been submitted to DWAF Minister by the end of 2002. At the end five years since the promulgation of the NWA in 1998, only one CMA had been approved. As for WUAs, only 43 proposals for the transformation of the old Irrigation Boards had been accepted by DWAF out of the 272 that were submitted by the end of 2002 (Faysse 2004). The main reason for the rejection of most proposals for the formation of CMAs and reconstitution of WUAs was attributed to the poor public participation processes. It became apparent that, to be able to establish a sufficiently participatory MSP, a prolonged mobilisation process of stakeholders from poor communities was required.

Water Services Institutions (WSIs)

The Constitution of the Republic of South Africa (RSA 1996) states that the provision of water services to people for supporting life and personal hygiene is a functional area of Local Government even though the National Government has the authority to make legislation for the effective performance by the organisations in the local government sphere.

A range of policies developed over time make local governments central players in water resource management. These include the Local Government Municipal Structures Act (Act 117 of 1998), the Municipal Structures Amendment Act (Act 33 of 2000), Municipal Systems Act No. 32 of 2000 and the Water Services Act of 1997. These documents provide the policy background and a legal format through which local government can provide water and sanitation services through either internal or external mechanisms. Should a municipality opt for an external mechanism, this involves entering into a service delivery agreement with a range of possible partners which include another municipality, a Water Service Committee, a traditional authority, a community based organisation or a licensed water service provider.

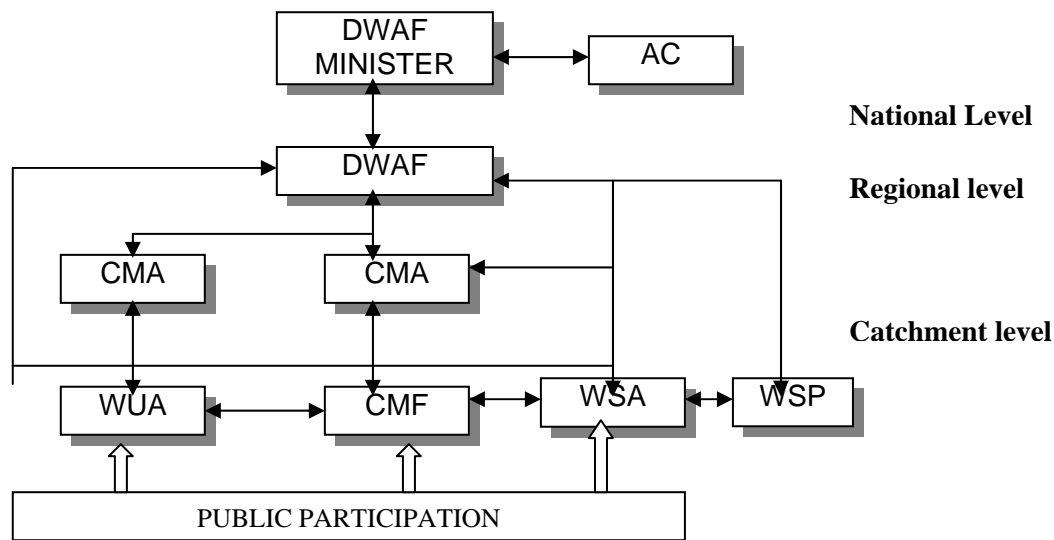
There is legislation, which regulates the actions of all these forms of Water Service Institutions (WSIs). The Water Services Act (of 1997) identifies a WSI as a Water Service Authority (WSA), a Water Service Provider (WSP), a Water Board or a Water Service Committee. Municipalities, including district or rural councils, are identified (by the Local Government Transition Act of 1993) as WSAs responsible for ensuring access to water and sanitation services. A WSP is any entity involved in providing water services to consumers or to another water service institution. This implies that WSAs have a governance function while WSP have a provision function. A WSA regulates how water and sanitation services are provided and who provides them and must progressively ensure efficient, affordable, economical and sustainable access to water supply and sanitation services. This implies that municipalities have the ultimate responsibility for water service provision in their designated areas. As a WSA, a

municipality must understand the water supply and sanitation needs of consumers within its area of jurisdiction and ensure that infrastructure for reticulation (i.e. reservoirs, pumping stations and pipelines) is developed, operated and maintained as well as managing revenue collection and maintaining consumer relations.

WSAs (municipalities) are required to generate Water Services Development Plans, which are part of Integrated Development Plans for municipal areas. The total allocation of water for various uses within a municipal has to be in consonance with what is specified in the Catchment Management Strategy (CMS). The CMS is a prerogative of CMAs and retrogressively CMFs. This means that there is a planning and an institutional relationship between CMAs/CMFs and Municipalities. CMAs and retrogressively CMFs are, in terms of the NWA, required to take into account relevant national and regional plans prepared in terms of any other law, including any development plan adopted in terms of the Water Services Act. Thus when a CMA or CMF prepares its Catchment Management Strategy (which includes an allocation plan for allocating water to existing and prospective users), the CMA/CMF needs to take into account the water requirements of the WSA as outlined in its Water Services Development Plan (WSDP). Likewise, when preparing the WSDP, the WSA must refer to the CMS to determine whether there is sufficient water available to support the proposed water services targets. The Catchment Management Strategy (prepared by a water resource management institution) and the Water Services Development Plan (prepared by a municipality) are two important complementary instruments for water management.

In addition, WSA (municipalities) are legally obliged to consult communities in preparing their WSDPs. The institutional relationship between WSAs and catchment management institutions is provided for in the NWA, which indicates that relevant local authorities are to be represented on the governing boards of the CMAs. It is important to recognise the position occupied by municipalities (WSAs) that municipalities occupy in the information is crucial in understanding the critical role that municipalities have to play in water resource management at catchment level, hence the importance of their participation in MSPs (Chapter Six).

In practice, the NWA suggests a water management framework that brings together all the three broad categories of water institutions discussed above - national government institutions, stakeholder participatory water management institutions (statutory and non-statutory) and water services institutions which fall under the wing of local government district and sub-district levels. Figure 3.3 on the next page is an illustration of the current institutional structure for water resource management. Multi-stakeholder participation is expected to happen at each level. However, catchments are the only level where maximum multi-stakeholder participation can be expected to occur since at this level, even the local actors have a higher chance of participating.

Figure 3.1 An overview of existing water institutions in South Africa**Legend**

AC	= Advisory Committee
DWAF	= Department of Water Affairs and Forestry
CMA	= Catchment Management Agent
WSA	= Water Services Authority (Municipalities)
WUA	= Water User Association
CMF	= Catchment Management Forum
WSP	= Water Services Provider (largely private sector)

Source: Field data. 2002

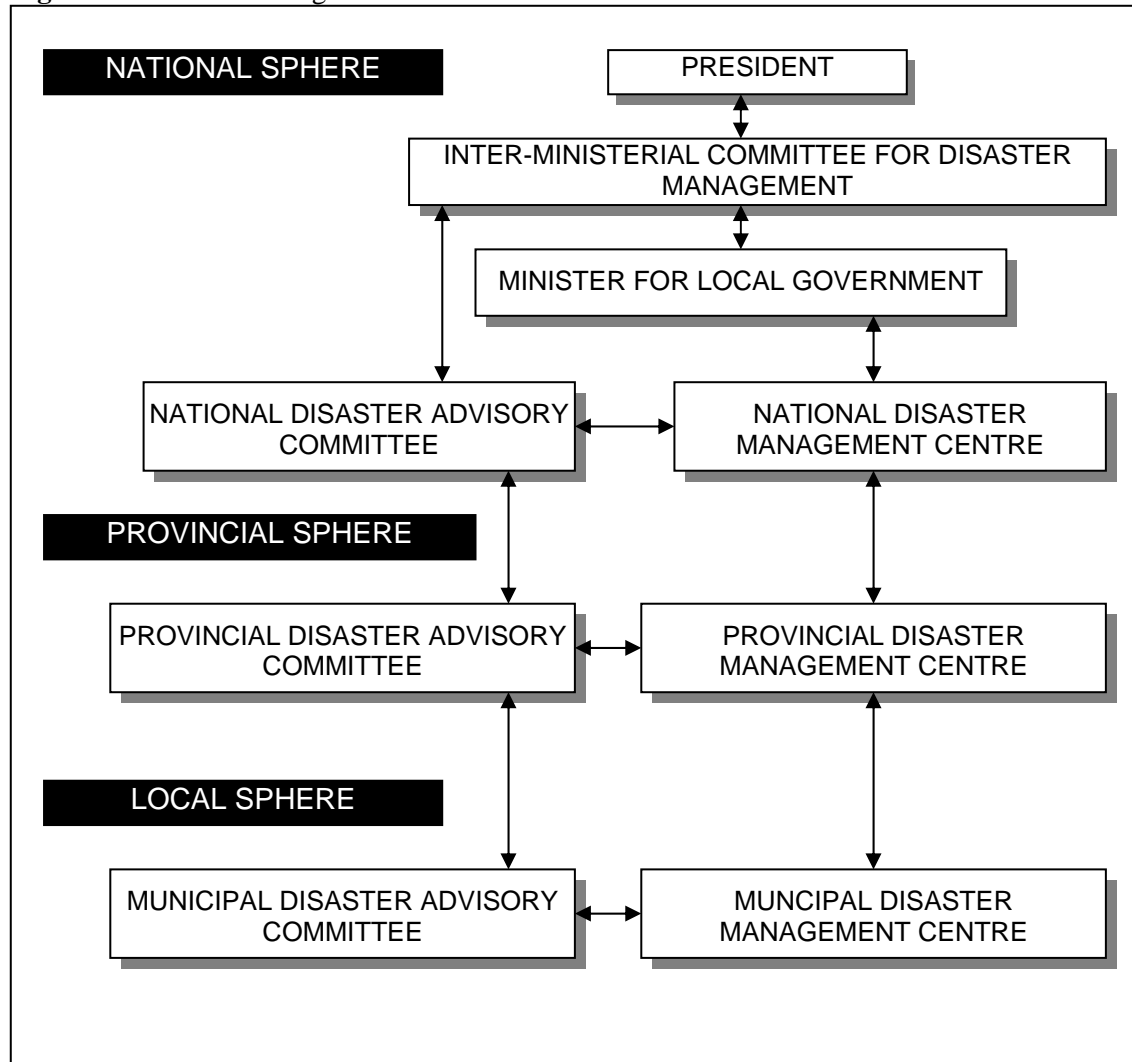
3.6 Institutional framework for flood disaster management

Since overflows of water (floods) occur within catchments and cause disasters, it is important to contemplate on how the institutional framework for the management of water relates to institutional framework for managing flood disasters. In South Africa, the National Water Act (NWA) promulgates the institutional framework for water resource management while the Disaster Management Act (DMA) promulgates the institutional framework for the management of disasters including flood disasters. The Minister of DWAF heads water resource management while the Minister for Local Government heads disaster management.

The current institutional framework for disaster management came into place in January 2003 soon after the promulgation of the Disaster Management Act No. 57 of 2002. The Act positions the management of all forms of disasters (floods, drought, fires, hurricanes, storms, snow, industrial etc.) under the responsibility of the National Disaster Management Centre (NDMC) housed in the Department of Housing, Local Government and Traditional Affairs. This implies that all water-related disasters are managed within the broad framework of national disaster management policy and legislation.

One of the core functions of the NDMC is to act as a repository of, and conduit for information concerning disasters, impending disasters and disaster management. In addition to the NDMC, the Act proposes the establishment of Provincial and Municipal Disaster Management Centres. All disaster management centres operate with input from Advisory Forums, which can be described as statutory multi-stakeholder platforms intended for consultation and co-ordination of actions and matters relating to disaster management at their designated levels (Figure 3.2).

Figure 3.2 Disaster management institutional framework.



Source: Field data. 2003

3.7 Conclusion

South Africa's history reveals social dispossessions; invasion of indigenous communities, discovery of natural minerals which consequently led to the diversion of black labour from agriculture to mining, displacement of indigenous people from productive land, an extended period of social conflicts and oppression, emancipation of

the indigenous people and finally a genesis of social healing through reconciliation. Post-apartheid strategy therefore became that of creating economic equity and consensus, which meant creating a non-racial society and one in which the dominant, but marginalised black people were reflected in public and resource-use institutions. This called for the simultaneous pursuit of democratisation and socio-economic change, as well as reconciliation. Not surprising that one of the three management goals for water resources contained in the National Water Policy is the achievement of equitable access to water.

The pursuance of stakeholder participation in water resource management in South Africa has happened simultaneously with the emergence of society from a history of division, resistance and social struggle. Considering that 70 percent of the population that is poor and poverty stricken can now equivocally contest for national resources, the state has no doubt a daunting task of creating an enabling environment for amicable negotiations that would achieve equity among diverse cultures and at the same time maintain a sustainable use of the contested resource.

The exploration of institutional frameworks for water resource management and flood disaster management has revealed that policy formulations, planning and reality with respect to management of water resources in a catchment, do not reflect the principles of IWRM whereby a holistic approach which also takes into consideration the risk posed by hydrological imbalances (floods and draughts) is comprehensively tackled by the relevant catchment water management institutions. How this may affect responses to flood risk and whether there is potential for CMFs to expand their agendas to include flood hazard management is the concern of Chapter Seven.

CHAPTER FOUR

A TALE OF TWO CATCHMENTS

Rowe (1989) recognises that the world is composed of ‘physical facts’ and ‘social facts’. I see ‘physical facts’ as the ‘hardware’, the part of the world that is tangible, such as all the natural resources and technologies mediating their cycles, and ‘social facts’ as the ‘software’, the part we cannot touch but is central in regulating the use of resources and related technology. As in computer technology, in which the ‘hardware’ interacts with ‘software’ to produce results, society too produces results from the use of resources and related technology. Even though the subject matter of social science is largely composed of social facts, physical facts constitute the basis of social interactions. This chapter presents the interaction between the physical and social facts in the study areas. It introduces the two MSPs and their environment: the Mthatha Catchment and its Forum herein referred to as the Mthatha CMF and the Kat River Valley Catchment and its Forum herein referred to as the Kat CMF. The chapter is largely a descriptive summary of the origins of the two CMFs and details of the immediate environment in which they are embedded.

As a result of marginalisation of former homelands during apartheid era, geographical information about these two areas is very scanty or completely non-existent. Most of the information about Mthatha catchment was obtained from recent studies of the catchment (Mthatha River Basin Study Volumes 1–13) undertaken by consultants contracted by DWAF. These studies were undertaken as a result of DWAF’s interest in generating a catchment management strategy for Mthatha catchment. Since no such interest existed in the Kat catchment, recent technical information from the Kat catchment was very limited at the time of completing this study.

4.1 The Eastern Cape Province

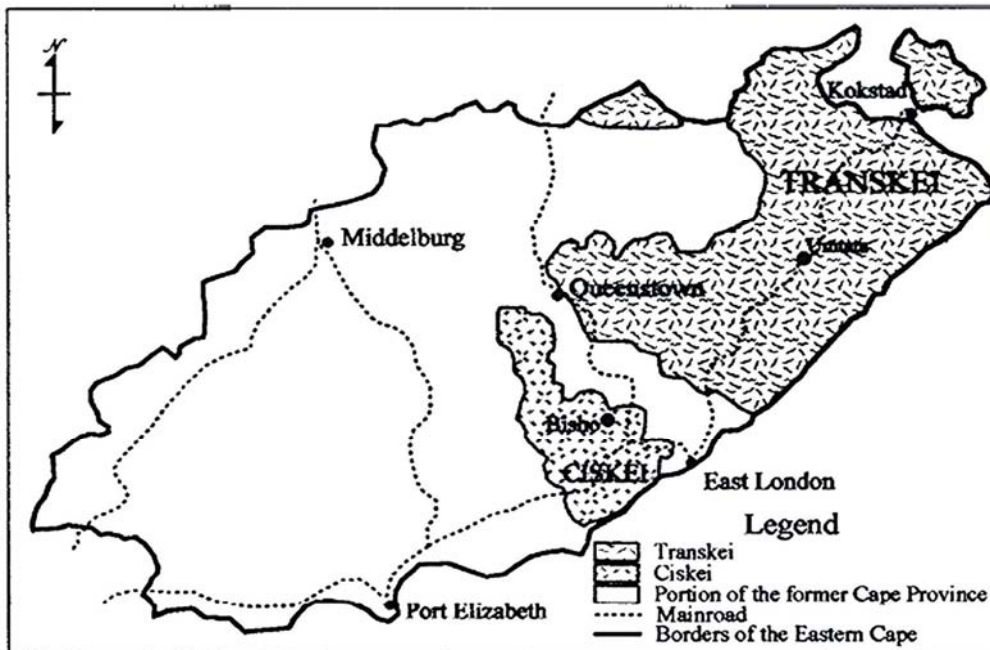
The apartheid government created a South Africa for the white minority and ‘reserves’ then known as ‘homelands’ or ‘bantustans’ for the habitation of black people and governed by puppet regimes. The Mthatha catchment and the Kat catchment both lie in these former ‘homelands’, then known as Transkei and Ciskei respectively. It is important however to note that only approximately half of the Kat Catchment fell within the Ciskei from 1980 onwards. Prior to 1980 only a small area of the Kat (Healdtown District) was part of the Ciskei. In 1976 the apartheid government granted full independence to the Transkei government and to Ciskei in 1981. As a result of emigration restrictions, these areas became densely populated. Having been located mostly on marginal lands with limited socio-economic infrastructure and confounded with high unemployment rates, residents of these areas became impoverished. In 1995, South Africa held its first democratic local government elections and Transkei and Ciskei became re-integrated into the new Eastern Cape Provincial government. (see Maps 4.1 and 4.2).

Map 4.1 Position of Eastern Cape Province in South Africa and the research study.

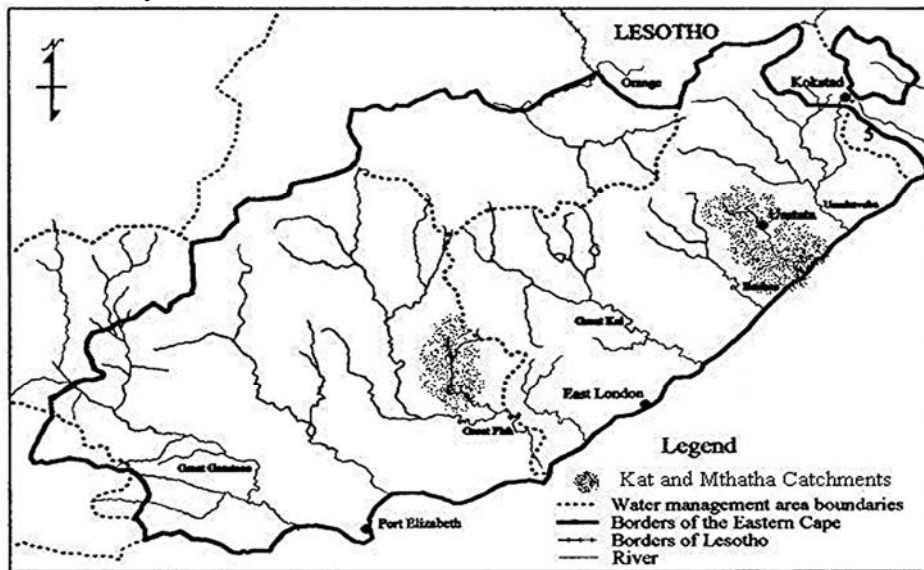


Source: DWAF 2001b

Map 4.2 ECP in relation to the former Transkei and Ciskei



Source: Lent *et. al.* 2000

Map 4.3 ECP river system with Kat and Mthatha catchments

Source: Adapted from Lent *et al.* 2000

The Eastern Cape Province is one of the nine provinces in South Africa and covers an area of 169 875 square kilometers and has a population of approximately 7 million people representing 15 percent of the country (StatsSA 2005). The great majority of the population is Xhosa speaking, with minorities speaking Afrikaans, English and Sotho; 65 percent of the population is classified as rural. The most densely populated districts are those of the former Transkei, reaching as high as approximately 93 persons per square kilometer in the Mthatha District (ECSECC 2000). The Eastern Cape is, by most indicators, the province with the highest incidence of poverty in South Africa: it has the lowest mean monthly household expenditure and the lowest Human Development Index (HDI), which is a measure of socio-economic development of a given society (UNDP 2003). The great majority of the poor are located in the former Ciskei and Transkei and poverty is particularly pronounced among black, rural and female-headed households. Landlessness, vulnerability, unemployment, lack of basic services and above all poverty, remain central to the lives of the majority of the population of Eastern Cape (Lahiff 2003).

Diamond and gold mines that were established about 700 kilometers away to the north of these catchments had a profound impact on these areas. Black males were drawn away from these rural areas to provide labour in the mines. Lahiff (2003; p 6) reports that the Eastern Cape was traditionally the greatest supplier of labour to the Witwatersrand, the majority of which went to the goldfields. As a result, to this date, a large percentage of rural households are female headed. An old man in Mthatha shared with me his version of why he thought rural development was never a priority to the apartheid government. He asserted that creating a healthy peasantry that sustained itself as agriculturists and turned the homelands in thriving centres of agriculture and industry would have threatened the existence of the migrant labour force as well as the existence of the unemployed mass who could be drawn on when necessary. In this respect, it was

the deliberate design of apartheid policies to maintain the former homelands in a permanent state of underdevelopment in order to be able to drain its labour resources.

The integration of Transkei and Ciskei into the new Eastern Cape Province also required the introduction of new institutional structures since the apartheid regime had marginalised and destroyed African indigenous social structures or modified and co-opted them into structures of power through the homeland systems. Nauta (2001; p 90-96) explains that both Transkei and Ciskei had dictatorial government systems during the apartheid era and traditional leaders were in charge of what could be termed local government. Colonial powers, which became the apartheid regime in later years, used local leaders to manage the affairs of black areas, thus creating apartheid puppets or loyal groups of leaders. As a result, rural people mostly the youth, motivated by distrust of their collaborating tribal authorities, took matters of local rule into their own hands and formed civic organisations. These ward committees, village committees and other aggregations of citizens liaised with a united democratic front to oppose all forms of organised resource management emanating from the state, consequently leading to the disintegration of indigenous environmental management systems. Natural Resource Management initiatives were thus perceived as programmes to facilitate social and economic domination by the state. Any form of participation in resource management was seen as collaboration with the oppressor.

This history is largely responsible for the absence of indigenous natural resources management institutions embedded in traditional structures or indeed government supported and community based organisations in both the Mthatha and Kat catchments. Rivalry between elected local government and tribal authorities and the lack of community-based structures has meant that government departments and municipalities remain key actors (and in many cases the only actors) in decision making over the management of natural resources (Lahiff 2003). Of special significance in terms of socio-economic emancipation of rural people was the Reconstruction and Development Programme (RDP). RDP was a strategic plan developed by ANC and its allies to map out and implement the reconstruction of South African society. Municipalities became the major vehicles through which huge sums of state funds were channelled to support local level development initiatives (domestic water supply, housing, electricity, etc). Thus government departments and municipalities etched their positions in society as the main conduits through which local people could contest for natural and financial resources. The absence of NGOs with specific interest in water resources in Mthatha and Kat catchments is notable but not surprising given that historically, there was more focus on emancipation of society than on resource management.

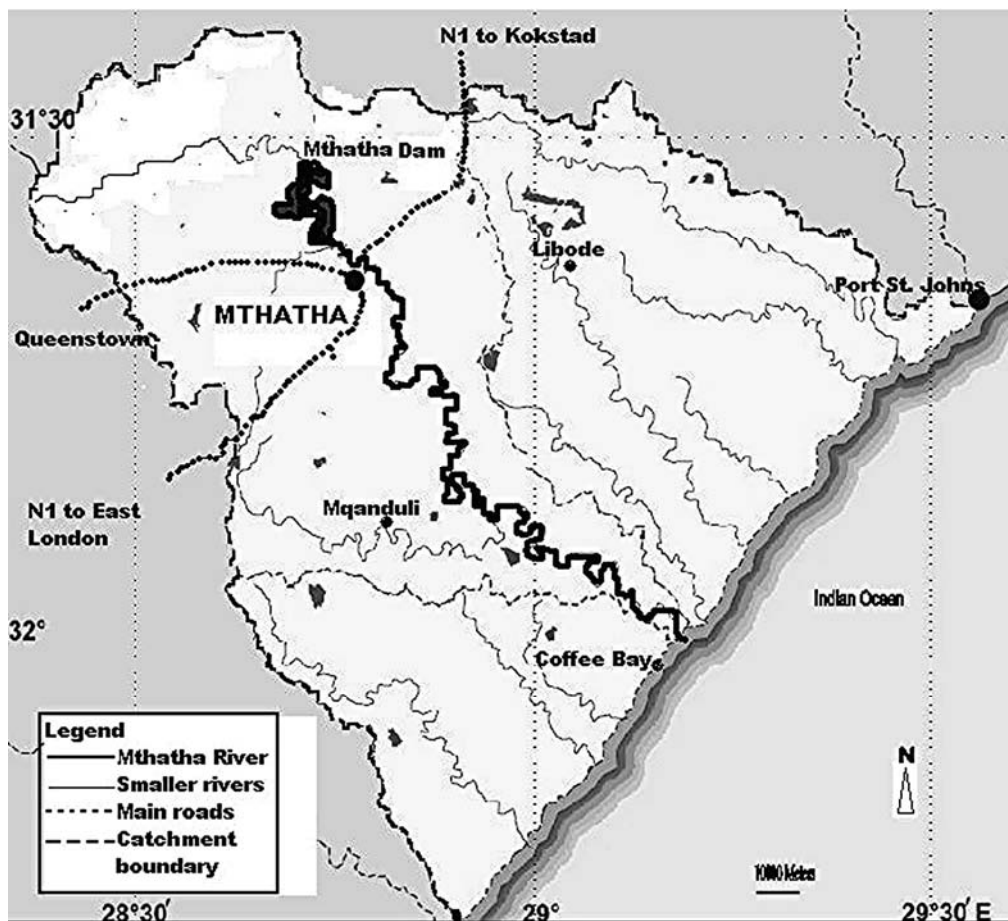
This history implies that the newly emerging CMFs did not have horizontal or vertical institutional structures within the water resource management sector to which they could anchor nor were there traditional structures within which they could be embedded. They emerged as grassroot institutions whereby the term 'grassroot' referred to the representation from local communities that the institutions were anticipated to attract. CMAs, if they had existed in these catchments could have provided a useful vertical link. The long journey to freedom that the local people had

travelled placed such newly emerging resource management institutions in an awkward position, since local people perceived such institutions as avenues for gaining access to long lost entitlements and income.

4.2 The Mthatha Catchment and its CMF

Towards the east southern border of the Eastern Cape Province of South Africa and within the borders of an area formerly known as Transkei, lies the Mthatha Catchment (Maps 4.1, 4.2 and 4.3). In terms of the South Africa's established hydrological zones, the catchment falls in the Water Management Area 12 namely referred to as the Mzimvubu to Keiskamma WMA.

Map 4.4 Mthatha catchment map showing the main Mthatha River with its tributaries and the Mthatha dam on the upper reaches of the catchment.



Source: DWAF 2001b

Geo-physical environment

The Mthatha catchment is made up of three secondary catchments covering a total area of approximately 5500 km². The catchment forms a deltaic (triangular) shaped catchment. It extends 95 kilometers along the coastline narrowing inland. It is generally

hilly and rugged rising to about 1700m above sea level (Map 4.4 and Plates 2 and 3). The coastal areas where the river joins the Indian Ocean, boast extensive and impressively breath taking scenic views referred to as the 'wild coast', which provides the catchment with sufficient potential for tourism. Non-water related infrastructure in the catchment include three surfaced main trunk roads, an airfield, telecommunications, electricity and extensive tourism infrastructure along coastal areas. A railway line exists which is non operational and appears run down. In broad terms, most infrastructure can be described as underdeveloped.

Water resources

The Mthatha River is the major river draining the catchment with an average mean annual runoff of 382 million m³ per annum (DWAF 2001b). The quality of water in the Mthatha River is being degraded due to the serious erosion problems in the catchment as well as pollution through the discharge of raw sewage effluent.

The Mthatha dam constitutes the main reservoir on the upper ranges of the catchment. With a surface area of about 25km² and a total gross capacity at 254 million m³ of water, it is the largest dam in the Province. The Mthatha River emerges inland from the dam and flows southward for about 100 kilometers, draining deep valleys towards the southern coast where it ends into the Indian Ocean. The dam has a 1 in 50 year yield of 145.5 million m³/annum of which approximately 22 million m³/annum is allocated to the Mthatha Water Supply Scheme for domestic and industrial use. This is said to represent 15 percent of the dam yield. The remainder is allocated to Electricity Company of South Africa (ESKOM) for hydropower generation at First and Second Falls hydropower stations downstream of Mthatha Dam. DWAF (2001b) indicates that the Mthatha Water Supply Scheme has sufficient pumping, storage and conveyance services to supply Mthatha consumers until the year 2007 based on a population growth rate of 2.5 percent per annum. Urban water requirements constitute 58 percent of domestic requirements (even though the urban population presently constitutes only 13 percent of the catchment) of which 99 percent is supplied to Mthatha city alone. Notwithstanding, the Mthatha Basin Study reports that no historical measurements for raw water supply to Mthatha city or releases to ESKOM for hydropower requirements were available until as recent as 1998 when meters were installed to record these abstractions. Consultancy reports on the internal water reticulation infrastructure of the city indicate that up to 51 percent of the existing water supply is unaccounted for due to the losses and unmetered connections.

Even though 90 percent of water use is supplied from surface water, the catchment has significant groundwater resources too. Information on boreholes recorded on 1:50,000 topographic map sheets covering the catchments, obtained from the National Groundwater Data Base (NGDB) of DWAF reflect only a small percentage of the total number of boreholes drilled in the catchment over the years. Bembridge (1984), which can be considered to be an old report, puts the statistics at more than 700 wells and boreholes. Based on a generally accepted groundwater recharge estimated as being between two and five percent of average annual precipitation, the annual groundwater recharge for the study area is estimated at 90 to 245 million m³/annum, which is a

substantial amount of potentially exploitable groundwater, a portion of which contributes to base flow in the rivers. DWAF (DWAF 2001b) estimates that between 89.1 million m³/annum and 245.3 million m³/annum of groundwater recharge is theoretically available to the Mthatha River catchment assuming a recharge of two to five percent of annual precipitation. This represents a significant resource, which according to DWAF is capable of supporting water supply schemes of various sizes such as:

- Primary point source supply throughout the study area
- Small reticulation schemes from boreholes producing in excess of three liters per second for villages of up to 3 000 people
- Medium reticulation schemes in areas where groundwater development potential is moderate or high i.e. up to 10 liters per second for basic supply to 10 000 people

In terms of water supply to rural population, the groundwater resources are considered to be able to support about 800 to 2000 persons per square kilometer over most of the catchment, assuming the free basic water policy of 25 liters/person/day. With regard to the ability of groundwater to support an urban water demand, estimated to be 200 liters/person/day, the resources over most of the catchment are able to support between 100 and 300 persons per square kilometer. The population density for Mthatha is estimated at 93 persons per square kilometer. It is clear therefore, notwithstanding the simplifications inherent in these calculations, that the groundwater resources are sufficient to make valuable contribution to the water supply needs of the catchment (also confirmed by the story in Box 4.1). My elementary hydrocensus, which I undertook through an exploratory tour of the catchment, revealed that groundwater resources are currently under-exploited. The combination of surface water and groundwater resources in Mthatha catchment shows that there are sufficient water resources to play an important role for future water supply development.

Box 4.1 Groundwater might prove the sustainable solution for residents of a rural village in Eastern Cape Province.

A study by the Department of Water Affairs and Forestry (DWAF) indicated massive underground reserves in Lusikisi area in the Oliver Tambo Municipality in the Mthatha catchment. The Lusikisi Groundwater Feasibility Study was conducted by SRK Consulting Company, which was commissioned to undertake exploratory work to assess underground water resources. Modern satellite imagery, known as Landsat Linear Mapping was used to highlight geological formations below the surface. Interpreting of this information on the surface using electro-magnetic and magnet techniques helped define 24 drilling targets around prominent satellite lineaments associated with dolerite intrusions. After 18 exploration holes were drilled, one provided an airlift of 85l/s, and two each of 22l/s.

DWAF engineers considered these finds 'exceptional'. These groundwater reserves could provide up to 50 000 people in the area with at least a basic supply of potable water.

Source: The Water Wheel 2006. Volume 5 No.4

Summary of the hydrological data on next page, indicates a projected total water requirement of 61 million m³/annum for the year 2025 (Table 4.2) while the available water in the year 2000 was 136 million m³/annum (Table 4.1) confirming that, unless something drastic happens to the catchment hydrology, there will be ample water in this catchment for sometime.

Table 4.1 Available water in year 2000 in WMA 12. (million m³/annum)

Sub-Area	Natural Resources		Usable Return Flow			Total local Yield ¹	Transfers in	Grand Total
	Surface Water	Ground Water	Irrigation	Urban	Mining and Bulk			
Mzimnvubu	84	3	2	2	0	91	0	91
Mthatha	129	1	0	6	0	136	0	136
Mbashe	112	1	0	1	0	114	85	199
Kei	325	14	14	6	0	359	0	359
Amatola	122	1	2	24	0	149	0	149
Wild Coast	4	1	0	0	0	5	0	5
Total	776	21	18	39	0	854	85	939

¹After allowance for the impact on yields of: ecological component of reserve, river losses, alien vegetation, rain-fed agriculture and urban runoff.

(Source: DWAF, 2001b)

Table 4.2 Year 2025 base scenario water requirements for WMA 12 (million m³/annum).

Sub-Area	Irrigation	Urban ¹	Rural ¹	Mining and Bulk ²	Power Generation ³	Afforestation	Total Local Requirement	Transfers out	Grand Total
Mzimnvubu	15	8	8	0	0	3	34	0	34
Mthatha	4	24	4	0	0	29	61	0	61
Mbashe	3	2	5	0	0	0	10	0	10
Kei	135	23	10	0	0	11	179	85	264
Amatola	33	83	5	0	0	4	125	0	125
Wild Coast	0	1	3	0	0	0	4	0	4
Total	190	141	35	0	0	47	413	85	413

¹Includes component for Reserve for basic human needs at 25l/person

²Mining and bulk industrial water uses, which are not part of urban systems

³Water for hydropower generation, which represents a small portion of power generation in South Africa, is generally available for other uses as well.

(Source: DWAF, 2001b)

Climate

Mthatha experiences a temperate climate with most rainfall occurring during the summer periods. Generally, rainfall is influenced by topography in Mthatha since it decreases from above 1000 mm per annum along the coast to between 700 and 800mm per annum in the central plateau area before increasing to above 1000mm in the higher

ground further west and northwest. More than 60 percent of the annual rainfall occurs during the summer period from October to March, most of which occurs as moderate to heavy falls. Extremely heavy falls of rain, exceeding the monthly mean in 24 hours, can occur and freak storms causing severe localised damage are well documented throughout the catchment.

Temperature variations throughout the catchment area show a relatively small annual range, and are closely related to elevation and proximity to the coast. Along the coast, temperatures are greatly influenced by the warm Mozambique Ocean current and high temperature extremes can occur as a result of *hot berg* winds. June, July and August are the coldest months with mean temperatures of between 12.5°C and 14.4°C at Mthatha (inland) and between 17.4°C and 17.8°C along the coast. Extremely high temperatures of over 40°C can be experienced in the inland portions of the catchment during the summer months while at the coast the extremes are less pronounced. Frost is never experienced at the coast, but at inland areas such as Mthatha, mild to moderate frost (0°C) is experienced on an average of 3.8 days per year, mainly in June or July.

The potential evaporation throughout the catchment is relatively uniform and ranges from between 1300 mm and 1400 mm in the upper regions of the catchment to less than 1200 mm in the eastern coastal parts of the area, which is well in excess of the rainfall over much of the catchment. The highest evaporation occurs in the summer months of December and January while the lowest monthly evaporation occurs in the winter months of June and July.

Ecosystem dynamics

The Eastern Cape Province in general is widely considered to be South Africa's second most biologically diverse province in plant species, after the Western Cape Province. The Mthatha catchment comprises four natural biomes, namely forest, grassland, savanna and thicket with grassland and savanna represented in similar proportions. Coastal grasslands cover about five percent of the catchment. Rolling hilly terrain covered in Karoo shrubbery and sparse grass extends over most of the catchment. The lush coastal vegetation supports an abundance of endangered species and is subject to extensive local grazing and increasing pressure from coastal development.

While the ecological status of sub-catchments is considered generally good, the Mthatha River ecology is considered highly degraded. The fish and invertebrates surveys indicated that these species were being affected by catchment degradation caused by water pollution occurring upstream and changes in the flow regime due to the presence of the dam upstream and the three hydroelectric power generating stations operated by ESKOM (DWAF 2002).

Land use systems and agriculture

Communal land tenure system is the dominant system in the catchment. The main land use system is veld and grazing, taking up 70 percent of the land followed by settlements and subsistence agriculture (Bembridge 1984, Lent *et. al.* 2000). Large areas have been planted with commercial forests, corresponding to areas of highest rainfall. The

economy of the catchment is dependent largely on livestock farming. Sheep and cattle farming provide a living for rural subsistence farmers. A keen ethnographer can easily note that there is a special relationship between the Xhosa and their cattle. Cattle in terms of quantity are an index of wealth among the traditionalists and play an important role in the social and religious aspects of tribal life. Livestock water requirements are met mainly from surface water sources, but groundwater (wells and boreholes) does play a minor role in some areas. The Department of Agriculture indicated that the catchment is currently overstocked even though the overstocking factor could not be determined (pers. comm.). Other researchers note that most communal areas may carry up to five times more stock than would otherwise be recommended for commercial farmers in equivalent vegetation types (ARDRI 1996, de Bruyn et al. 1998, Goqwana 1998). It is observable that over-grazing contributes to the excessive sediment runoff that is experienced in many sub-catchments.

Irrigated agriculture is insignificant in Mthatha catchment. The total area under irrigation is estimated at 293 hectares while there is potential in excess of 1200 hectares, based on an estimated annual requirement of 6 000 m³/ha/annum (DWAF 2002; p. 16). Nonetheless, it is anticipated that demand for irrigation water will increase significantly when irrigation schemes that have fallen into disrepair are refurbished and new areas for irrigation schemes are identified. Most of the irrigation takes place over the eight months from March to October. Irrigated crops constitute mainly vegetables (mostly cabbage) and maize, which is marketed as green maize. Historically sorghum accounted for the largest percent of area under food grains. Due to increasing absence of men as a result of engaging in migrant labour, adjustments in the cropping systems resulted in sorghum giving way to the more manageable plantings of maize intercropped with beans and pumpkins along with food legumes, vegetables and other minor crops. In the absence of any industrial revolution, agriculture still remains the main source of employment and therefore fundamentally the source of future development for the local economy.

Demographical and socio-economic characteristics

The Mthatha Catchment is generally under-developed, and the area is characterised by a high degree of unemployment and high poverty levels. The only major town in the catchment is Mthatha where 21 percent of the catchment population resides and the remaining three percent reside in two other sub-urban areas. For a long time, the main economic base of the catchment has been the government sector, but has been shrinking since 1994. Mthatha town used to be the governmental capital of the Transkei homeland during the apartheid era. It functioned as the centre for trade and business in the region. It currently boasts a commercial airfield, which is completely absent in the Kat catchment. However in the new political dispensation, the government provincial offices were moved from Mthatha to Bisho, which is a more central town for Eastern Cape Province and lies about 250 kilometers away from Mthatha catchment. Statistics South Africa projects the population figures for Mthatha Catchment in 2005 to be 657 425 (DWAF 2001b). The overall population is projected to grow to peak at approximately 660 000 in year 2007 before declining to 600 000 in year 2020. The negative growth rate in the projected population figures is attributed to outward

migration due to the absence of economic activity and to the impact of HIV/AIDS. As a result, water demand for the future is not expected to grow significantly. There are relatively few urban and industrial water users meaning that existing primary water requirements lie in the rural areas. It is estimated that about 75 percent of the population is rural, living in remote villages with poor infrastructure. The rural communities comprise relatively low-density but numerous scattered settlements characterised by informal housing with poor road access.

Over the last decade, Mthatha has experienced a large influx of people into the peri-urban areas and rural villages surrounding the city and new settlements and villages have been established all of which require sustainable water supply. Upon entering Mthatha city, one can quickly see the informal settlements that are mushrooming on municipal land³¹ and in peri-urban areas. Some informal settlements that have now been recognised by the municipality as official settlements and designated for housing projects could actually conflict with future demands for expansion of the city and economic development while some may lie in flood hazard and insecure areas.

The evolution of Mthatha CMF

The formation of the Catchment Management Forum (CMF) in Mthatha was initiated by DWAF in 1999. My interviews with DWAF staff indicate that the main reason why Mthatha catchment was selected as a pilot project for stakeholder participation in Water Management area 12 was the amount of pollution that the Mthatha River had been subjected to. The serious pollution of a section of the river that crosses Mthatha town center at an area called circus triangle was used as evidence of the problem. Local residents and small informal enterprises dump all kinds of waste materials alongside the banks of the river all of which eventually end up into the river. It was assumed that bringing stakeholders on board in the management of the river would reap longer lasting and more effective results. But as will be discovered in the exposition later, pollution control became overshadowed by what emerged to be more serious concerns such as domestic water supply. In any case, the informal nature of the CMF meant that the organs responsible for water pollution control could not be obligated to come on-board or take action.

To form the Forum, DWAF enrolled the services of a private consulting firm to assist with the mobilization of stakeholders. The recruitment of a planning committee was the first step taken by the contracted consultants. The list of members recruited in the planning committee includes:

- ESKOM, which is an electricity Company with three hydroelectric power stations along the Mthatha River.
- UNITRA, the local university in Mthatha.
- Amanz abantu services, a non-governmental domestic water supply organisation.

³¹ Due to political pressure to recognise the plight of poor rural homeless households, these informal settlements are in the process of being legalised even though they are positioned on non-scheduled municipal land.

- Oliver Tambo Municipality, the local district municipality with jurisdiction over the catchment and beyond.
- Department of Agriculture, a government department responsible for agriculture in the whole catchment and beyond.
- Department of Economic affairs Environment and Tourism, a government department responsible for ensuring a sustainable environment and promoting tourism.

It is clear from the above list that there was no initial representation from local communities or community based organisations. The objectives of the planning committee were listed as:

- To initiate the process of formation of the CMF.
- To raise awareness of the process of the development of the catchment management strategy.
- To provide input in the planning process to be followed in forming the CMF.
- To facilitate in the identification of stakeholders.
- To provide input in the drafting of the terms of reference for the CMF.

Meetings of the planning committee were chaired by a representative from DWAF. Records indicate that the planning committee met on three occasions during which time it developed terms of reference for the CMF, drafted an information document about catchment management and the need for a CMF and planned publicity campaigns for the formation of the CMF. The committee then organized three public meetings in the more densely populated areas of the catchment where it recorded a highest attendance of 60 people representing local communities, government departments and NGOs. These meetings were specifically designed to recruit participants of the CMF. In April 2001, an inaugural meeting was held in the city's high-rise office building which houses DWAF and other government departments in Mthatha. During that meeting a management committee for the CMF was elected. The management committee comprised a chairperson and deputy, a secretary and deputy, a DWAF representative and three additional committee members. These positions were not systematically allotted to different categories of stakeholders in anyway, nor were there guidelines to provide direction on how the management committee was to be constituted. For instance, the position of chairperson was and is still³² occupied by a representative from the local University. This can only be attributed to the fact that academics are the most suited to roles requiring planning and administration through consultative meetings. The deputy chairperson was a councillor from the local municipality and a lady representing an NGO was elected in the position of secretary. The only government department represented on the management committee was DWAF. Representatives from two communities and one from a community-based organisation filled the positions of committee members.

³² The word 'still' is used with references to the time of writing this thesis, which was five years after the inauguration of the CMF. Two other chairpersons who followed after the first chairperson also came from the same University.

The purpose of the management committee was to provide leadership and oversee the day-to-day functioning of the CMF. It would also serve as a liaison between the regional DWAF directorate and the Mthatha CMF. The Forum remained an open platform whereby representatives from local communities, Community Based Organisations, The University of Transkei, Non Governmental Organisations, traditional leaders and representatives from local municipalities (six municipalities lie in the catchment) and the Departments of Water Affairs, Agriculture, and Environmental Affairs were free to attend meetings and make their contributions. However, in due course, participation of community representatives waned and that of local municipalities became problematic.

At a workshop in Mthatha, organised by the CMF in 2002 at which local community members participated, important water issues to be tackled by the CMF were listed as being,

- Hydroelectric schemes affecting ecosystems down stream
- Alien vegetation on river banks reducing runoff and stream flow
- Lack of piped water supply in many areas
- Pollution of Mthatha river
- Land degradation causing sedimentation of the river
- Poor sanitation as a result of poor management at the municipal sewerage plant
- High water losses in existing water distribution system
- Poor payment by consumers for water services
- Land tenure system pressure
- Poverty

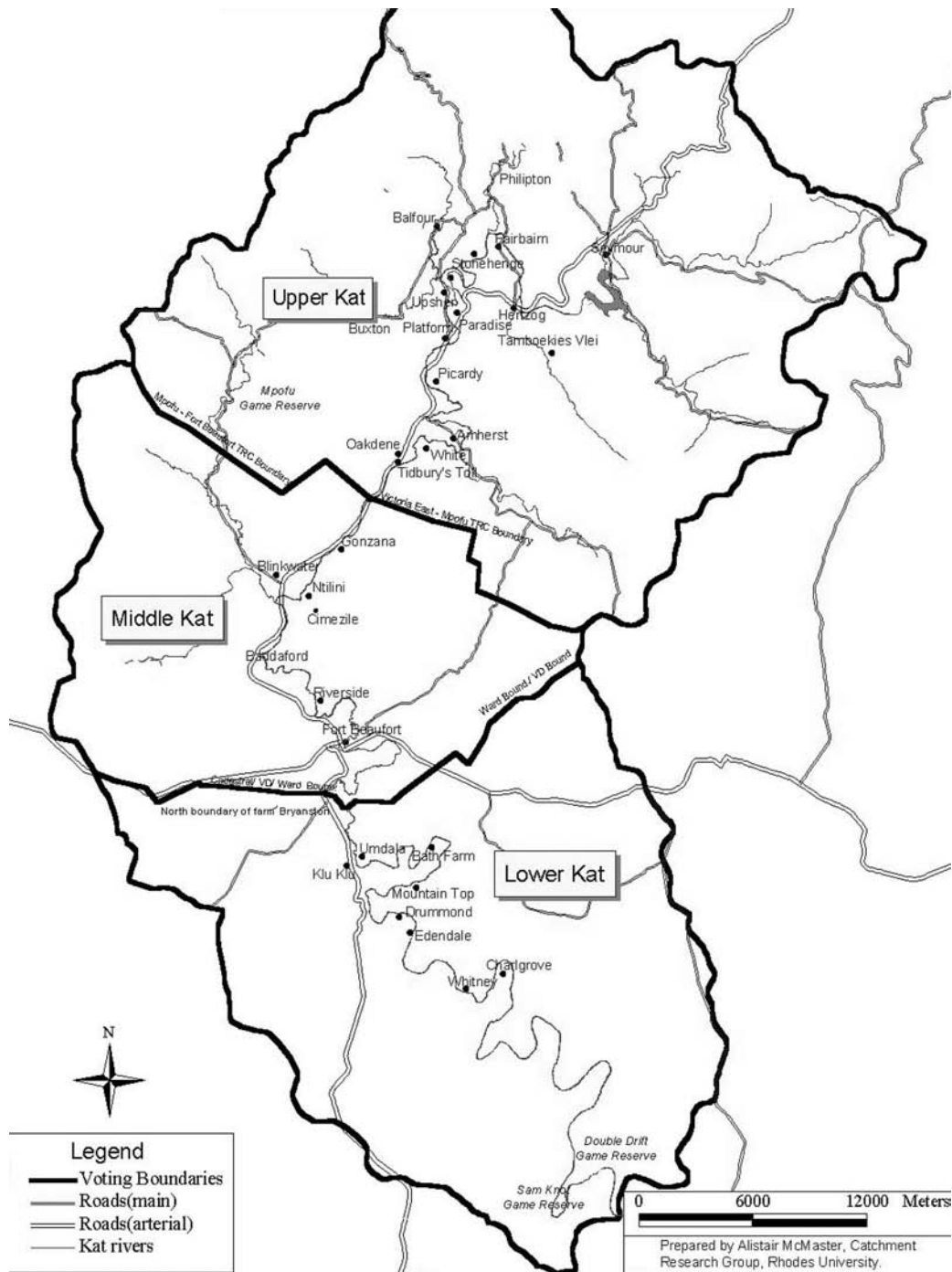
Discussions during the formation phase of the CMF and at the above workshop indicate that provision of piped water to rural communities remained the most highly contested issue. This was to be expected considering that majority of people in the catchment had no access to clean water and sanitation and the fact that little improvement had been achieved since the advent of freedom in 1994.

DWAF made significant financial investment into the operations of the Mthatha CMF. The mobilisation process took an extensive modernistic marketing strategy whereby several avenues of the public media were used to reach as many people in the catchment as was possible. Announcements of public meetings were made in both local and English languages in the local newspapers and radio. After the CMF was established, a number of meetings continued to be announced through newspapers and radio while at other times, members could be called by telephone to remind them of the meetings. Meals and documents for meetings were all provided by DWAF. At least one (and sometimes two) senior DWAF staff flew in from the head office in Pretoria to attend most meetings.

4.3 The Kat Catchment and its CMF

About 350 kilometers to the west of Mthatha, is the Kat River Valley catchment. In terms of South Africa's 19 hydrological zones, it lies in the Water Management Area 15, also known as the Fish-to-Tsitsikamma WMA.

Map 4.5 Kat Catchment with dam on the upper reaches of the catchment



Source: Rhodes University Geography Department

Geographical and demographical characteristics

The Kat River is a tributary of the Great Fish River, which ultimately discharges its water directly into the Indian Ocean. The Kat catchment extends approximately 90km north to south, and covers an area of approximately 1700km² (Maps 4.1 and 4.5 and Plates 1 and 4). The topography is characterised by high mountain ranges, with the Kat River cutting through the middle of the catchment, bordered by mountains on both sides of the catchment.

Several small settlements lie along the Kat River over the 90-kilometer stretch of the catchment. The catchment is home to about 178 000 people. Ten percent of the population resides in Fort Beaufort, the largest town, which sits at the bottom end of the middle of the catchment (Magni 1999). The rest of the population resides in rural, remote villages and on white commercial farms as farm workers. The Ciskei areas of the Kat are not especially densely populated compared to the Mthatha catchment.

Water resources and usage

At an average of about 500mm per annum, rainfall is described as the greatest limiting factor to agricultural development in the catchment. Nonetheless the mountainous regions of the upper Kat receives an annual rainfall of up to 1200mm, most of which is captured in the concrete reservoir upstream, constructed by Department of Water Affairs in the late 1960s. The concrete multiple arch dam has a 56.6m high wall with a storage capacity of 26.1 million m³ covering a surface area of 214.1 hectares. The dam was constructed mainly to supply water to commercial white irrigation schemes at the bottom of the Kat River Valley.

Consuming an estimated annual amount of 9 million m³ of water (this research), the white commercial farms are the largest water user in the catchment followed by domestic water pumped to Fort Beaufort town which amounts to only 2.5 percent of that consumed by commercial farms. Irrigation represents 85 percent of the total requirements for water. Our own research³³ arrived at the following estimates of water usage by white commercial farms in the lower Kat.

Table 4.3 Water usage on commercial farms in the Kat catchment

Type of Irrigation	Area under irrigation (ha)	Volume of water used (m ³ /ha/annum)	Total (million m ³ /annum)
Drip irrigation	859	6 000	5.154
Micro Jet	429	9 000	3.861
Total	1288		9.015

Source: Field data (May 2004)

Water use by WUA members is charged by DWAF at a rate of approximately \$22 per hectare. Demand for domestic usage in urban and peri-urban areas (Fort Beaufort and

³³ This data was collected with the help of Armath Domburg who was one the research students from Wageningen University.

Seymour) was small due to low populations, leaving the white commercial farms the major water user in Kat catchment. Other water uses included rural domestic use and small-scale irrigation projects. My research colleagues who were stationed in the catchment established that there was an additional estimated 34 million m³ mean annual runoff coming from 6 tributaries lying in the top 15 kilometers of the catchment. Indications were such that it will be a long while before water demand outstripped supply.

Commercial farmers down-stream confirmed that except for 1984 when there was a serious drought in the area, they had never experienced any serious problem with water. The available water in the river was sufficient to irrigate up to 1800 hectares per annum (pers. comm.) while the currently irrigated commercial farmland is estimated at 1200 hectares (personal communication with Mr. Roberts, a commercial farmer in the Kat River Valley). However, much of the scheduled farmland is not in full production. Notwithstanding, the water availability situation could see a rapid change should a drought occur. Redevelopment of upper Kat farmland and the joining of black farmers in serious agricultural production would also create stress on the Kat River.

Water from the dam is released only upon request by WUA members who are commercial farmers living in the lower part of the Kat catchment from about 40 to 70 kilometers below the dam. The majority of catchment residents occupies the upper 40 kilometers of the river but undertakes very little irrigated agriculture mainly due to land ownership problems and lack of access to inputs. After 1994, local people recognised their right of access to water released from the dam and have since been known to use amounts significant enough to create a shortfall in the water requested by commercial farmers downstream. However, this situation had not (yet) caused any serious problems with water use and distribution as the dam operator simply released extra water than normally requested for by commercial farmers. The dam operator referred to up-stream users of water as 'unauthorized' users. This was a reflection of the legacy of discriminatory policies that regulated access to water. One such 'unauthorised user' of river water was a hard working middle-aged man I will refer to as Chris. Chris was a stakeholder representative of his community on the Kat CMF. I found this man very enterprising, as he was one of the few local people who were still eking a living out of irrigated farming in the face of hard times. His plot, measuring close to an acre lay adjacent to the river. He grew cabbage, Irish potato and occasionally tomato. He owned a small old pump which frequently broke-down. The income from his garden earned him a decent living worthy of envious looks from the local neighborhood. Chris, oblivious of the requirements for a water license, considered that the coming of freedom meant that he could pump as much water as he wanted. He explained how such a situation could have landed him in great trouble in the previous political dispensation.

Domestic water is supplied mainly to Fort Beaufort and Seymour by a water service provider contracted by the local municipality while DWAF runs rural water schemes in two communities in the catchment. The rest of the residents who constitute 80 percent of the population depend on rivers, streams and spring water.

Land use systems and agriculture

The land-use system in the Kat is characterized by a variety of uses ranging from export-oriented citrus farming in the lower reaches of the catchment to commercially oriented rangeland stock farming in the upper reaches, hence commercial farms are the major employers of labour. In the middle reaches of the catchment can be found community-based or small-scale agriculture and stock farming. Commercial forestry exists in the northwestern upper reaches (McMaster 2002). Like the Mthatha catchment, over-grazing and denudation has significantly increased the quantities of sediment that reach the rivers. Important crops include citrus, potatoes, lucerne and maize. Vegetable gardening is an important occupation for many small scale producers. The availability of fertile plots lying adjacent to rivers and streams makes irrigation by hand possible on small plots. There are four game reserves in the area but tourism has not (yet) gained importance. Even though the area has extensive privately owned white farms with high levels of production and employing most labour, most residents are subsistence to emergent black farmers, characterized by low levels of production. A high degree of poverty and unemployment is observable in the more densely populated sections.

Among the observed serious environmental problems is soil erosion as a result of steep slopes and denudation that characterise the landscape of the catchment. This problem has led to an increasing sediment output, which is seriously affecting the health of the river. Other problems identified through community workshops included lack of clean water and sanitation, over-fertilization, litter in the settlements, water-pollution, reduced tree and grass cover, sand extraction for building, and the removal of culturally valued resources, such as plants and clay (Motteux *et al.* 2001).

The evolution of the Kat CMF

The Kat CMF emerged at about the same time period as the Mthatha CMF. Unlike the Mthatha CMF, the Kat CMF emerged as a result of activities of researchers from Rhodes University. Researchers, mainly from the Geography department, undertook anthropological research in 1996 and 1997 that resulted in workshops in 17 villages from late 1999 to mid 2000. The aim of these workshops was to create environmental awareness (co-operative and responsible resource management), introducing the concept of a Water User Association (WUA) and facilitating an understanding of the need for a Catchment Management Forum (CMF). Upstream-downstream relationships between the villages was role-played and analysed. Later, representatives from each village that would participate in the Forum were elected at workshops.

The main thrust of activities of researchers from Rhodes University was on facilitating stakeholder participation in the initiation of the transformation of the white commercial farmers' Irrigation Board to a more inclusive Water User Association (Motteux *et al.* 2001). The awareness creation conducted through Participatory Rural Appraisal methods led to the build-up of the formation of the Catchment Management Forum in which broader issues relating to catchment management could be tackled. Since the focus of Rhodes University researchers' activities was on the empowerment of previously disadvantaged communities, the CMF became rooted into the community structure of the rural Kat River areas, particularly the upper and middle reaches of the

catchment. Representation from government departments, NGOs and local government remained minimal.

The Kat CMF became actively engaged with a Land-care Project intended to address the gully erosion problem, which was prominent in the upper and middle reaches of the catchment. The project was run by stakeholders from local communities and funded by the Department of Agriculture. Despite the existing lack of management skills and project management experience among the community, the operations were proceeding well.

At the first joint workshop held as an initiative of this research, differences between the Mthatha and Kat CMFs were summarised by participants as in the table below:

Table 4.4 Differences between Mthatha and Kat CMFs

<i>KAT RIVER FORUM</i>	<i>MTHATHA RIVER FORUM</i>
The Kat River Valley Catchment originated from the initiative of local people who wanted to address problems of land acquisition, conservation as well as limited water resources.	The Provincial Department of Water Affairs and Forestry initiated the Mthatha Forum.
The Forum is composed of mainly youth from the surrounding communities and projects.	The Mthatha Forum has a majority of adults who come from various institutions and organisations. It also has District Municipality and Local Municipality representatives.
This forum does not receive any financial support from government.	This Forum enjoys some financial and administrative support from DWAF.

4.4 Conclusion

To sum up this tale of the two catchments, the following factors can be identified to characterise the catchments and also influence participatory water resource management practices:

- The dependence of several users on single river systems (Mthatha and the Kat River) for diverse water uses (hydroelectricity power generation, domestic and industrial water supply, irrigation, rural communities for domestic and productive water uses, estuaries and leisure), justifies an integrated and collaborative planning to regulate the ecological flow requirements of the rivers.
- It is important to note that in spite of the fact that catchments may straddle political administrative boundaries, both the Mthatha and the Kat catchments lie predominantly within the Eastern Cape Province. Mthatha catchment falls within the confines of the Oliver Tambo district Municipality while the Kat catchment falls within the Nkonkobe District Municipality. This implies that complications that are associated with institutional complexities arising from mismatched management boundaries may be limited in this case. This is important to note because based on a

case study from the Northeastern part of South Africa, Pollard and Du Toit (2005) have argued that due to a discordance that occurs between catchment and district boundaries, a mismatch can exist between water resource management (which is to be undertaken by a CMA/CMF) and water services provision (a prerogative of district municipalities).

- Both Mthatha and Kat CMFs emerged as a response to NWA requirement to involve grassroot stakeholders in water resource management at catchment level. The processes were externally induced whereby Mthatha CMF was initiated by DWAF with a strong top-down approach and Kat CMF was initiated by academic researchers from Rhodes University with a strong bottom-up approach in which PRA approaches were used to mobilize community members for collective action towards environmental management.
- The two catchments are predominantly black areas. The majority of the population is uneducated, live in outlying rural areas and have little to no income. Provincial statistics indicate that despite the availability of educational infrastructure, evident from the presence of five universities³⁴, three technikons³⁵ and 20 colleges in the Province, only five percent of the population has completed higher education.
- DWAF owns and operates most water supply and sewerage services in both catchments. Considering that these services are required to be handled by municipalities, this situation is a reflection of the lack of capacity among municipalities in these catchments.
- The majority of rural population does not have access to potable water supply due to lack of infrastructure. As a result, most water users in both catchments depend on untreated river water without any significant mediation from public agencies or any organised water services provider. This makes river water quantity and quality an important issue.
- It is apparent that both catchments are still open basins since not all-utilisable water is committed to present uses. Thus it is possible to increase consumption without adversely affecting downstream users.
- While most focus is still on surface water resources found in the main river systems, there is potential for exploiting groundwater resources as well as springs for rural water supply.
- Climate, rainfall data and general precipitation indicate that there is potential for expanding rain-fed agriculture in both areas. The current perceptible situation is that local people are not necessarily unproductive because they are allocating resources inefficiently but because they are caught up in a vicious circle of lack of land, capital, inputs, credit, information technology and marketing facilities. Economic forces have not accorded any real incentive or opportunity to increase volume and quality of production.

³⁴ In Mthatha, the University of Transkei lies inside the city and the chairman of the CMF comes from this institution. In the Kat, there is the University of Fort Hare, which lies 70km away, and Rhodes University lying approximately 120km away from the catchment.

³⁵ Technikons are tertiary institutions that provide technical education mostly to high school leavers and are a popular option for many learners who fail to enter Universities.

- Both surface and groundwater resources exceed the projected consumptive and environmental water requirements to the year 2025 on an annualised basis for both catchments and yet there is substantially underutilized potential for irrigated agriculture in both catchments. In the Kat catchment, there is a large contribution to the surface base-flow made by groundwater through springs positioned in the fringes of the catchment.
- The catchments have excellent tourism potential. This economic activity has potential to engage rural communities and to address poverty concerns. However, neither Forum has active representation of stakeholders from the tourism industry.
- An important impact of labour migration that is clearly observable in the two catchments is the preponderance of women as '*de facto*' heads of households. This has placed women in an unenviable position of being prime decision makers in agriculture.
- The rapid growth of urban population in Mthatha is contrasted with rapid decline in agricultural land use.
- The resource status indicates that rural community members constitute the most seriously affected stakeholder group that has salient issues to contest. Water quality, supply of domestic water and availability of water for productive uses constitute their main concerns.
- Physical data together with results from workshops organised by CMF initiators point to the following issues as critical concerns for both catchments:
 - domestic water supply,
 - environmental degradation,
 - means for utilisation of water by poor households for productive uses
 - water pollution.

These characteristics are a summary of the crucial socio-economic and physiological factors that seemed to influence whether and how stakeholders, particularly community stakeholders, participated in the collective action for the management of water resources. How these forces and demands have shaped the evolution and institutionalisation of the CMFs is discussed in the ensuing chapters.

CHAPTER FIVE

LEARNING ABOUT MSPs – METHODS AND TECHNIQUES

Do MSPs exist? Many natural resource management practitioners would attest to the existence of collective action for resource management. However, newly formed social groups may not necessarily be the organisations their adherents say they are. The critical challenge of research methodologies is to show the real practices of new institutions, whether they have power to further the interest of their members or are just tokenistic forms of MSPs. This chapter fulfils two roles. It documents the qualitative methods of enquiry considered critical in studying these new ‘group’ forms of resource management institutions. It also brings out first information about the real existence of CMFs in the eyes of different actors. Thus I document both how I built the knowledge and learned about CMFs, as well as how other CMF stakeholders learned about their own CMF to believe in their existence and relevant function.

5.1 Studying the existence of MSPs.

To begin answering the first research question set out in Chapter One, several research methods were applied. Research can be conceptualised as a learning process, which generates knowledge, skills and information to all that get involved in it. To be able to learn, a researcher employs various methodological approaches. According to Vincent (2003; p. 142) learning (lessons) can refer to a teaching exercise ... structured to provide facts, skills or information, or to the *meaning and awareness that is extracted from an experience* (emphasis supplied). In this chapter, I discuss how this ‘*extraction of meaning and awareness from an experience*’ was achieved through the use of various research methods to learn (lessons) about MSPs. This meaning and awareness also extends to social groups, for themselves and how they see themselves. In working to study CMFs, my methods for learning allowed me to interact with, and shape other actors and the CMFs themselves (even though this process itself was not understudy). Figure 5.1 on the next page is a figurative illustration of the research design used to achieve learning. The connectors in the diagram signify that the methods are overlapping, interlocked and iterative. Examples of data and lessons that each research approach generated are discussed in the respective sections of this chapter. The research design consisted of ‘methods’ and ‘tools’ that gave my research a concise structure relevant for achieving the desired learning. I use the term ‘method’ in the sense defined by the Oxford English dictionary, as means or manner of procedure, especially a regular and systematic way of accomplishing something: a technique of acting. In social science research, ‘research method’ is generally understood to include research design, data collection and analysis (Punch, 2005). However, the emphasis in this discussion is particularly on processes and data generation. I drew my research methods from the pool of methods increasingly used to explore institutional frameworks for natural resources management, that document actor experience and narratives.

Figure 5.1 Research methods and tools link together to extract meaning and awareness about CMFs.

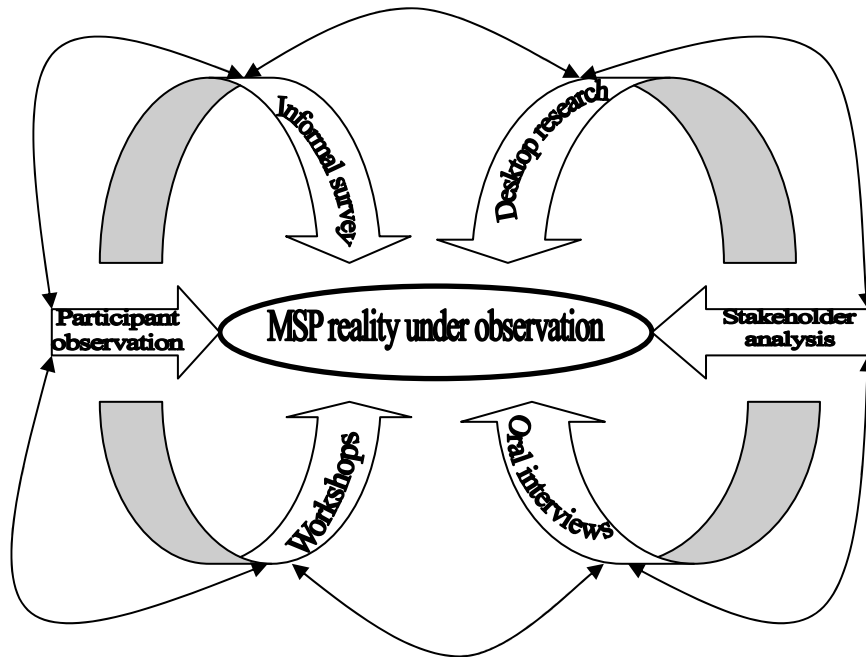


Figure 5.1 presents six different research methods used to learn about the existence of MSP and its *modus operandi* and how participants perceive their own institutions:

- Desktop research
- Oral interviews
- Informal survey
- Participant observation
- Stakeholder analysis
- Workshops

The research process was not a linear process as the listing of methods above and the ensuing sequential discussion may appear. As a matter of fact, in qualitative research, unlike quantitative research methods, one cannot sharply differentiate between research methods and processes. For instance, the process of undertaking an informal survey involves interviewing actors in a manner that does not differentiate it from the process of conducting other oral interviews. Also the process of collecting data is not mutually exclusive from analysis. These processes overlap and inform each other. As a matter of fact, the collected data continually informs the researcher on how to proceed (May 1997; Punch 2005; Wolcott 1994). In many instances, I was directed on where to go next by what I had discovered from an interview, a public meeting or from reading published documents.

5.2 Desktop research (Secondary data collection)

Desktop research is in some way a misnomer as it conjures an image of undertaking research from one's desk. On the contrary, it most often involves extensive travel to libraries, offices and a general ingenuity in picking up pamphlets, reading and listening

to media bulletins. Desktop research is a method that utilises secondary data sources to learn about a situation. Secondary data sources are useful in constructing social realities and versions of events (May 1997). However May also argues that documents cannot be viewed to be neutral artefacts. They can be viewed as media through which social power is expressed and may be viewed as attempts at persuasion. May's views are particularly important when one studies externally induced initiatives, as I did, particularly those introduced by governments since such initiatives are most often accompanied by literature that may be propagandist.

In researching CMFs, I found desktop research useful in gaining a holistic view of the situation, particularly the range of available sources that described CMFs and differences between them. While the research process was largely qualitative, desktop research provided means for collecting data with an objective of quantifying certain institutional environmental features. For instance, Table 5.1 is an illustration of how statistical information was acquired and summarised through desktop research.

Table 5.1 Summarised quantitative data on study catchments and CMFs from archival and documentary sources

<i>Type of information collected through desktop research</i>		<i>Mthatha catchment</i>	<i>Kat catchment</i>
Catchment physical features	Size of catchment	5500km ²	1700km ²
	Population	657 000	178 000
	Population density (urban)	92person/km ²	Data unavailable
	Size of upstream dam (capacity)	254 million m ³	26.1 million m ³
	River flow (mean annual runoff)	382 million m ³	Over 34 million m ³
	Total potential irrigated land	1200ha	1800ha
	Actual irrigated area	300ha	1200ha
	Rainfall (per annum)	700 – 1000mm	500 – 1200mm
CMF processes	Dates of inauguration of CMF	April 1999	2000
	Size of CMF membership (Steering committee)	35	12
	Number of stakeholder groups represented in the CMF (at inception)	8	4
	Average number of official CMF meetings per annum	4	3
Key issues of concern		<ul style="list-style-type: none"> • Catchment Management Strategy • Mthatha River water quality • Water use licensing 	<ul style="list-style-type: none"> • Land degradation • Livelihoods • Water quality

Source: Secondary data from desktop research. 2002

It is important though to note that data in Table 5.1 was further validated and clarified through the use of other methods such as oral interviews and participant observation.

For example, information regarding area under irrigation and river and stream flows in the Kat catchment was further validated through personal communication with water users in the catchment (oral interviews) and through interaction with other researchers.

Furthermore, there were other sources of document-based information that provided analytical data upon which the discussions in subsequent chapters are based. A summary of the type of information sourced from documents is presented in Table 5.2 below:

Table 5.2 Examples of documentation used in understanding the unit of analysis

<i>Type of document</i>	<i>Area</i>	<i>Information extracted from document</i>
Minutes of 14 CMF meetings	Mthatha catchment	<ul style="list-style-type: none"> • Stakeholder attendance • Resolutions • Plans and activities • CMF outputs
Minutes of 8 CMF meetings	Kat catchment	<ul style="list-style-type: none"> • Stakeholder attendance • Resolutions • Plans and activities • CMF outputs
Mthatha River Basin Study (DWA)	Mthatha catchment	<ul style="list-style-type: none"> • Geology and Hydrology of the area • Socio-economic status of the area
Mthatha Catchment Management Strategy (DWA)	Mthatha catchment	<ul style="list-style-type: none"> • Plans regarding basin water resource management
Water Resources Situation Assessment (DWA)	Mthatha and Kat catchment	<ul style="list-style-type: none"> • Water accounting³⁶ for the catchments
Development and coordination of catchment for empowerment of rural communities (Water Research Commission Report)	Kat catchment	<ul style="list-style-type: none"> • Emergence of WUA in Kat Catchment • Emergence processes of the Kat CMF
Workshop evaluation reports and project proposals	Mthatha and Kat catchment	<ul style="list-style-type: none"> • CMF self evaluation reports • Performance records • CMF strategic plans

Source: Field data. 2002 - 2005

Documents in Table 5.2 revealed that CMFs certainly did exist for their organisers. However they also began to not only show the differences in catchments where CMFs operated, but that the scope and nature of the CMFs were very different. This information reshaped my research design to study different processes, experience and

³⁶ Water accounting information refers to the estimated amount of water in the catchment and a description of water use systems. The water accounting reports provide estimates of the amount of water received in the catchment, how, how much and for what purpose this amount of water is used.

outcomes of institutions and to facilitate social learning³⁷ by enabling interaction between participants from the two CMFs. With reference to my analytical framework developed in Chapter Two (Figure 2.1), this information was essential in understanding and explaining the interrelationships between CMFs and in describing the biophysical and socio-economic conditions that existed.

5.3 Informal survey

Surveys are one of the most frequently used methods in social research (May 1997). They are defined as a method of gathering information from a number of individuals, referred to as ‘a sample’, in order to learn something about the larger population from which the sample is drawn (Reinharz 2002). The purpose of surveys in social research is varied and beyond the scope of this discussion. For this research, the purpose for using survey as a research method was to canvass the opinion of a larger population than the participating stakeholders only. The survey results were used to establish the relevance of the CMFs to the needs of catchment residents.

The survey was an ‘informal’ one whereby a questionnaire with semi-structured questions was used in personal interviews. Even if a set of structured questions was followed during interviews, I could probe beyond the set questions to seek clarification and sometimes even varied the question wording to elicit wide-angled opinions from interviewees. The survey was conducted only in the villages that had representatives attending the CMF meetings. This way, it was possible to establish the embeddedness of the CMFs in the social environment in which their membership originated. In the absence of population figures and maps for these villages, which could have facilitated a systematised random selection of interviewees, a different strategy was used whereby, a household to be interviewed was selected by simply walking through a village and following a random path as illustrated in Figure 5.2. The interview was conducted with whoever was found at home as long as that person was an adult who was knowledgeable of local socio-economic issues. While the largest number of those interviewed were a female-headed household as shown in Figure 5.3, there were situations where both the husband and wife as well as other adult family members were present and participated in the conversation, each one expressing their individual opinion.

For the purpose of this research a probability sample of the population to be interviewed was not relevant since I was not aiming at making statistical inferences from my sample onto the population. While this approach may be criticised for its weakness in relation to external validity³⁸ of the survey results, I see that having used multiple sources (120

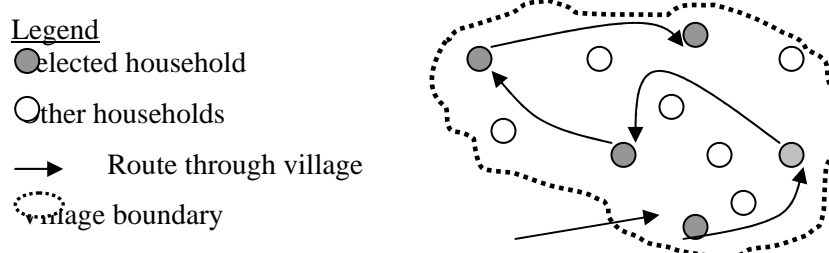
³⁷ Water resource management practitioners have established that MSP approaches demand social learning. Woodhill (forthcoming) and SLIM (2004) contend that social learning enables participants of water governance to better manage and innovate in situations characterised by uncertainty, complexity, rapid change and conflicting interests. Social learning is understood as a process of knowing in which participants modify their points of view on issues and on their practices. The process causes them to understand and act differently by asking the question: “*How can I do what I do in a different way?*”

³⁸ Here referring to the ability to generalise the results of my survey to the rest of the residents of the catchment.

interviewees) allowed for multiple mapping of realities, leading to interpretations that could be considered ‘typical’.

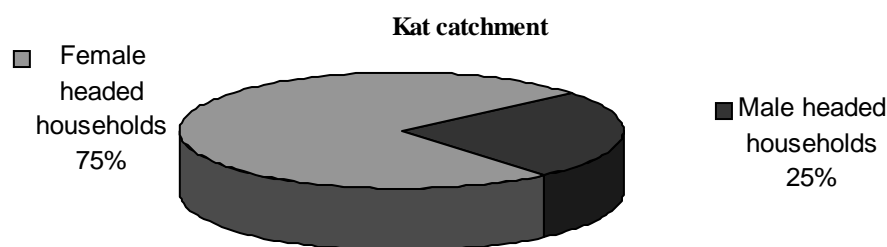
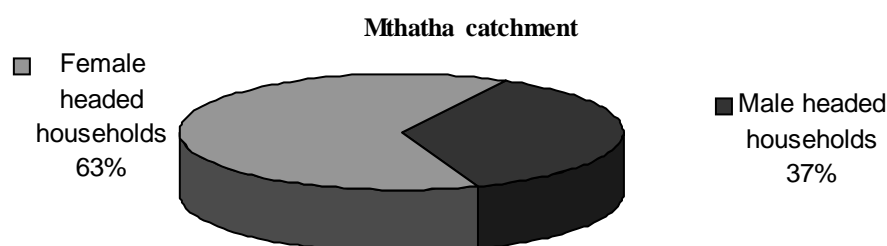
Box 5.1 on the next page shows the issues explored during the informal survey. The survey was conducted in two different communities in Mthatha catchment (Libode and Mqanduli), which can be located on Map 4.3, and three different communities in the Kat River Catchment (Ntilini – middle Kat, Platform and Balfour – Upper Kat), which can be located on Map 4.4. There were an average number of 24 interviews in each village.

Figure 5.2. Illustration of how the selection process of households interviewed during informal survey was conducted.



Box 5.1 Informal survey questions.

- (i) Location (A description of the area where the respondent resided)
- (ii) Interviewee profile (respondent's gender, age, household size, occupation, education, how long lived in the catchment, distance to water source, water uses, etc)
- (iii) Historical knowledge of the catchment (social organisations, weather, productive activities, land and water rights, flood and drought disasters that had occurred in the area)
- (iv) Current knowledge and views on CMF operations (Does the respondent understand government policy regarding water resources management in the catchment? Does the respondent know about the existence of the CMF? If yes, what opinion does the respondent have on CMF usefulness?)
- (v) Current views on improvement to livelihood (What was needed to improve the respondents standard of living?)
- (vi) If respondent is a member of the CMF, how did he/she become member of the CMF? What did he/she think was the driving force behind the operations of the CMF? How independent of outside assistance was the CMF? Was such independence possible or even necessary? What were the major problems faced by CMF and what changes were needed?

Figure 5.3 Informal survey - demographics of respondents.**Figure 5.4.** Informal survey- demographics of respondents

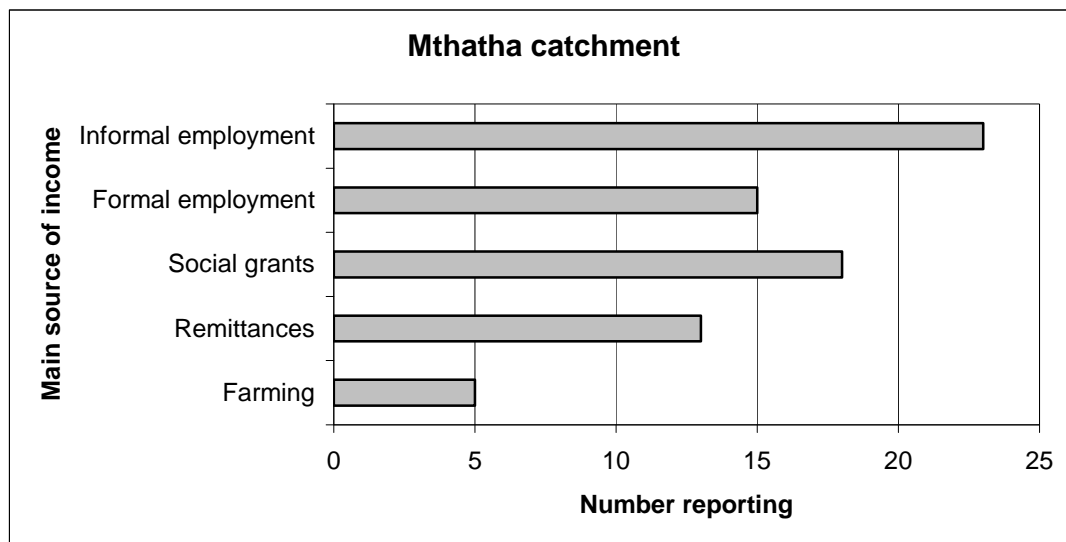
Respondents' demographics in Figures 5.3 and 5.4 confirmed the gender imbalance in household heads that exists in the Eastern Cape Province (Chapter Four). In general, a household survey of 1999 indicates that 42 percent of black households in South Africa are headed by a female (RSA 1999). This figure can be assumed to be bigger for areas such as Mthatha and the Kat, which were historically sources of male black labour for the mining and industrial sectors. This information underscored the desirability of including women in decision-making regarding water resource management (Zwarteveen 2006).

Figures 5.5 and 5.6 on the next page indicate that most interviewees in Mthatha earned their income mainly through informal businesses, which is commonly observable in these areas, as most street vendors of foodstuff were women. Social grants ranked second in Mthatha and first in the Kat. Informal businesses were not common in the Kat catchment, probably owing to the remoteness of the villages where the survey was conducted. Many families in the Kat catchment survived on government social grants. In Mthatha, probably related to the fact that the communities selected were in the peri-urban areas, a good number of interviewees were also engaged in formal employment. This information begun to reveal the priorities and life strategies that influenced community members' participation in collective actions for resource management.

Other data collected in the informal survey was summarised in Chapter Six in which opinions regarding most pressing issues in the catchment are discussed. As can be observed from the survey questionnaire (Box 5.1), question (iii) explored issues regarding flood and drought hazards. This information was relevant in explaining local interpretations of integrated water resource management to study whether local discourses took into account such hazards as integral to catchment water-flow. A few

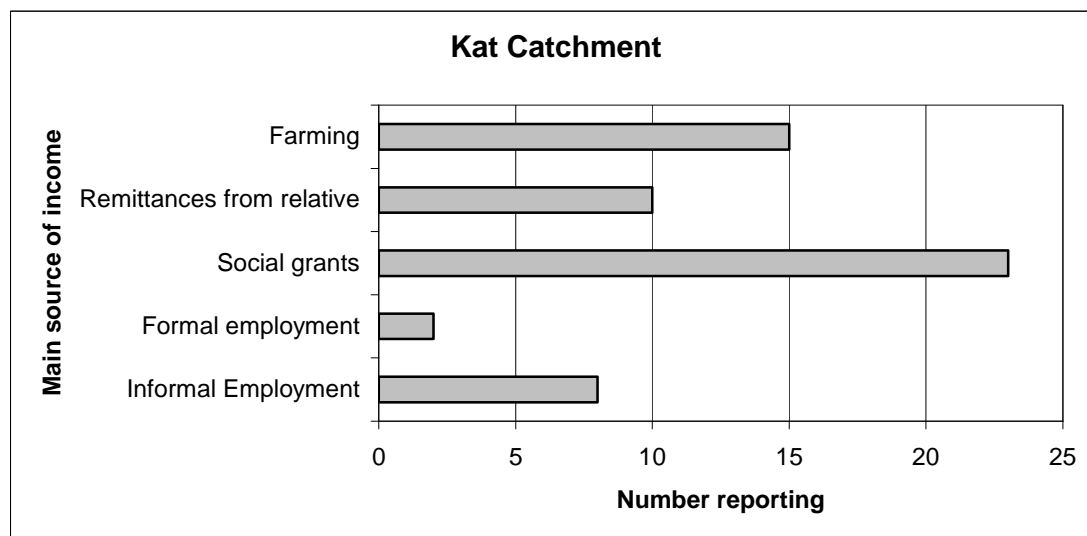
narratives regarding flood disasters that were captured during the survey have been presented in Chapter Seven.

Figure 5.5 Main sources of income in Mthatha catchment.



Source Field data. 2003

Figure 5.6 Main sources of income in the Kat catchment



Source: Field data. 2003

5.4 Interviews

Conversing with people was my main data collection tool. Depending on how relevant the conversation was, I would decide to record the full conversation in my notebook while in some cases, and I would only take note of the critical information. Informal daily conversations were the most popular source of information even though I also held focused face-to-face verbal interactions with one or more respondents. Table 5.3 on the

next page shows a list of key informants interviewed in focused face-to-face interactions.

Table 5.3 Key sources of information through interviews

<i>Informant</i>	<i>No of Interviews</i>
National officials of the Department of Water Affairs	5
Regional officials of the Department of Water Affairs	8
National and Provincial Departments of Agriculture and Land Affairs	3
Water Research Commission (Pretoria)	1
Council of Scientific and Industrial Research (Pretoria)	1
International Water Management Institute (IWMI Pretoria)	1
National Disaster Management Centre (Pretoria)	1
Eastern Cape Province Disaster Management Centre	1
Water User Association in the Kat River Catchment	2
Amanz Abantu (Water Service Provider) King Williams Town	1
Water and Sanitation South Africa Pty (Service provider) Eastern Cape Province	1
Mthatha CMF Members	13
Kat CMF members	15
Local institutions in Mthatha and Kat catchments (NGOS, Educational institutions, Hotels, Private Businesses)	12
Individuals in private capacity (Councilors, farmers, unemployed residents, informal business owners, government officials etc.)	35

It should be noted that interviews with CMF members were not necessarily one-off interactions. I had several repeated interactions with CMF members as new issues emerged throughout the study period. For instance, I had at least 8 interviews with a single member of the Kat CMF over the period of my study. Interviews with the last group of informants in Table 5.3 were generally unstructured, meaning that there was no planned list of targeted informants to be interviewed in a given area and most interviews occurred spontaneously when I met someone who could provide useful information. For example, the following narrative demonstrates how I occasionally ‘stumbled’ upon useful information and how such information was further validated:

After a focused oral interview with the Agricultural Engineer in the Department of Agriculture in Mthatha, he invites me to join him for a meal at a restaurant downtown. At the restaurant, my host introduces me to another local person we find in the restaurant. He is a prominent local businessman involved in construction projects, which included construction of water supply systems. This person shows interest in my work and I proceed to interview him after asking for his permission to record (by writing) our conversation:

Researcher: *You mean you know about the existence of the CMF in Mthatha?*

Interviewee: *Of course I do. I saw the advertisements about its formation in the local papers. Honestly I was not sure what such an organisation could achieve in the face of the difficulties being faced by our municipality. At one time*

- I even wondered whether it was not just another ANC ploy to outsmart the UDM influence in Mthatha.*
- Researcher: *Do you then think that the formation of the CMF is more a political ploy than a water management strategy?*
- Interviewee: *In Mthatha many issues are political my friend. You will discover that if people see that the new organisation has no power to control or redistribute resources, no one will show interest. Leaders yearn for power to control while the public wants access to resources. If you can talk people into believing that you can give them that access, they will follow you. Don't you see that UDM became popular here in Mthatha because they argued that ANC was failing people and that they were going to provide the alternative solution to the failures of ANC. You see, whenever people see new developments or institutions emerging, they ask which party is behind it or what power does the new institution have.*
- Researcher: *What chance then, has the CMF to make any difference in Mthatha?*
- Interviewee: *My honest opinion is that I doubt greatly whether local people will respond positively once they realize that the Forum has nothing to do with delivery of services. Government workers are supportive of any government initiative because it is their duty to do so; they are just doing their jobs. For instance, they were requested to form these Forums. They have to do it as their duty. If everyone else has to get involved, then it should be clearly explained why and what benefits will accrue to those participating, or the public in general, for spending ones time in such new initiatives. As it is now, local people know who has the power to control these resources and therefore might see that their involvement will just be a waste of time.*
- Researcher: *Where do you live by the way?*
- Interviewee: *Hah, hah, hah, is it about me now?*
- Researcher: *Yes it is about you because this is your personal opinion which I think is influenced by your frame of reference and your experiences in terms of where you have lived and who you have dealt with, don't you think so?*
- Interviewee: *Look here my friend, I am a local guy and I have undertaken a number of projects in this town. I know how these people operate ...*
- Researcher: *Which people?*
- Interviewee: *The municipal and government workers?*
- Researcher: *Does everything here depend on these people then?*
- Interviewee: *Of course, they are the only ones with the mandate to provide development and social services. They control the funds and natural resources and everyone knows about it. The general public associates the failure in delivery of social services such of domestic water and sanitation, housing and employment with the municipality and government departments.*
- Researcher: *Don't you think then, that by participating in institutions such as CMFs, local people and other stakeholders can voice their concerns over poor delivery of such services and could be a useful starting point for changing the situation?*

Interviewee: *Unfortunately, government officials are forming these institutions under their own terms. I am sure government cannot form an institution intended to criticize itself. It obviously has some form of self-interest in forming the institution. In most cases, if the new institution will be powerful in terms of control of resources, there is little chance for local people to play a leading role. As it is, the government knows that all that is needed from local people is their presence at meetings to sanction its own programmes.*

A week after this conversation in the restaurant, I met a Farmer's Union member who was also a member of the CMF. An excerpt from my conversation with him illustrates how individual opinion can be confirmed from multiple sources:

Researcher: *Why do you think there is this problem of poor participation of municipal workers in the CMF?*

Interviewee: *Simple, it is power. People here in Mthatha like control. Everything is politics. If by participating in the CMF, it were possible to gain control over water resources, by being able to decide water distribution and having access to funds for water development projects, we could have political fights over who should be a member of the CMF, who should be the chairman and who should be secretary. The problem would not be poor participation but serious contestation over membership.*

This second interview, and several others, validated the opinions of the earlier interview in the restaurant. Information from several such interviews was useful in creating and interpreting pictures of social issues and for social realities. The analysis in Chapter Six was founded on such information.

Besides generating huge amounts of textual information (recorded in notebooks and all kinds of pieces of paper), this form of research helped me develop first hand understanding of the social environment, processes and to situate CMFs from wider stakeholders' point of view.

The interviews were either focused interviews intended to collect information regarding issues of specific interest (in this case a list of structured questions would be used) or a more general discussion intended to collect general perceptions of catchment residents. The questions, which were fashioned as both closed and open-ended questions, formed the basis for eliciting narrative stories that were recorded in the field notebook and then transcribed to serve as data for analysis. Some interviews were more formally scheduled sessions consisting of series of open-ended questions that were designed to allow the respondent to describe, in his/her words, the rationale, goals, problems and policy issues. Usually I asked questions in the context of a practice I had observed.

Interviews tell both a collective and an individual story but the analysis of the narrative may focus more on one than the other depending on the object of study (Kvale 1996). For instance, several interviews with members of the CMF in both catchments yielded

narratives on the individual as well as on the CMF as the following excerpt from an interview with a CMF member in the Kat catchment indicates:

- Researcher: *How long have you lived in this area?*
 Respondent: *I was born here. I cannot remember when my parents settled in this place. I know that they moved from the North Eastern Cape to come and work on white farms here.*
- Researcher: *It appears that you still live with your parents, why?*
 Respondent: *Yes I do, even though I do have my own house within my parents homestead. It is not easy for one to acquire one's own land for settlement. Moving away from my parents will also mean owning my own farmland or other productive means for survival. However, I am preparing to find my own place soon as I am planning to marry my fiancée with whom I have a son.*
- Researcher: *How do you earn your living, do you have to depend on your parents?*
 Respondent: *Life is tough but that is how everyone survives here. My parents have a piece of land where I help out to produce vegetables. They also get a pension from the government, which is a major provider of our needs. Occasionally I also earn some money from doing small-time jobs ... such as working at the land-care project of the CMF. I know that I have to think of some ways of earning a steady income considering that I will soon have a wife and son to take care of.*
- Researcher: *What type of plans could those be?*
 Respondent: *Such as improving my education so that I can get a job. I intend to do some skills training. I am learning a lot from the land-care project and I hope that I can formalise the skills I am picking from the project by obtaining a craftsman's certificate. Then I can use such a qualification to get a job.*
- Researcher: *Where can you find a job?*
 Respondent: *It is a pity that one has indeed to leave this area to find a job. That is why we are working hard in the CMF to create employment opportunities, so that local people can earn an income through the activities of the CMF.*
- Researcher: *So you think that the CMF is not exclusively intended for management of the environment, but also for creation of employment opportunities?*
 Respondent: *Yes, I don't think that many of us could be interested if we were to spend our time just working to ensure that we live in a good environment. We also have to think of how we can survive.*

Information from this excerpt of an interview and many other similar interviews was useful in understanding the reasons behind the interest (or indeed lack of it) in the CMF by stakeholders. There were several similar responses in interviews with the youthful members of the Kat CMF, which begun to shape the picture that showed that there was more expected from their participation in the CMF than merely land and water conservation practices. While issues of personal life emerged in the interviews, the object of the interviews was to establish the respondents' connection with the CMF and

hence I always steered the interviews that way. These interviews were critical in understanding the real embeddedness of CMFs and the interests of stakeholders and how these factors were translated into functionality of the new institutions.

5.5 Participant Observation

“Participant observer” is a well-established field technique in social sciences. It is also often referred to as ethnography since it is a method in which a researcher enters and spends a certain amount of time interacting and observing local life in order to understand and document how things work (May 1997). However, some social scientists such as Punch (2005), assert that ethnography refers much to the study of culture, having originated from cultural anthropology. Hammersley and Atkinson (1995) also contend that the goal of an ethnographic study is to carefully surface the hidden structure of a specific culture. Nonetheless, May (1997) argues that there is a central ethnographical component to every successful survey work since it is important to understand people’s frames of reference to make meaningful analytical conclusions. Ethnography can also be applied to understanding new social groups emerging in a complex society (Cohen 1976) and to both interest and action groups as well as in understanding of who holds power over which resources and people. In relation to my own work, the application of ethnography to institutions involved not only identification of gender, ethnicity or work function but also included identification of shared values, recruitment methods, agreed organisational practices, networks and interdependencies that existed. Thus through my active participation in the social world of stakeholders, achieved through attending social functions and CMF activities - to observe the way they conducted their personal (or organisational) business, the way they interacted as members of the same institution and the way they made sense of the events which they experienced, - I was able to build pictures of meaning regarding relationships and functioning of the CMFs. This is a form of ethnographic analysis achieved through becoming familiar with data from interviews in combination with observation (May 1997).

Participant observation allowed close-up immersive experiences that made it easier to collect qualitative data. For instance, the identification of critical variables that influenced the process of institutionalisation of the CMFs (discussed in Chapter Eight) can positively be attributed to the use of participant observation. By observing carefully and following up on the issues that were tabled for discussions in meetings and the activities that were undertaken by CMFs, I was able to discover the important factors that contributed towards the difficulties faced by CMFs. Taking stakeholder representation as one example, my discovery of this factor came as a result of careful and long-term observation of what stakeholders did inside and outside CMFs. This personal experience testifies to May’s assertion (1997) that participant observation gives opportunity for ‘eurekas’ or ‘pop-through’ discoveries than would, say, a one-shot, impersonal administration of an open-ended survey to a group of sample subjects. Data from every event attended, (all CMF meetings and public gatherings) generated through participant observation was entered in note books and summarised as indicated in Table 5.4 on the next page.

In addition to these observations, I went about noting how catchment residents spent their time, what actions of water use impacted on water quality, quantity and distribution. Data from these observations was useful in establishing events that were typical and widespread. For instance, the focus of one of the cultural days held in Mthatha in 2002 was basically to highlight the role that local people played in the fight for freedom and hence the need to begin to recompense their sacrifice. The dancing, poems and songs were symbols of acquired power and anticipated recoup of long-lost resource entitlements.

Table 5.4 How data was summarised from participant observation

Event observed	Observations made in each event
Regular CMF meetings (four meetings in Mthatha and five in the Kat catchment)	<ul style="list-style-type: none"> • A description of the venue of meetings • Attendance list, noting gender representation, regular members and new attendees. • Commencement time and end time of meetings • Agenda – whether set in advance and by whom and what issues it addresses. • Repertoire: how the chairperson sets rapport, who speaks most, over what, who stays silent and why.
Public meetings (Two in Mthatha)	<ul style="list-style-type: none"> • Purpose of meeting • Estimated number of participants, distribution and roles of participants • Representation of officials from different sectors of society • Cultural symbolisms and their importance • Activities and themes of the speeches and how these are related to natural resource use and management.
Land-care project in the Kat catchment (Three management meetings attended and three work sessions observed)	<ul style="list-style-type: none"> • Gender distribution of workers • Method of recruiting workers • Work schedule • Specific activities undertaken by workers • Management of the projects (administration of finances, workers etc) • Results achieved

5.6 Stakeholder analysis.

Stakeholder analysis has emerged as an important research tool with the appearance of participatory collective initiatives in natural resource management that have labelled participants in resource management as ‘stakeholders’. In his discussion on stakeholder analysis, Ramirez (1999; p 1-2) traces several origins of stakeholder analysis, which include political economy, participatory methods of project designs such as rapid and participatory rural appraisal (PRA) and the social actor perspective in the sociology of development. With increasing collective actions in natural resources management, stakeholder analysis has also become increasingly usefulness as a research method in understanding how such institutions function. Based on the information I generated through the use of stakeholder analysis, which I discuss in this section, I would argue that in studying resource management groups such as MSPs, stakeholder analysis

constitutes a key research tool without which an understanding of how these groups function cannot be accomplished.

Without returning to the definition of ‘stakeholders’, which has already been explored in Chapter One, ‘stakeholder analysis’ is defined as a research tool or approach of understanding a system by means of identifying the stakeholders in that system and assessing their respective interests, objectives, power and relationships (Grimble *et al.* 1995). Ramirez (1999) sees stakeholders analysis as consisting a ‘range of tools’ for the identification and description of stakeholders on the basis of their attributes, interrelationships and interests related to a given issue or resource. The purposes for using stakeholders analysis as an analytical tool are explained by Grimble and Wellard (1996), Engel (1997) and Röling and Wagemakers (1998) as: (i) to empirically discover existing patterns of interaction; (ii) to analytically improve interventions; (iii) as a management tool in policy making; and (iv) as a tool to predict conflicts. Whenever stakeholder analysis is used as a step in establishing an NRM initiative or in understanding resource use or as a tool to predict conflict, the process of undertaking stakeholder analysis begins with the identification of ‘all’ stakeholders that may influence the management of a given resource. Hence in NRM literature and resource use research, stakeholders become categorised into a range of classes such as primary, secondary and key stakeholders (ODA 1995).

My reason for using stakeholder analysis was basically with respect to the first purpose stated above, which is to empirically discover existing patterns of interaction amongst participating stakeholders and to establish the principle interests (or stake) each stakeholder held in the water resources of the catchment. This was more relevant in studying the real powers and symbolism of the new emergent institutions. As a result, my approach consisted of identifying only ‘regular’³⁹ members of the MSP rather than all existing or potential stakeholders. In undertaking stakeholders analysis, I listed organisations and groups represented on the CMF, including their mission, interest (or stake) relating to water resources and expectations from participating in the CMF.

In line with Ramirez’s assertion that stakeholder analysis consists of ‘a range of tools’, a researcher can generate various stakeholder matrices for understanding stakeholder circumstances. The International Centre for Development Oriented Research (ICRA 2000) provides a range of examples of stakeholder matrices, which include (i) ‘Stakeholders pay-off matrix’ which is used for social equity screening; (ii) ‘Stakeholder problem-perception matrix’, which analyses problems in relation to their importance to each stakeholder and ‘matrix of stakeholder influence’ for assessing power differences among participating stakeholders, (iii) ‘importance/influence matrix’, used to map out relative importance and influence of key stakeholders; (iv) ‘conflict/complementary matrix’ a framework for mapping areas of cooperation and conflict between key stakeholders and (v) ‘actor linkage matrix’ used to map linkages and flows of information. As can be noticed, various forms of stakeholder matrices can

³⁹ In this instance, ‘regular’ members were identified as those who participated in at least 50 percent of the CMF activities.

be generated from a stakeholder analysis depending on their relevance. For the type of institutional analysis I was conducting, I utilised a 'stakeholder interest matrix', which I found useful in describing stakes, interests and expectations of participating stakeholders in relation to the perceived purpose of CMFs. The stakeholder interest matrix assisted me in defining the typology of stakeholders participating in the CMFs (Table 6.1).

5.7 Workshops.

Even though workshops are generally not discussed as a research method in social science research methods, in the study of MSPs, workshops can provide a useful research tool through which a researcher may observe at close proximity the interactions and interchange of knowledge among participants who constitute the units of observation. Workshops have become a common tool in many interactive designs for NRM and policy reformation and service provision. Workshops allow groups of people to make critical assessments of their institutions through the exchange of ideas and evaluation of their actions. As Brooks-Harris and Stock-Wood (1999) confirm, workshops are basically conducted with a purpose for creating an environment for interactive learning.

Fleming (1997) provides a definition of workshop that emphasises the development of competence, interactive learning among participants, opportunities for hand-on practice, practical and intensive interaction, small group work and application of new learning. Brick-Harris and Stock-Wood (1999) show that earlier definitions of workshops also identified similar themes while Sock (*quoted in*: Brooks-Harris and Stock-Wood, 1999) defines a workshop as a relatively short-term and intensive problem-focused learning experience that actively involves participants in the identification and analysis of problems, communication of experiences and in the development and evaluation of solutions.

These definitions show that workshops engage participants in problem articulation, improved communication and may result into action. Therefore when a workshop is used as a research tool that engages participants into action to produce results, the research becomes an 'action research.' Punch (2005) describes action research as research that brings together the acting (or doing) and the researching (inquiring). In contrast to the ideas of inquiry for its own sake and building knowledge for its own sake, action research aims to design enquiry and build knowledge for use in the service of action to solve practical problems. The whole purpose of action research is to lead to action to solve a practical problem or to answer a practical question. In general, action research is understood as a research design or sequence intended to bear upon a practical problem, which requires a solution (Stringer 1999). What are called 'workshops' can also be explained as forums or listening sessions, where information can be gathered from and between stakeholders.

Including workshops in my research design was intended to make a contribution towards the practice of participatory water resource management in the catchments by

providing stakeholders with an opportunity for interactive learning⁴⁰ and problem identification and resolution. Documentation of discussions, visions and opinions became relevant for the future of the CMFs and also for the purpose of this research to assess them and understand their form, structure and functions.

Three workshops were held during the course of my field study, totalling five days together. The initial workshop brought the two CMFs together to a joint learning experience (Burt *et al.* 2003). The attendees and scope of discussion emerged from within them and set the focus for subsequent workshops. These workshops allowed stakeholders to present their own assessments and hopes of the CMFs, and learn from them. The learning that streams through the discussions relating the process of institutionalisation discussed in Chapter Eight largely emerged from my encounter with CMFs in workshop settings. Box 5.3 to 5.5 are brief reports of how the workshops were organised and the results they achieved.

Box 5.2. First Joint Workshop between Kat and Mthatha CMFs 28 and 29 January 2002

Workshop ownership

The idea to hold a joint workshop for the two CMFs originated with me as the researcher. However, to achieve the intended purpose of the workshop, as well as to contribute towards capacity building of the CMFs, an approach was followed that could allow the CMFs themselves organize the workshop. My initial task therefore was to lobby for approval from the CMFs and then handover the planning and organisation of the workshop. A series of meetings were held with both CMFs at which I presented the idea of the workshop.

After a series of meetings, an agreement was finally reached on the need for a joint workshop. Each CMF was given an opportunity to consider hosting the workshop. A decision was reached that the Kat CMF was better placed to host the workshop on the basis that it had more activities happening on the ground to show-case during the workshop and to use as discussion points. Consequently more meetings were held with the Kat CMF to prepare for the workshop. One of the goals of these meetings was to transfer the ownership of the workshop to members of the Forum.

⁴⁰ Interactive learning here is understood in terms of the SLIM project (2004) definition which describes it as the knowing that occurs through convergence of goals, criteria and knowledge, leading to more accurate mutual expectations, and the building of relations of trust and respect. Interactive learning occurs through face-to-face exchange of experience and review of practices resulting into co-creation of knowledge needed to understand issues and practices. It may result in a change of behaviours, norms and procedures arising from development of mutual understanding of the issues, as a result of shared actions such as physical experiments, joint fact-finding and participatory interpretation.

Box 5.2 continued...*Who came to the 1st joint workshop?*

The workshop was primarily intended for the Mthatha and the Kat CMFs. However, other practitioners of water resources management and researchers were also invited to assist with facilitation as well as learn and appreciate institutional challenges faced by members of the CMFs.

In attendance were:

- The Director and Assistant Director: Department of Water Affairs and Forestry (DWAF), Catchment Management Directorate.
- Six staff members from the Regional offices of DWAF, Catchment Management Directorate.
- Eight facilitators and researchers from Rhodes University: Catchment Management Research Group.
- Six Wageningen University researchers.
- 35 participants from the Kat CMF, which included all steering committee members, one municipal councillor and community representatives.
- 15 participants from Mthatha CMF, which included management committee members, two participants from the CMF secretariat and two municipal councillors.

What did participants expect from the 1st joint workshop

Participants were allowed to present their expectations as individuals and as members of a group that included researchers, practitioners and CMF. All expectations were then presented back to all participants and then set aside to be revisited at the end of the workshop. The long list of expectations were summarised into 22 common expectations. Some key expectations were as following:

- To identify problems common to the catchments or unique to the catchments
- Gain a better view of the current situation for both catchments, together with the main issues/threats/problems that are apparent and shared and the approaches used by participants to address them.
- To find out common challenges facing the two catchment Forums, such as issues of sustainability of these groups.
- To see what we can learn from the different methods in which the two Forums were established.
- To acquaint ourselves with what is going on in Forums in the Eastern Cape Province.
- To know the extent of progress of the two catchments Forums.
- To identify possible solutions to the challenges faced by Forums.
- To shared ideas/experiences and learn from each other.
- To improve catchment management and document our experiences.

What happened on the first day of the 1st joint workshop?

All participants met in the Kat River valley catchment. The first activity was a tour of the catchment, which began in the afternoon. The Mthatha CMF arrived later than expected. This resulted in the tour being shorter than anticipated although a lot of catchment activity was covered in the tour. The tour followed projects and landmarks

Box 5.2 continued ...

lying mainly along the arterial road. At each landmark, which included a dam, river, bridge, CMF Office, land improvement project, village, etc. participants had a chance to discuss and reflect on the status of the landmark and its impact on the lives of the catchment residents.

There was a large contingent of participants from the Kat CMF. As the host Forum, this situation worked out well because these members performed as tour guides, meaning that there was no short of informants for visiting participants.

What happened on the second day of the 1st joint workshop?

On the second day of the workshop, participants met at a remote venue outside the catchment. The day was spent in group work both indoors and outdoors, sharing information and knowledge, problem identification and seeking answers. Each CMF made a presentation during the plenary session based on:

- History of their CMF
- Their understanding of the definition of a CMF
- Strength and weakness of their CMF.

How can the 1st joint workshop be useful to anyone?

The outcome of this workshop could provide:

- ✓ **CMF members:** the grounds from which to launch their negotiations for consensual decision-making and action with respect to participatory catchment management.
- ✓ **Government staff:** lessons in the practice of participatory catchment management and the kind of roles required of them to support and strengthen catchment management process.
- ✓ **Catchment management practitioners:** with a view of the challenges faced by stakeholders and what action is required from them to alleviate some of these challenges.
- ✓ **Catchment management researchers:** an insight to the dilemmas of the participatory catchment management and the challenges of documenting the visions and opinions of stakeholders.
- ✓ **All readers of these workshop proceedings:** that dialogue and collaborative learning can be fruitful and can bring about beneficial results to participants.

What action resulted from the 1st joint workshop?

- Plans were made to secure appointments with local councillors and mayors to canvas for their support to CMFs.
- Commitments were made to table the evaluation of the workshop at the consecutive Forum meetings to inform members who missed the workshop. This commitment was met by both Forums at their successive meetings that took place soon after the workshop.
- Participants from CMFs vowed to regularly attend their Forum meetings (even though it is possible that those who attended the workshop were probably already the committed members of the CMF who already attended their meetings regularly).
- Academic researchers and government officials realized the need to provide

Box 5.2 continued ...

assistance to CMFs through facilitate negotiations, management support and providing advice for the general functioning of CMFs.

- Participants from government departments made plans to investigate reasons for poor participation by local government and other stakeholders.
- DWAF staff indicated in their commitments that they would support further workshops for CMFs.
- Discovering that a lack of funds was a major limitation in the operations of Forums, practitioners made plans to get involved in writing business proposals for Forums to source funding.

Box 5.3 Second joint workshop between Mthatha and Kat CMF. 4th and 6th May 2004*Why the 2nd joint workshop was held.*

The overriding reason for holding the workshop originated from the desire by the Mthatha CMF members to acquaint themselves with their catchment as the Kat CMF had done with theirs. The Mthatha CMF members therefore planned to undertake a tour of their catchment and extended the invitation to the Kat CMF to join them, as way of reinforcing the partnership that was developing since their first joint workshop in the Kat catchment.

For me, as a researcher, this was going to be the last opportunity to be with both groups at the same time and therefore became a useful occasion for receiving feedback from the CMF members about what I had learned and also an opportunity to thank them for the cooperation I had enjoyed during the three years of my field study.

Who were participants of the 2nd joint workshop?

The workshop was hosted by the Mthatha CMF, which was represented by 35 participants including two municipal councillors, the management committee, the CMF secretariat and representatives from NGOs such as Working for Water Project. Fifteen participants came from the Kat catchment including one councillor. There were ten researchers from Rhodes University and two from Wageningen University. The Director of DWAF for Eastern Cape Province was also present.

What happened at the 2nd joint workshop?

The workshop begun with a tour of the catchment on the first day. The first landmark visited was the Mthatha dam, which is considered the source of Mthatha River. The entourage then proceeded to the Mthatha Water Treatment Plant, which is run by the local municipality. The third stop was the Waste Water Treatment Plant also operated by the municipality. Here the whole process of how wastewater is recycled back to the river was explained to the entourage. The entourage then proceeded to the ESKOM Electricity Power Station further down the Mthatha River. An ESKOM staff member, who also represented ESKOM on the Mthatha CMF, took the entourage on the tour of the power plant, to explain the process of electricity generation. Participants observed

Box 5.3 continued ...

one serious problem of a waterweed that had invaded the dam from where water was fed into the power plant. From the ESKOM power station, the entourage proceeded further down the river to visit two emerging commercial farmers engaged in irrigated agriculture along the Mthatha River. The tour terminated late in the evening at the Mthatha River mouth where the river joins the sea. The Anchorage hotel, which is situated by the beachfront close to the Mthatha River mouth, became the overnight resting place for participants as well as the meeting venue for the second day workshop deliberations.

Second-day deliberations begun with a review of the tour. Participants asked questions to clarify what had been observed and discussed how certain catchment operations and features could be modified, developed, managed, or controlled to achieve sustainable management of catchment resources. The rest of the day's activities included presentations from a representative of the NGO, "Working for Water Project", who explained their plans and operations, a presentation from DWAF representative who introduced a discussion over the proposed Mthatha Catchment Management Strategy and finally I had an opportunity to present my research findings resulting from my three year field study of the functioning of the two CMFs. I also took this opportunity to thank the participants for the wonderful and cordial working relationship accorded to me. My research propositions discussed during this session have been included in the concluding remarks in this chapter.

Box 5.4 Last research workshop in the Kat catchment 18th January 2005

Why was this workshop held?

The workshop was intended to extend awareness of the catchment management to villages that were currently not participating in water resource management through the Kat CMF. This initiative was expected to increase the number of stakeholders participating in the CMF.

The researcher's additional interest in the workshop was to establish the capacity of local actors in following up their plans and implementing participatory management.

Who were the participants?

- Two researchers from Rhodes University who had been involved in the emergence and functioning of the Kat CMF and who also played a facilitation role for the workshop and compiled the workshop report.
- One researcher from Wageningen University.
- Two representatives from local NGOs; 'Spiral Trust' and Working for Water'.
- One member from the Department of Agriculture
- One member from the farmers' training centre
- 16 community representatives from the 15 villages already participating in the Kat CMF.

Box 5.4 continued ...

- 36 community members from the local community where the workshop was held (Ephumleni)

Where was the workshop held and why?

Ephumleni community where the workshop was held lies in the western side of the middle reaches of the Kat catchment. It has an estimated number of 3000 thousand residents (personal comm.). The village holds a historical importance in that the main tribal chief for the larger part of the Kat River valley resided in this village. The village does not have piped water service and residents rely on water from two main streams, which form tributaries of the Kat River. The majority of the residents survive on government social grants.

In spite of the strategic position the village occupied in the catchment, community members have never participated in the management of catchment resources and specifically water, through the Kat CMF. This is what prompted the CMF steering committee to hold a one-day workshop in this community with the aim of canvassing for their participation in the CMF.

What activities were undertaken at the workshop?

The workshop took a focused stance whereby steering committee members introduced the CMF to participants, specifically to inform community members of the origins and purpose of the CMF and then proceeded with a plenary session to discuss how community members of Ephumleni village could participate in the CMF.

What was the outcome of this workshop?

- Community members from the local community of Ephumleni registered their interest to participate in the Kat CMF operations.
- Workshop participants identified the need to allocate any available resources (particularly funds) towards environmental awareness campaigns rather than workshops. Participants argued that workshops consumed a lot of funds with little corresponding returns from the investment. They argued that despite the large number of workshops held in the catchment, a larger number of residents still remained ignorant on the issue of participatory water resource management. Following an extensive debate on this issue, participants finally resolved that the Kat CMF should allocate anymore funds remaining from the organisation of this workshop towards printing T-shirts that carried messages intended to educate residents of the catchment regarding the need for participatory catchment management.
- Participants observed that the office of the Kat CMF was poorly equipped in terms of office equipment required for the functioning of the CMF. The CMF chairman reported that some funds had become available to allow the CMF purchase a computer and a printer. This was accredited to the support of existing partnerships with NGOs and research organisations such as Rhodes and Wageningen University. The chairman mentioned that the acquisition of a computer and printer would improve the quality of communication and documentation of CMF activities.

Workshops produced a wealth of research data through documented observations and recorded workshop proceedings, which have been used in more detailed analysis in subsequent chapters. Workshop observations provided valuable data since they revealed the internal awareness of each CMF and the existing networks of these groups and how these two factors impacted on the operations of the CMFs. As will be noted, the analytical chapters contain numerous references to these workshops.

5.8 Conclusion: *How learning was achieved through multi-method approach*

It is evident that the analytical object shapes research approaches and methods. When studying institutional arrangements such as MSPs, which are embedded in several socio-economic, political and biophysical domains, by combining several research methods, as I did, provides multiple sources of information and allows for in-depth understanding of the phenomenon. This is a design referred to as a multi-method approach (May 1997). My multi-method approach helped show the institutions in both their visibility to involve practitioners and their partial visibility in wider society, and how such groups can begin to initiate and develop cohesion and action. The use of multi-method approach was also a form of cross-validation and triangulation of information to ensure its reliability. It assisted with crosschecking of information. For instance, it is important to note that while desk-top research provided a holistic and detailed description of the macro and micro-level issues, workshops were relevant in understanding the same issues from the standpoint of stakeholders who were participating in the CMFs. Perceptions of the public at large, which was not directly involved with CMFs, could not have been captured without an informal survey. Also, the combined use of participant observation, focused interviews and analysis of minutes of the meetings (and meeting documents) meant that notes collected from my personal observations of the interaction and dialogue during CMF meetings and those from focused interviews could be compared with the actual minutes of the meetings to build holistic interpretations of the situations. Thus to be able to construct local realities, several research methods had to be brought to bear. Wolcott (1994) puts it this way:

“three major methods for gathering data come together – participant observation (experiencing), interviewing (enquiring) and studying materials prepared by others (examining)”.

These approaches enabled me to achieve a holistic analysis on the existence of newly emerging institutions, how they link individuals and society, their power for action and their symbolic value. In terms of seeing the existence of CMFs, I learnt that even though much existed on paper, more about reality had to be learned especially about the differing and unclear expectations and meager resources that CMFs had to contend with and how this scenario affected their institutionalisation process analysed in Chapter Eight.

Towards the end of my study, I put together what I considered to be my core learning from the whole research process and presented it back to participants of MSP in the two catchments in form of statements I called ‘propositions’ of lessons learnt. I needed to verify my learning, to confirm whether the picture that I had created in my learning, of

the status of Multi-Stakeholder Participation and institutional arrangements was indeed a true reflection of what the rest of the participants were experiencing. During the second joint workshop in Mthatha, I distributed forms (a total of 75) carrying 12 propositions, to all participants to agree or disagree with my propositions based on their own experiences. The results presented in Table 5.5 below indicate that except for proposition (iv), the participants of CMFs in both catchments were overwhelmingly in agreement with my learning that I had acquired through the use of multiple research methods over the research period.

Table 5.5 Propositions of lessons learned.

<i>PROPOSITION</i>	<i>Agree</i>	<i>Disagree</i>
	<i>N = 75</i>	
(i) A large majority of catchment residents are still unaware of the Catchment Management Forum process.	63	3
(ii) Stakeholders are categorized in two groups: Community Stakeholders (local residents) and Organisational Stakeholders (representatives of government and non governmental departments)	62	5
(iii) Since Community stakeholders constitute the majority in the catchment and the most affected by water status, they should be allowed to drive (to lead) the functioning of the Forum.	55	20
(iv) All Stakeholder representatives must be literate (at least able to read).	23	52
(v) The Forum should yield tangible benefits to the residents of the catchment.	75	0
(vi) All key stakeholders existing within a catchment <u>must</u> actively participate in the forum.	55	20
(viii) The forum should maintain “open door” policy for any stakeholder to join or leave as they please.	63	10
(ix) The forum can perform better if it were a statutory body with legal rights.	63	11
(x) Organizational Stakeholders need capacity building too.	52	15
(xi) Forums need financial support	75	0
(xii) Forums need a permanent administrative core staff.	68	2

Source: Second Joint Workshop in Mthatha. May 2004.



Plate 1: Participants of the First Joint Workshop engage in joint learning over land degradation in the Kat catchment

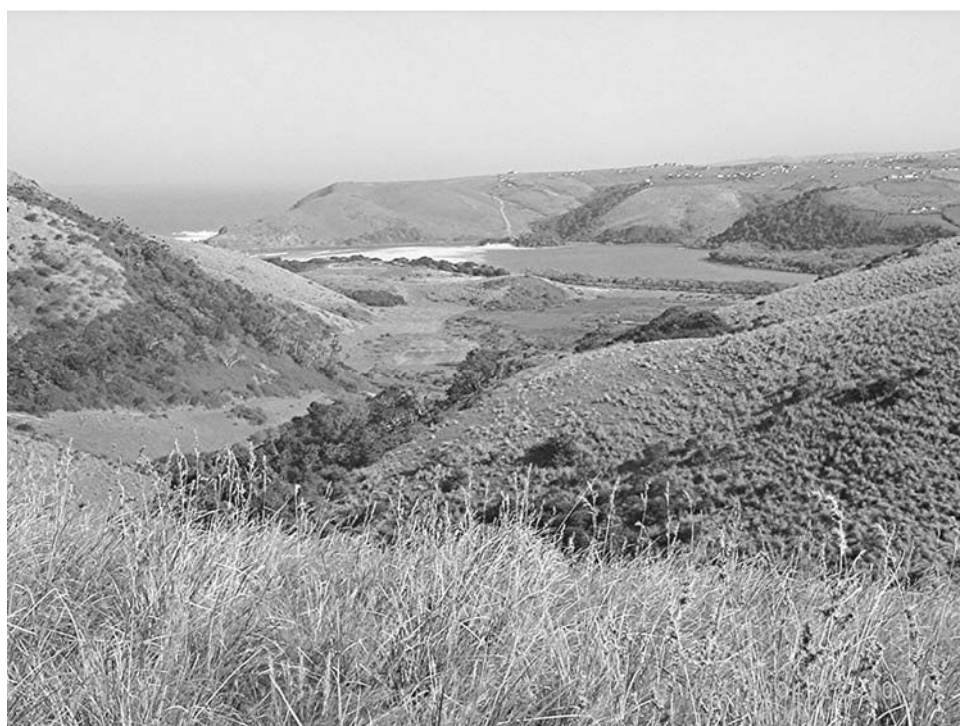


Plate 2: Typical landscape of the Mthatha catchment



Plate 3: The contrast between Mthatha urban and Mthatha rural. Principally also reflecting the contrast between background and interests among Organisational Stakeholders and Community Stakeholders.



Plate 4: Export Citrus orchards along the Kat River

CHAPTER SIX

AN ENQUIRY INTO CMF EMERGENCE AND OPERATIONS

Chapter Four introduced the two CMFs and their immediate environments while Chapter Five explained how the learning processes about these CMFs occurred. In this chapter I explore the evolution of the practices of these CMFs, by probing four crucial aspects: emergence processes (sub-sections 6.1-6.2); stakeholder representation (sub-section 6.3 and 6.4); how CMF agendas fitted their purpose (sub-sections 6.5 – 6.7); and stakeholder priorities (6.8).

Rather than probing each CMF separately, the chapter takes the format of a cross-case analysis related to these aspects. It also presents additional information on emergence processes not discussed in Chapter Four. In each section, the chapter revisits some of the concepts and theories reviewed in Chapter Two, which mentioned how different concepts were used together to explore the different dynamics of MSPs. To understand the outcomes of the operations of CMFs, the chapter utilises the explanation building technique (Yin 2003) whereby explanations are gradually built using metaphors and field data.

6.1 Emergence processes: Institution-constitution complexities⁴¹

There are specific issues that are crucial in the building and functioning of externally induced initiatives. To highlight these issues, I wish to invoke a popular folklore, also used by Blomqvist (1996) in her study of the dynamics of collective action among irrigation farmers and textile industrialist in South India. In the folklore, a chief requests all (*all!*) his subjects to contribute towards a community celebration by bringing a litre of (white) wine to the palace. The wine was to be poured in a large container at the chief's palace. The chief's administrative structures were to coordinate the collection of wine. At the end of a week-long collection of wine, and on the day of the celebration, the chief, to his great disappointment, discovered that the liquid in the container tasted more like water than wine. The implication was that many villagers had poured water rather than wine into the container. The folklore demonstrates the difficulty associated with coordinating, monitoring and enforcing a collective action. It reveals how individuals, though bound by social norms, are not prevented from making personal decision not to comply. Since it was difficult to monitor what each villager poured into the container, compliance of the rule (one litre of white wine) was a function of the internal norms that guided the actions of the chief's subjects and indeed their interpretation of the benefits associated with the collective action. Also, the chief in requesting everyone to contribute one litre of wine did not take into consideration the different capacities of his subjects in being able to make or buy a litre of wine. The decree, having come from the chief and enforced by his administrative structures, which

⁴¹ 'Institution-constitution complexities' may be understood as simply the difficulties associated with the constituting or formation of an institution.

were also responsible for guarding the container placed at the chief's palace, could have cast a shadow of suspicion among villagers about the legitimacy of the decree. Thus a combination of factors that included the source of decree, the enforcers of the decree and the type of resource around which actors were to cooperate, all contributed to the opportunity of the villagers to disobey the chief's orders.

This metaphor highlights the institution-constitution complexities associated with initiating a collective action. As a social phenomenon, MSPs are almost invariably set up because of external enthusiasm on the part of external, third party actors particularly national governments (Chapter One). I begin the exploration of the operational challenges faced by the CMFs by examining the emergence processes. Due to prevailing circumstances in South Africa, the CMFs had to be externally induced. The social facts presented in Chapter Three and Four were not sufficiently supportive to allow bottom-up initiatives in which stakeholders themselves initiate collective actions⁴². The institutional reforms in water resource management that were instituted within a short space of time meant that external inducement and facilitation was required to build capacities and bridges between racial and ethnic divides that had existed among all participating stakeholders. However, constituting multi-actor participatory institutions through external initiatives calls for a careful balancing act between cooptation (or imposition) and facilitation. Empirical evidence emerging from this study shows how notoriously difficult such a balancing act can be and how legitimate institutional building can result into ill-designed institutions that fail to meet their intended purpose.

What are the observable initial indicators that point to problems in the mobilisation processes employed to introduce both the Mthatha and Kat CMFs and how did these processes impact on the subsequent constitution and functioning of the CMFs? In this section I attempt to establish a direct and strong link between the mobilisation processes (or the manner in which stakeholders were invited or recruited), and the resultant *modus operandi* of CMFs.

The immediate challenge of the hydro-policies of the ANC government, or indeed of any state that attempts to introduce stakeholder participatory institutions, is the manner in which the mobilisation processes intended to induce participation are conducted. In South Africa, considering the troubled history of its people, this process was to be an immensely challenging one. The outcomes of the mobilisation processes in both CMFs herein under study indicate that little attention was paid to social analysis and careful consideration of the circumstances of all stakeholders. In spite of the allegedly 'strategic' mobilisation techniques, membership of all relevant stakeholders in CMFs was problematic in both cases, subtly in a different way for each case. In Mthatha, DWAF put its financial muscle behind the mobilisation campaign, by hiring the services of professional social organisation consultants. In spite of the use of costly modernistic communication strategies by the hired consultants, to reach a wide section of the public,

⁴² The apartheid era had fragmented the society into racial and ethnic segments in which avenues for cooperation were decimated.

stakeholder participation still remained cunningly problematic. Poor participation of community members became a major concern for the management committee and emerged as an important agenda item in many CMF meetings. I had estimated an average participation of two community members per each meeting held. There was a maximum of four community members in one of the meetings and none in many meetings. The participation of the local municipality, the OR Tambo District municipality, was also problematic. This too received its share of debates in the meetings.

Unlike the Mthatha approach, the campaign in the Kat catchment took a social environmental awareness approach. University researchers camped in the villages within the catchment and used participatory rural appraisal methods to work with community members in workshops and group meetings to discuss the need for a cooperative and collective action towards environmental management. Participatory research techniques used were based on the recognition that local communities too possessed relevant local knowledge of resources and skills to effect sustainable use management of these resources. However it is noteworthy to observe that the PRA workshops did not include staff of state organs nor NGOs. They were exclusively targeted at local people. It is as though there was an assumption that the schooled officials of state organs and NGOs were sufficiently knowledgeable about these issues and about modalities of collective action towards sustainable natural resource management. Nonetheless, invitations were sent to them to attend meetings intended to form the CMF. Attendance at the first meeting at which the Forum was inaugurated indicates that there was representation from the municipality, DWAF, Department of Agriculture and the Water User Association which had just been constituted but not as yet duly registered with DWAF. Initiating researchers from Rhodes University played the critical role of facilitators. However, in due course, participation of government departments, the local municipality and NGOs became problematic in the Kat.

While it was the participation of community members and municipality, which was problematic in Mthatha, in the Kat it was that of representatives from NGOs and state organs. Considering that the processes of mobilisation in both Mthatha and the Kat claim to have involved 'public consultation,' why do we observe such a queer outcome, whereby, stakeholders from the community and the municipality take little interest in Mthatha and stakeholders from Government and NGOs take little interest in the Kat? Why did local municipalities take little interest in both cases?

The continued absence of community representatives from CMF meetings in Mthatha was tabled for discussion in several meetings. In one of the meetings, it was resolved that more workshops needed to be held for local communities. Thus, it was considered that insufficient public consultation before the inauguration of the CMF was the reason behind poor community participation. Some DWAF senior staff blamed the use of consultants as service providers in the formation of these CMF as a problem as the following comment captured in one of my interviews indicates:

“Consultants were not a useful approach because they had their time frames and took on numerous tasks. They put emphasis on producing impressive reports” [NM]

However, while indeed there was insufficient public consultation, particularly in Mthatha, I wish to postulate that empirical evidence points to the unclarified purpose of the CMFs during the conception phase as the main reason for poor initial response. Comments captured during interviews reveal that stakeholders held varying degrees of expectations from the CMF. During interviews with CMF members in Mthatha, interviewees’ sentiments pointed to the expectations created during the mobilisation processes. A representative of a government department put it this way:

“Representatives from communities expected too much from the CMFs. They wanted tangible results to start flowing immediately after the CMF had been organised. Now after a number of meetings, they realise that it is mainly about planning and resolving old water problems, so they have lost interest” [JS]⁴³

“Most community representatives did not understand the purpose of the CMF clearly. I think they were expecting too much in terms of what was to be delivered.” [FM]

Community members’ sentiments reflected similar sentiments:

“We hoped that we would start discussing provision of clean water to communities which have had no clean water for a long time. But it appears that most of the people in that meeting come from areas where there is piped water already. Water supply to people who do not have piped water is not their priority.” [GK]

“How can I represent my community to discuss issues which are not important to my community? The burning issue in my community is domestic water supply, but they are discussing other issues, which are important only to them. I think it is not the right forum for us.” [MK]

The consultancy company responsible for the mobilisation process in Mthatha denies that local communities were not adequately informed about the purpose of the CMF. But they do accept that domestic water supply for rural communities was the hottest water issue in the catchment. Mention was made during public meetings that once the CMF was formed, domestic water supply could be tabled for discussion and community members may get involved in planning for the provision of such services. This was to be the reason why it was important for local communities to send representatives to the CMF. Community members who attended public meetings showed a great sense of

⁴³ Interviewees wished to remain anonymous and therefore only their initials are reflected here. This way, only themselves and the researcher may know the identity.

expectation regarding access to clean water. Since the CMF could not meet that expectation, the inevitable outcome was a gradual withdrawal from participation by community members.

In contrast to the Mthatha case, the Kat mobilisation process had a different outcome. It created interest among local people and disinterest from government and private sectors. As in the Mthatha case, sentiments from CMF participants and non-participants revealed misconceptions;

“I think they are scared (government departments) because we the community formed the Forum.” [PM]

“Government departments are only interested in activities which they themselves initiate. If communities start something, they are not interested. [Jazz]

On my last meeting in the Kat, I spoke to two DWAF staff to enquire why a representative was not coming to attend the Kat CMF meeting. Their responses were perplexing:

“We do not see our role in the Kat since it was their own initiative. They should be able to function without our involvement. Rhodes University should continue to play their supportive role since they facilitated the formation of the CMF.” [DN]

“We are aware of the existence of a Forum in the Kat and we shall remain supportive if assistance is required. Permanent membership however is not necessary since the Forum was conceived by the community, meaning that they have their own ambitions regarding why they initiated the Forum” [TM]

The Department of Agriculture in Fort Beaufort in the Kat catchment held similar notions:

“We do send staff to attend Forum meetings when we do not have pressing matters to attend to. The Forum was initiated by the community and we anticipate that it has to do with community issues rather than our issues.” [MN]

Katberg Hotel, situated in the western upper reaches of the Kat catchment, is a potential key stakeholder whose participation in the CMF could have made a significant impact. The Hotel is a popular destination for people seeking a countryside lifestyle since it is located in lush, hilly and picturesque surroundings with an extensive golf course. The Hotel had on its staff, a well-qualified landscape manager who has a good understanding of land and water resources of the Kat catchment. I observed that he had a keen interest in the catchment ecology and he kept impressive records of the local

weather and precipitation of the catchment. He also was aware of the existence of the CMF. However, his perception of the CMF was not different from representatives of other organisations as the following statement from his interview reflects:

“I have heard about the CMF but I understand that it is a local community group addressing their problems.” [GM]

6.2 Emergence processes: The challenge to mobilising contemporary collective action.

There is no doubt that in addition to widening public consultation, it was important also to clarify the purpose of CMFs to all stakeholders. However, we might wonder whether indeed by simply stating in clear terms the importance of stakeholder participation in water resource management in a catchment would have motivated ‘all’ stakeholders to take keen interest in participating in CMFs. As a matter of fact, the process of drafting water policies and laws involved public consultation. Therefore one would anticipate that a certain group of stakeholders, particularly government organs, were sufficiently aware and knowledgeable about the need for stakeholder participation in water resource management in a catchment. Furthermore, the government extensively publicized the new approaches through public media (newspaper, radio and free leaflets) particularly in Mthatha. At this stage, it is possible to postulate that besides getting public consultation right and clearly stating the purpose of a collective action, there still existed another important variable that dictated the mode of participation. What could this variable have been?

To situate and explain this argument, I wish to evoke theoretical notions explored in Chapter Two. I see that the rational choice perspectives could assist in unraveling the dilemmas associated with the outcomes of stakeholder mobilisation in Mthatha and Kat catchments. I wish to argue that there is a link between the prevailing socio-economic conditions in the study areas and actor response to stakeholder participation in CMFs that can be associated to propositions made by rational choice theory. Actors in contemporary societies are entrepreneurs who choose the alternative that is likely to give them the greatest satisfaction. They are optimisers who in normal situations act purposefully. In their social interactions, they weigh carefully and take into consideration costs such as delays, uncertainties, bargaining, obstructions and chicanery, together referred to as transactional costs (Hubbard 1997; p 239-249). Actors in contemporary societies view institutions as composed of incentives and/or constraints on behaviours and respond to them according to their desired utility within and without institutions.

March and Olsen (1989) view that preferences of individuals are endogenous, meaning that it is the (dis)incentives offered by the institution that influence individual’s choices. I see that preferences are both endogenous and exogenous, meaning that individuals weigh their experiences both inside and outside an institution and choose to pursue the outcome that gives them greatest satisfaction. The central theme of this argument is that people act rationally. They act so as to maximise a well-defined and stable objective function representing their personal preferences subject to information on the constraint

facing them. In a more pragmatic way, Rowe (1989) contends “*if people act rationally in their purchases and sales of goods and services, why should they not act rationally in all other activities as well?*”

Participation as a rational choice

I see that the rational choice concept can help to illuminate the reasons behind the different outcomes of the mobilisation processes in both Mthatha and the Kat catchments. The outcome of the mobilisation processes in the establishment of CMFs could be considered as the sum total of rational decisions made by individuals and organisations, based on interests that can be objectively defined and known. The areas' historical path, coupled with the current economic circumstances, could be considered to have created a socio-economic environment in which actors strive to “create space” for their own survival (Long 1989). The need to cope with ravages of poverty in the society has meant that pressure to conform to norms is being replaced by the desire to survive. Exposure of rural communities to urban lifestyles, which occurs through reading newspapers, listening to radio, watching TV (along with the glossy advertisements that accompany the media) and through visits to urban centres, is dissolving the great urban-rural divide. Rapidly changing patterns of social behaviour and emergence of modern socio-economic structures (monetary driven economies, globalization processes, individualism and nuclear families rather than community) has led in some cases to the erosion of historically traditional values. Durkheim's theoretical exploration of individual behaviours in modern society (*quoted in*: Douglas 1987; p 13) affirms this view when he argues that a difference exists between modern and primitive (or traditional) societies. He argues that primitive societies did not depend on the exchange of differentiated forms of goods and services. As a result individuals came to think alike by internalising their idea of the social order. In such systems, problems of legitimacy were readily solved since individuals carried around the social order inside their heads and projected it out onto nature. However an advanced division of labour, postulated by today's lifestyles, destroys this harmony between morality, society and the physical world and replaces it *with solidarity dependent on the workings of the market* (emphasis supplied).

Individual behaviour manifested in contemporary rural life in South Africa exhibits the desire for economic survival and it is underpinned by the historical socio-economic development. The Xhosa people who inhabit both the Mthatha and the Kat have for many centuries subsisted by practicing a mixed farming system, which was based mainly on the rearing of dairy cattle, but also involved cultivation on a limited scale. Hunting and gathering supplemented farming. Both hunting and the handling of cattle were male domains and cultivation was essentially the responsibility of women. Crops (mainly sorghum and maize) and vegetables were produced on small fields or gardens, and soil fertility was managed using shifting cultivation (Van Ranst *et al.* 2000).

Van Ranst *et al.* explain that in the 18th century, white settler farmers moved from the south and western coastal areas towards the east and occupied most of the riparian land in the nowadays Eastern Cape Province. Noteworthy in this account is that livestock production was the basis for both white farmer settlers and the local Xhosa people. As a

result, both groups started competing for land resulting in armed conflicts. When the British took over the Cape, they provided the military might to settle conflicts in favour of the white colonists, resulting in loss of land for the Xhosa. This resulted in the creation of new social strata in which the local black population hired their labour to white farmers.

It is now observable that there is little subsistence economy to be found in the two catchments of my study. Local people are dependent on formal cash employment, migrant remittances, government grants and informal economic activities. Hebinck and Smith (2001) affirm this shift in livelihood strategies, when they observed, in their research focused on two communities from the Eastern Cape, that rural peoples' livelihoods are currently hardly based on agricultural production, but basically rely on incomes from claims against the state and kin⁴⁴. Hebinck and Smith (2001) state that one of the essential characteristics of livelihoods in Eastern Cape generally is the demise of agriculture as a source of livelihood and the increasing importance of both migration and reliance on grants from the state and kin (remittances from urban relatives). Their snap survey indicated that 80 percent of respondents relied on social welfare grants as their source of income. Other sources of income included wages and salaries and income from self employed activities such as petty trade. Income earned from crop cultivation and livestock was relatively small and not widespread.

It is evident that the traditional way in which Xhosa people provided for a living has been altered to one in which impoverished black people now depend on the "workings of the market." Consequently it can be assumed that individual values will change only in response to the assortment of opportunities and constraints that new institutions are prepared to offer. Thus the most important question raised by participants when considering participation in collective actions is "what is it costing me?" If it costs them some effort, energy and sacrifice but the payback is not exponentially greater than drawbacks, then the initiative may not be considered worthwhile. For example, during the first joint workshop of the two CMFs, participants were asked to list problems affecting their CMFs. The list prepared by participants from Mthatha CMF included the statement "*lack of incentives - volunteering does not exist with us*".

This argument contradicts ideologies that postulate that stakeholders participate in natural resource management in the interest of the returns that will accrue to the entire society. Such conceptions of participation gloss over, at least de-emphasize the power of vested interest in self-realisation of participating individuals. Based on some statements quoted below, captured in my interviews, I concluded that many individuals could not care less how their actions affected the entire society as a functioning system, if their participation required self-sacrifice alone.

⁴⁴ Claims against the state here refer to social welfare grants, which are paid to people above the age of 65 and to children below the age of 16.

“It is not easy to convince community members to take active participation in emerging institutions such as the CMF because everyone is preoccupied with finding means for survival. Attending meetings like the CMF is a major strain on our time as community members.”
[Community representative on the Mthatha CMF]

“I suppose there are people who are elected to take care of our environment on behalf of everyone. I can only guess that such people are remunerated for setting their personal activities aside when they spend their time at CMF meetings.”[Farmers Union member in Mthatha catchment]

“I wonder whether I can be able to set aside my family duties to attend CMF meetings if I were nominated to represent my community. You see, I have such a big family to take care of and my husband is about too old to be left behind with the children each time I am to attend workshops and meetings.” [Female community member at a meeting at which the community was nominating a CMF representative in the Kat catchment]

The importance of taking into consideration a participant's opportunity cost⁴⁵ for participating in an externally induced activity was also recognised by a research team in Zimbabwe. Mudege (2005; p 50) reports how she adopted an approach of offering 'tokens of appreciation'⁴⁶ to local farmers who participated in the research study. While it can be assumed that those 'tokens of appreciation' were intended to be thank you gestures (even when it was possible to say thank you without payments), it can also be concluded that the gesture was a recognition of the fact that local people too incur an opportunity cost in participating in activities that originate from outside their decision boundary, and some form of compensation for such cost is necessary.

The basic argument of course is that there is an opportunity cost for engaging in any activity. It is recognised that individuals with no observable market wage, as jobless community members might be, do not necessarily have a low or zero value of time. McConnel (1975) contends that far from having a low opportunity cost of time, unemployed individuals may have much higher time values than employed individuals. Accordingly, when stakeholders representing local communities in Mthatha carefully considered the benefits for participating in the CMF, their immediate response was disinterest and gradual withdrawal. A senior DWAF official responsible for empowerment and participation concerted during an interview that:

⁴⁵ Opportunity cost is an economic concept that captures the essence of alternative choices. It explains that every choice results in sacrificing another alternative choice. Thus the opportunity cost of a choice is the value to the decision maker of the best alternative that could have been chosen but was not chosen (Mohr and Fourie 2000; p 11). Thus every time a choice is made, such as attending a CMF meeting, the decision maker forgoes another opportunity such as engaging in a productive activity or visiting a relative. The value to the decision maker of the forgone activity is the opportunity cost for attending the CMF meeting.

⁴⁶ Mudege reports that goats and money were given to farmers who participated in the research study.

“How can we expect a poor woman who is selling goods in the streets to feed her family, leave her place to come to the CMF meeting, she obviously weighs her benefits in doing that.” [NM]

Participation of organisations

While the principles of the theory of actor-oriented approaches and rational choice can be used to explain the reasons behind the apathy of Community Stakeholders towards CMFs, how can the disinterest from government organs specifically in the Kat and municipalities in both catchments be explained? One explanation could be found in the manner in which these organs operate. North (1990; p 5) explains that organizations can be thought of as groups and individuals bound together by some common purpose to achieve their objectives. Thus organizations will pursue those activities that directly satisfy achievement of their mission. The mission of an organisation forms a cognitive map that provides broad parameters within which it formulates its goals and forges its actions. Thus organisations are legitimately engaged in activities that ensure their ‘own survival’. Thus their participation in a collective action will be pursued as a means to secure their own technical goals through actions of others. This ‘self-serving’⁴⁷ side of organisations means that stakeholder representatives will only participate to the extent to which the process will not create any operational or financial burden on the organisation. Frost *et al.* (1985) also identify the ‘self-serving’ side of organisations as the reason that encourages most public agencies to look to their own interests first and societal welfare second. During my field study, I observed that this was particularly true with regards to municipalities. Many municipalities in South Africa are faced with a debilitating shortage of skilled human resources (also observed by Kihato and Schmitz 2002). For instance, the local municipalities in the Kat and Mthatha catchments had only one water engineer each who, in addition to councillors, was expected to represent the municipality on the CMF. However, the water engineers’ job demands were such that they could not find time to participate nor were they able to answer to CMF demands.

I see government organs, NGOs and the private sector remaining resolutely technocratic, preferring to pursue their goals with little interference. Warner and Simpungwe (2002) assert that should an NGO perceive that joining an MSP might put it at risk of losing its legitimacy with a constituency that expects it to rally support against popular government decisions, it may think twice about joining such a decision-making process. The lack of interest on the part of the local municipalities can also be linked to the apolitical nature of CMFs. CMF mandate did not have a legal backing and the institutions emerged as simply platforms for dialogue. This meant that councillors did not see how CMF activities could produce vote-winning action. Local municipalities represent arenas where national politics are fiercely contested. Councillors from different political parties play out their acts to impress the voters and local institutions vie for membership of councillors to earn their legitimacy. My interviews with three

⁴⁷ Nauta (2001; p 28) also observed that NGOs too do have this ‘self-serving’ side that forces them to pursue projects and programme that will sustain their own objectives.

local councillors (two from Mthatha and one from the Kat) all gave a similar response for their failure to attend CMF meetings:

“We councillors have numerous activities to attend to. We are interested in all activities that benefit our people, but organisers of meetings must ensure that their meeting dates do not coincide with our activities and we must be informed in good time.” [BM]

Logically, if a local political figure requires to be implored to attend a meeting, it is an indication that he or she does not see such a meeting to be a vote-winning activity. When I confronted water engineers in the municipalities to explain their failure to attend CMF meetings, they positioned the problem in the confusion that existed in the delegation of duties within municipalities, as a municipal staff put it in Mthatha:

“Attending CMF meetings is not part of my responsibilities. I have my boss whose duty is to assign me such responsibility if he felt it was necessary for me to do. I cannot just take off and leave my desk to go and attend some meeting just because it deals with water issues. In fact, invitations to such meetings need to be addressed to my boss.” [SN]

Thus organisational workers did not think it was in their mandate to attend CMF meetings. In the Kat catchment, the Department of Agriculture sent a junior member of staff⁴⁸ to represent the department at CMF meetings. When I called him by phone to investigate why he had missed so many CMF meetings, he indicated that his mandate did not include attending such meetings and he only came when his boss said he could. Stakeholders from state organs also presented a different kind of apathy towards the CMF, they tended to send new faces at subsequent CMF meetings. As a result, there was poor continuity in dealing with issues discussed at previous meetings.

Evaluating the application of the rational choice theory

It is important at this stage to admit that the rational choice notion alluded to in this discussion to explain possible reasons for poor responses from stakeholders representing local communities in participating in the CMFs has serious limitations. After all, a theory is only a syntactic statement, which may be interpreted in various ways. Hardin (1982) has argued that people do not ‘always’ act according to rational choice principles. As a matter of fact, Zey (1998) has shown that two interlinked problems have bedevilled attempts to depict theories of rational action as general theory of individual and organisational action. These are the problems of collective action and social norms. Rational choice theory has difficulties in explaining why some people invest time and resources in all kinds of collective actions such as demonstrations and campaigns even though this might be irrational from the standpoint of strategic rationality. Social norms is related to why people seem to accept and follow norms of behaviour that lead them to act in altruistic ways or to feel a sense of obligation that

⁴⁸Rather than taking the responsibility themselves, senior subject matter specialists positioned at District Offices sent a field extension staff member to attend CMF meetings

overrides their self interest. It is therefore evident that there are alternative motives behind decision-making besides rationality.

Nonetheless, how we interpret theory depends on its context. I see that rational choice theory is consistent with the decision-making processes involved in the management of the resource at stake and with the drivers of social welfare that pertain to the study of catchments. The socio-economic status of the stakeholders and the type of resource at stake in this case, may be crucial in actors' response to a collective action. With reference to the folklore presented at the beginning of this chapter, in which the chief requested his subjects to contribute a litre of white wine, the fact that the chief's order did not take into consideration the different capacities of his subjects and that wine was to be white (white wine was not very distinguishable from water), contributed to the infringement of the chief's order. Thus the capacity of actors and the nature of the resource (or good) around which actors are to cooperate is a factor in how participants respond in a collective action.

According to the rational choice model of human decision making, expected costs and benefits would be the factors that influence an individual's choice as to whether or not become involved in an institution working for a collective good (Blomqvist 1996). In consideration of transactional costs associated with participating in the collective management of a public good, Olson (1965) contends that poorer individuals will usually have little choice but to opt out for the free rider strategy. In this instance, the behaviour demonstrated by stakeholders who were expected to participate in CMF activities, but chose not to do so, can be considered as 'free-riding' on the management outcomes achieved by the (few) participants who took the interest in participating in management decision-making for catchment water resource management. CMF group action is presumed to promote water resource use efficiency and sustainability. Free-riding constitutes a behaviour challenging these sound goals of group action.

Thus as a public good, I see water to be highly responsive to rational choice principles. Three critical features of water in a river make it susceptible to rational choice principle: (i) individual consumption can diminish its quality and/or quantity; (ii) no member of a collective initiative or one outside can be excluded from using it; and (iii) no member of the public can claim to have produced it (Koundouri 2003, Perry *et al.* 1997). The 'official view' of the purpose of CMFs was mainly to allow stakeholder participation in decision-making regarding utilisation and conservation of the water resources (sub-section 6.5). Under such conditions, an individual or sector behaving according to rational self-interest will not contribute to a collective management of the water resource beyond expected benefit. Since the nature of water use, particularly by poor communities in the two catchments, is such that there is not a possibility of excluding someone once it is efficiently conserved, and its conservation involves many contributors, the individual's rational calculation (particularly when one has limited personal resources as poorer members of the study catchment are) will tend to stop him from contributing if he considers that his transactional costs (or difficulties associated with participating) are beyond his perceived benefits. Under these circumstances, a stakeholder can choose to take a "free ride" expecting that his/her own contribution will

be of no consequence. After all, no social sanctions are available to penalise non-participation in the collective action for decision-making over management of the water resources.

6.3 Stakeholder representation: Attracting the interest of stakeholders

Following from the preceding discussion, it is difficult to imagine why stakeholders would choose to participate in a collective action that requires sacrifice on their part even when they are not obliged to participate. This implies that the novelty of the MSP concept in externally induced initiatives might require accompanying regulations that necessitates participation of relevant stakeholders. According to Olson (1965), the problems of collective action as stated in the theory of rational choice can only be solved by coercion, which is the motivation of participants through a ‘threat’ of regulation, or by activity that has low transactional costs to the participating individual or by a mixture of the two. The ideological assumption implied in the MSP discourse, that once management of water resources has been devolved to stakeholders, they will respond unanimously and take interest in a collective action might not be plausible. Emergence of the Kat CMF may be considered as a bottom-up process while that of the Mthatha CMF may be considered as a top-down process. However, both were faced with different kinds of participation problems. This indicates that in externally induced initiatives additional regulations or incentives may be required to attract the interest of stakeholders

Proceedings of the first joint workshop between the two CMFs could testify to this argument. When each CMF was asked to present the desired composition of their CMF, the Mthatha group came up with what could be considered a comprehensive list of stakeholders as following;

- DWAF – Water Services and Planning division
- DWAF – Directorate of Water Resource Management
- Provincial Government Departments:
 - Dept. of Agriculture
 - Dept. of Local Government and Housing
 - Dept. of Health
 - Dept. of Education
 - Dept. of Economic Affairs
 - Dept of Environmental Affairs and Tourism
- Local Government
- Community representatives
- Traditional leaders
- Educational institutions (University of Transkei)
- Water Services Providers such as – Amanz’Abantu
- Semi Government Organisations:
 - Eastern Cape Community Development Corporation
 - East Cape Appropriate Technology Unit.
 - Eskom (Electricity Company)
 - Wild Coast Spatial Development Initiative
 - Eastern Cape Tourism Board

- Local Business Service Centre

However when the group was then asked to list problems affecting the efficient functioning of their CMF, it was interesting to note that non- participation of most of the listed stakeholders was a serious concern as the list below shows:

- Not all stakeholders have come onboard
- Poor local government involvement – few officials come to attend meetings from the municipalities.
- Councillors do not completely understand the catchment boundaries and hence their poor involvement in the Forum
- Some key stakeholders are not fully involved, such as:
 - ⇒ Eskom (electricity company operating a power station in the catchment)
 - ⇒ Team leaders
 - ⇒ Government departments such the Department of Agriculture and Land Affairs
 - ⇒ Grassroots participants: We have not achieved youth, and older people as stakeholders. Youth come and go. They need to be attracted.
- Lack of incentives - Volunteering does not exist with us.

It is evident that CMF members recognised the need for a broader participation of stakeholders. At this same workshop, both the Kat and Mthatha CMF members listed poor participation as a major weakness of their CMF. Participants then explored how the active participation of government and private sector organs was to be achieved and whose responsibility it was to ensure that these sectors were actively involved. Since no specific resolutions were reached regarding this issue, was an indication of how unclear the rules regarding stakeholder participation, at catchment level, were.

Essentially, in state-induced participatory resource management, the MSP practice is a self-defeating exercise if state organs responsible for resource management are absent from a collective action. Municipalities and government departments (DWAf, DOA and DEAT) are organs in the delivery of water and sanitation services (Chapter Three). It is difficult to imagine how community members could be expected to participate (and lead) in a state-induced multi-actor initiative in which these state organs do not show interest.

To finalise my argument, let me allude to a proverb from a tribe in Zambia, since most evidence of poor participation seem to point this direction. Whenever there is a suggestion for a collective action, this Zambian tribal people would intimate “*Upanfwe eulwa nechibi*”. A literal translation of this statement to English would be “*Whoever is in a hurry fights with the door.*” This proverb emanates from a situation based on the African village setting where toilets were built outside the main house. In those villages, lions were known to knock down house doors in order to get their human prey. As a result, most village house doors were designed to withstand massive knocks from hungry lions or indeed other predators. The door design included placing several huge logs, across the inside of the doorway to reinforce the outer reed-mat door. This arrangement meant that at night, should someone be faced with an emergency call of

nature, one had to work extra hard and to remain committed to the task to make his/her way out of the house to the toilet. During the struggle with the door, the rest unaffected members would remain sleeping. Children would usually be assisted by 'concerned' adults and escorted outside. This situation found itself in the proverb to explain that when there is a task to be done, only those that have serious concern will make the effort. Similarly, is it surprising that stakeholders in collective actions will act rationally in choosing whether or not to participate in the management of a common pool resource depending on the assortment of available incentives and costs involved in doing so? This argument is brought to a sounder conclusion in Chapter Nine.

6.4 Stakeholder representation: Providing a portrait of an MSP

The main enthusiasm for the concept of an MSP comes from its principle of the tripartite partnership whereby the public, private and civil-society actors are brought together to a consensual and mutual decision-making. This is also the anticipated state of affairs in the studied CMFs. However, a careful observation and analysis of actors involved in the studied CMFs revealed a bilateral rather than a multi-lateral structure.

While not abandoning the 'multi' aspect of CMFs, whereby stakeholders represented different government departments, NGOs, academics and communities, my field observations revealed that the local stakeholder discourse within the CMFs had invented an interesting and unique portrait of their MSPs. Stakeholders grouped into two general categories; those who represented an organisation and those who represented a local community⁴⁹. The two groups of stakeholders were identified as '*Organisational Stakeholders*' (members of the CMF who represented an organisation) and '*Community Stakeholders*' (members of the CMF who represented a community in the catchment). I observed that there was no individual known to be participating only in his or her personal capacity, even if this was not excluded. I found this simplified categorisation of stakeholders appropriate and relevant for understanding stakeholder behaviours because essentially, their nature of participation in action and behaviour (which constitutes my point of departure) was largely dictated by whether a stakeholder represented a local community or an organisation.

Organisational Stakeholders

This description referred to members of the CMF who represented an organisation with regularised operations and that were distinguishable by name. The member's contributions to the CMF were not intended to reflect the member's personal opinions or interest but those of the organisation s/he represented. The member's participation on the CMF was limited to his/her term of office in the organisation, and was subject to the demands of his/her organisation i.e. he/she would attend to the requirements of the CMF (meetings, workshops, business) only when there were no other organisational

⁴⁹ The word 'community' in social science literature, is used to describe a range of overlapping social units which serve as the locus of social activity and/or shared identity (Dynes 1998). In the context of this research, the most important attributes of the community are its geographical boundary and a shared identity. Hence a 'community' is identified as a group of people living in a common environment and interacting with one another. Accordingly, local people in the study area use the word 'community' interchangeably with the word 'village'.

duties that required his/her attention. In many instances, members of the CMFs who represented an organisation would send a 'substitute' representative to meetings. This meant that their participation in CMFs was only '*participation by proxy*'. I noticed that Organisational Stakeholder was also a residual category for any stakeholder who did not come from a village (community) since even as a researcher, I was perceived as an Organisational Stakeholder. In principle they were right since I was involved in facilitating some processes but in reality I was not necessarily a stakeholder since the objective of my being there was just to observe the processes.

Organisational Stakeholders may also be referred to as 'expert systems' (Chambers 1993), referring to people and structures constructed around conventional knowledge gained from traditional education believed to be scientific as opposed to local or indigenous knowledge. Organisational Stakeholders perceive themselves as specialists in their given fields. They rely on 'scientific' knowledge and use technical tools and paraphernalia to situate their position. I observed that Organisational Stakeholders were not necessarily deeply embedded in local communities as field workers but operated from urban locales and pursued their organisation's objectives and schedules.

Community Stakeholders

This group constituted members coming to the CMF in their individual capacity or representing a local community. Community Stakeholders were local residents on whom the status of water environment and management had the highest impact. They were mostly poor and living in the outlying areas of the urban centres. Their livelihood system depended on the status of the state of and level of management over the hydrological cycle. The hydrological status of the catchment dictated the (un)certainly of their lives. This group of stakeholders may or may not be homogenous. Representatives from communities spoke on behalf of the people they represented and indeed on their own behalf and that of their kin. As I will elaborate further, they also pursued their individual incentives and aspirations by participating in the CMF. Community Stakeholders had a defined social space in which they existed. This was in contrast to Organisational Stakeholders who existed in a boundless social sphere, whereby the catchment was just a workspace that changed with the assortment of incentives and opportunities.

Notwithstanding, I am aware that sociologists wonder whether a distinct 'community', to which one can attach a representative, does exist. They argue that communities are erroneously seen as relatively homogeneous, whose members share characteristics distinguishable from 'outsiders'. Mohan and Stokke (2000; p 264) describe a 'community' as a fluid sphere of social interactions rather than fixed or discrete entities. Indeed, describing people as a 'community' is to disregard ethnic, cultural and other differences as well as great power differentials within a local community that block them from functioning as a unit. However, Ostrom (1990; p 232 – 233) contends that communities are characterised by a degree of shared norms, values and patterns of reciprocity, capable in principle of *cooperative behaviour*. It is on the basis of this potential for 'cooperative behaviour' that community members have been classified into one category as 'Community Stakeholders'.

The limitations in this simplified categorisation of stakeholders are acknowledged and precise and rigorous definitions that distinguish the two categories may not be easy to arrive at. For instance, an academic representing a local University in Mthatha argued that he would not place himself in either category, but rather in a different category, which he referred to as '*academic*'. He defined this as those without a direct stake in the resource and whose role was merely to facilitate the bargaining between user interests through the provision of information and knowledge. I found it difficult to accept this argument because I observed that in fact, '*academics*' held much stronger decision-making power than the rest of the members of the CMFs since they chaired the meetings (in Mthatha) and were more articulate than any other members (both in Mthatha and the Kat). They therefore provided more ideas for action and were looked to as a source of ideas. I therefore maintained that they belonged to the category of Organisational Stakeholders, as identified by those from the community. This categorisation is also problematic when one considers that certain individuals can play 'hybrid roles' or 'multiple roles', such as was the case with one member of the Mthatha CMF. This person was a staff of the consultancy company, which facilitated the CMF operations, and was a councillor in the local municipality and was a representative of the community from where he resided. All the three roles that he occupied in society qualified him to be member of the CMF representing private sector, local government or indeed local community and he could be categorised as both an organisational stakeholder as well as a community stakeholder. Nevertheless, that was a unique and rare situation.

The fact of the matter is that any given society may be differentiated in several classes and sub-classes (based on gender, wealth, ethnicity etc). The categorisation of stakeholders alluded to here does not necessarily refer to 'sameness' or 'functional cohesion' of the stakeholders in each class. Rather it refers to the analogous or comparability of stakeholder representatives, where some individuals represent the interests of organizations to which they are *associated during the term of their employment* and others represent a social group to which they *belong in terms of their livelihood*. In general, classification is actually a matter of convenience. Douglas (1987, p 58-59) argues that classification depends on which properties are selected. She qualifies her argument by referring to what she terms 'an archaic religious classification' from the Christian Bible, where the unlikely threesome, the camel, the hare, and the rock badger get classed together as animals that chew the cud, but are excluded from the cud-chewing ruminants because their hooves do not part like the rest of the class (Leviticus 11.) Concluding then that sameness is not a quality that can be recognized in things themselves, but that it is conferred upon elements within a coherent scheme. In a similar manner, within water management, images of cooperative 'communities' do exist as counter-discourses to the dominant control over resources by state and private sector.

*A typology of stakeholders and their stakes in the Kat and Mthatha catchments**The Department of Water Affairs and Forestry (DWAF)*

The DWAF, which underwent a transformation, from the apartheid era Department of Water Affairs (DWA) to the post-apartheid era Department of Water Affairs and Forestry (DWAF), is a national government department headed by a Minister and has its headquarters in Pretoria. The Department states that it is both a poacher and gatekeeper in water resource management.⁵⁰ This statement was intended to describe the dual role that DWAF occupies in water resource management as both a stakeholder as well as guardian of water and forestry resources in South Africa. At national level, DWAF is primarily responsible for the formulation of policy governing water and forestry sectors, while 9 regional offices are responsible for their implementation. Even though local governments provide water and sanitation services in their areas, DWAF has overall responsibility for such services. The Water Services Act (1997) instructs DWAF to regulate water services through compulsory national standards, norms and standards for tariffs and contracts between WSAs and WSPs (Chapter Three).

DWAF's other functions and responsibilities include inter-catchment water transfers, drought and flood management, safety of dams, control over the abstraction of public water and management of water quality. The Directorate of Catchment Management within DWAF is directly responsible for water resource management in the catchments as well as ensuring stakeholder participation. Some of these responsibilities include capacity building and training to facilitate the establishment of water management institutions, such as CMAs, WAUs and CMFs. DWAF develops and monitors the implementation of policies, and guidelines with regards to catchment management and stakeholder participation. It is DWAF's responsibility to ensure that CMFs (and indeed all forms of participatory water institutions) carry out their functions effectively. It can be concluded then that DWAF has considerable control over the functioning of CMFs and other water institutions. According to the NWA, DWAF⁵¹ is ultimately accountable for the management of water in the catchment. To this day, DWAF still commands a large degree of centralised power over the water and forestry resources.

The management of water resources (surface and groundwater) in the Kat and Mthatha catchments is the sole responsibility of DWAF. This includes monitoring of water quality and quantity. The two dams in both catchments are owned by DWAF. According to NWA, CMAs are expected to take over these functions from DWAF. However the establishment of CMA in Water Management Areas 12 and 15 where the Kat and Mthatha catchments fall, respectively, is undoubtedly still a long way away. DWAF's Catchment Management Directorate in the Eastern Cape Province is represented by a regional office in Cradock, which is situated about 400km from Mthatha catchment and 'only' 200km from the Kat catchment. Other DWAF satellite offices exist in King Williams Town, about 150km from the Kat catchment, and within Mthatha town. It was ironic, considering the presence of DWAF in the vicinity of the

⁵⁰ This statement can also be found on its website at www.dwaf.gov

⁵¹ The Minister of DWAF is specifically mentioned in the Act

Kat catchment that its participation in the Kat CMF was problematic while the Mthatha CMF meetings were attended by at least four DWAF staff members and occasionally senior staff from DWAF headquarters in Pretoria flew to the catchment to attend the meetings. DWAF Cradock office, which lies closer to Kat catchment than to Mthatha, argued that it was too overstretched to send a representative to the Kat catchment. However DWAF had a staff member in the Kat catchment - the dam operator - who could be considered a relevant DWAF representative on the basis that he was responsible for regulating water flow in the Kat River and he resided only a few kilometres away from the usual meeting place of the CMF. His surprising absence from the CMF is discussed in Chapter Eight.

DWAF's ability to successfully play both roles as stakeholder and facilitator could be a subject for a separate fully-fledged research. Suffice to mention here that sentiments from Mthatha CMF members indicate that members of the CMF observed paternalistic tendencies in the manner in which DWAF conducted itself:

“DWAF wants to ensure that the CMF concept works. Its concern is to see that government policies are adopted or implemented. The staff of DWAF is therefore having to supervise and manage CMF activities since it reflects on their performance as government workers.” [BS]

Local government

As mentioned in Chapter Three, South African government is organised into three spheres of administration; the National level, Provincial and Districts. Districts are referred to as local and constitute the third tier of government. They fall under the arm of the National Department of Local Government and Traditional Affairs. South Africa has six metropolitan municipalities, 47 district municipalities and 231 local municipalities. For the purpose of political administration, each local municipality is further demarcated into smaller regions called wards. A ward councillor who is a political representative from a specific political party represents each ward. A ward councillor is an executive member of the district municipality.

The Mthatha catchment lies within the Oliver Tambo Municipality while the Kat catchment falls under the Nkonkobe District Municipality. CMFs desire that Water Engineers from the municipalities and ward councillors from wards that lie in the catchment represent the municipalities on the CMF. Water Engineers because they are the technical officers in water issues while ward councillors represent the interest of the grassroots and are crucial in decision-making of all district plans. As discussed in Chapter Three, municipalities are key role players in water resource management at catchment level considering that as WSAs, they facilitate water use and had the greatest impact upon water resources (supply of domestic water, treatment and disposal of wastewater, pollution and disaster management).

The District Municipalities are faced with high costs of water and sanitation services. The cost of provision of these services is confounded by the scattered nature of settlements. Due to lack of capacity to handle water and sanitation services, DWAF still

has to provide water supply and sanitation services and in some cases, municipalities contract private water service providers who are also regulated by DWAF.

The National Water Resources Management Strategy requires that when preparing its water services development plan, a municipality must refer to the relevant catchment management strategy for information about the availability of water to support: proposed water services targets, the source of the water and the requirements for the quality of wastewater that is to be returned to the water resource after use. Catchment management cannot therefore be effectively carried out without full participation from local government. The Water Services Act also indicates that municipalities are responsible for facilitating meaningful community participation in decision-making processes of its activities and therefore are required to support forums where the public can give its inputs in a structured and meaningful manner.

The Department of Agriculture (DOF)

The National Department of Agriculture is a key stakeholder in both the Mthatha and Kat catchments. District offices of DOA existed in both catchments. Its responsibility is to support the agriculture sector in maximising its contribution to economic growth, food production and reduction of poverty. Land-care and support of irrigation schemes are important concerns for the department. For instance, this department funded the Land-care project⁵² in the Kat catchment. The Department was also overseeing the smooth running of several irrigation schemes in Mthatha catchment. The Agricultural engineer in Mthatha indicated to me that there were several soil erosion control and irrigation projects that are being implemented by DOA in the catchment but which had not (yet) come to the knowledge of the CMF.

The DOA had a regular representative who attended CMF meetings in Mthatha. In the Kat, a junior extension officer from DOA offices sporadically attended the CMF meetings. Since the department was financing the Land-care project, it can be assumed that the Department's interest as a stakeholder was related more to the land-care project rather than to water resources management. This was confirmed by the fact that the Department's representative appeared mostly at meetings set to discuss the Land-care project.

The Department of Environmental Affairs and Tourism (DEAT)

As a department responsible for the conservation of natural resources, marine and coastal management, the Department of Environmental Affairs and Tourism holds a stake in water resources of both catchments. A representative of the department attended meetings of Mthatha CMF. DEAT was however absent in the Kat catchment. Its absence was attributed to the fact that there were no DEAT offices close to the Kat catchment. In Mthatha, DEAT's interest lay in the development of the wild coast mainly for the purpose of tourism but also for poverty alleviation of the impoverished local

⁵² The Land-care project is extensively discussed under its own subsection in the next section of this chapter.

populations and for environmental management. Members of the Mthatha CMF were keen at exploiting this potential.

Electricity Company of South Africa (ESKOM)

With two hydro-electricity generation stations along the Mthatha River, ESKOM was a crucial stakeholder in Mthatha catchment. A highly placed official from ESKOM represented the organisation on the Mthatha CMF. ESKOM was absent in the Kat catchment since there were no hydropower generation activities on the Kat River.

Records indicate that ESKOM utilised up to 240 million m³/annum of water from Mthatha River. However, it was considered non-consumptive since it was returned to the river. Unpublished research reports indicated that ESKOM activities of regulating the flow regime of the river negatively affected the estuaries downstream since it amounted to the manipulation of the ecosystem (DWAF 2002). Thus hydropower generation was in direct conflict with the temporal scale for water required for the natural environment. ESKOM saw its participation on the CMF to be crucial in terms of ‘convincing’ the members that the benefits accruing from hydropower generation probably exceeded the negative effects. An example to this effect was a conducted tour of its plant by all members of the Mthatha and Kat CMFs, which was included in the second joint workshop of the two CMFs held in Mthatha. During the tour of the ESKOM plant, the staff pointed out the efforts that ESKOM was making to maintain the integrity of the river ecology.

University of Transkei (UNITRA)

The University of Transkei, which is based in Mthatha town, was established during apartheid era to provide university education to residents of the “homelands.” During the process of mobilisation for the formation of Mthatha CMF, scientists from the Department of Geography and Botany were specifically invited to contribute towards assessing and generating information regarding the geomorphology, riparian and aquatic biota of the Mthatha River. As a result of their involvement in these activities, these University staff took interest in the activities of the CMF and at the inauguration of the CMF a University staff member accepted the position of chairman of the management committee of the CMF. The University is often represented by at least 4 staff members at each CMF meeting.

Rhodes University

The interest of Rhodes University in the Kat catchment can be linked to the several research studies that were undertaken in the Kat River Valley by researchers from the Geography Department of the University, most of which also informed this study (for some of these studies see McMaster *et. al.* 2001, Rowntree *et. al.* 2000, Motteux and Rowntree 1997, 1998, Motteux 2002, Motteux *et. al.* 1999a, 1999b). Within the Geography department of the University is a catchment management group that took interest in exploring management practices of catchment ecology. Rather than conduct an exclusively academic research, researchers also took interest in undertaking an action research approach that would yield specific benefits to the local communities. The research activities that began in 1996 resulted in the creation of an intimate relationship

between the University and the communities of the Kat catchment, to an extent that local people begun to perceive the University as the “parent”⁵³ of the CMF.

From its research budget, the University provided funds to the CMF to hold its meetings and conducted a number of capacity building workshops. The University saw its role in the Kat as that of providing backup knowledge for the management decisions undertaken by both the WUA and the CMF. For instance, it played an advisory role in the implementation of the Land-care project and facilitated the transformation of the Irrigation Board to a Water User Association. As a result of these initiatives, Rhodes University also provided a research network that also helped in workshop processes of group development and also created a learning platform for several researchers interested in social processes involved in catchment water resource management.

Eastern Cape Appropriate Technology Unit. (ECATU)

This is a government-sponsored institution responsible for conducting applied research in appropriate technology. It picks up community projects such as making sanitation designs that improve the quality of rural life. In my interview with stakeholder representative of this organisation, I learnt that its specific interest in the catchment lay in the institution’s concern for appropriate utilisation of catchment resources. By getting involved in the CMF, the institution was hoping to be able to identify areas that needed innovations for the upliftment of rural people’s lives. At the time of my research, a lady representative of this institution was serving as the secretary of the management committee of the Mthatha CMF.

Water Users Association (WUA)

Since CMFs are charged with the task of managing water resources for the whole catchment and WUAs are important water users within a given catchment, they (WUAs) are eligible and key stakeholder members of the CMF. There was no WUA in Mthatha at the time of my research. This was attributed to the limited agricultural activities in the area. As for the Kat catchment, an irrigation board had existed in the lower part of the Kat catchment. It had just been transformed (2002) from an irrigation board composed of exclusively white framers, to an ‘inclusive’ WUA as required by the NWA. The participatory processes undertaken to raise environmental awareness among community members in the Kat included some joint workshops and meetings with members of the irrigation board as a way of anchoring the board’s transformation process into the on-going community mobilisation processes of the catchment management. However, most members of the WUA still came from the lower part of the catchment where commercial farming was concentrated and had little concern for the upper Kat where the CMF was active.

At the formation of the WUA, some emerging commercial black farmers and a number of community members (not necessarily farmers) were incorporated into the new structure of the WUA. Even though the WUA in the Kat ‘claimed’ to have representatives on the Kat CMF, my observations and interviews indicated that the

⁵³ Sentiments made by participants of the Land-care Evaluation workshop held on 5th and 6th May 2003.

people who were supposedly WUA representatives could not possibly genuinely represent the interests and concerns of the WUA on the CMF. I learnt that the few (three) community members who got positions in the management committee of the WUA were incorporated to represent the interests of local communities specifically to ensure that water-use activities of commercial farmers did not infringe upon the needs and interests of local communities. They were expected to monitor the operations of the WUA, with respect to water use from the Kat River and dam, ensuring that these did not put community water users at a disadvantage. This meant that these three WUA members from the local community actually represented consumptive uses of water rather than productive uses.

These three community members, having been involved with the emergence of the CMF also sat on the steering committee of the CMF. Since these local community representatives were members of both the WUA and the CMF, they became WUA representatives on the CMF by default. There was no sign of interest in the CMF by the original members of the WUA who constituted the white commercial farmers. The amount of water abstractions (discussed in Chapter Four) did not correspond to their margin of interest in the co-management of the catchment resources. An interview with one white commercial farmer from WUA revealed that, from their own perspective, their absence on CMF was justified by the fact that there were some community members attending CMF meetings who also were considered to be WUA members. One of the responses from the white WUA member went as follows:

“It is not necessary for us (white farmers) to attend CMF meetings in the Kat. We feel adequately represented by some members (black community members) from our association. They understand CMF issues better than we do and so we leave it to them. Should there be any serious concerns, we shall be informed and we shall be glad to help.” [RR]

It is difficult to justify that the interests and concerns of the WUA were fully represented on the CMF by the community members, especially considering that these ‘supposedly’ WUA members did not own any farms, did not live in the lower commercial farming region of the catchment and were not engaged in irrigation activities of any kind. Considering that most members of the WUA were wealthy educated commercial farmers, I cannot assume that they lacked understanding of the interdependence of human activities in the up-stream down-stream dynamics. The lack of interest of the white community in the lower Kat catchment and that of the management of the Katberg hotel in the upper Kat catchment can only point to the historical racial divide that still looms in South Africa (Chapter Three - how history matters). Writing about his experiences in the Kat catchment, one of my research colleagues who happened to be a white Dutch student, confirms these sentiments when he made the following remarks in his field notes:

“On my first day in Fort Beaufort it was immediately clear that this research was going to be different from the one in the Upper Kat, only 40 kilometres further up the river. The farmers here are big scale, rich

and almost all white. It was sometimes clarifying (sic) sometimes rather shocking to hear their views on the black communities and the capabilities they believe these communities have. Truly the apartheid hasn't stopped influencing daily practices here. It's a shame to say, but for me to be white surely seemed to be an advantage, for most farmers were very welcoming towards me and the amounts of coffee I got offered during the interviews could have kept me awake for the next year" [AD]

Thus it was possible that white WUA members viewed the Kat CMF as something for the black communities. On the other hand, it is also logical to conclude, based on South Africa's legislation⁵⁴ that WUA members in the Kat could have considered their institution more legitimate than the CMF and therefore did not feel compelled to participate in an institution, which was not backed by any statutes.

Mpofu Farmers Training Centre

This institution existed only in the Kat Catchment. It is a government owned farmers' training centre. Its stake in the catchment lies in its ownership of 20 hectares of irrigated cropland. It pumps its irrigation water from the Kat River. The centre has a number of livestock too. Pump failures and problems with farm management stalled crop production.

The centre was frequently used as a venue for workshops and meetings by the CMF. As a matter of fact, the first joint workshop between the two CMFs was convened at this place. The Centre, though an important stakeholder in the catchment, does not send a representative to CMF meetings. The principal of the centre explained that they did not have sufficient staff to send to CMF meetings. He however felt that he made his contribution to the CMF by providing facilities for CMF meetings and workshops.

South African National Civics Organisation (SANCO)

Formed during the eighties, SANCO emerged as a community based lobby organisation intended to add impetus to the United Democratic Front fight for freedom. It was seen as a legitimate and democratic structure by the progressive forces of the masses. It was a national organisation with branches in many rural black communities where political activism was rife. Although the organisation helped to draft the Reconstruction and Development Programme (RDP) following South Africa's political freedom, it progressively lost strength and political relevance after the political parties were unbanned (Nauta 2001; p 93).

The Mthatha SANCO branch was a strong player in politics, but no group existed within the Kat catchment. The Mthatha branch of SANCO was actively involved in the CMF and was represented by its articulate and very vocal chairman. He saw his role as that of eliciting important issues affecting local community members and ensuring that the needs of the poor local people were not sidelined.

⁵⁴ Based on South Africa's legislation, WUAs are statutory institutions and therefore have legal backing which CMFs do not have since they are non-statutory institutions.

Local communities

This group of stakeholders refers to local residents of the catchment who live mostly in remote rural villages. It includes small-scale farmers, emergent commercial farmers, farm workers and the general residents who use water mainly for domestic purpose alone. They all have a critical stake in water, regardless of whether one's abstraction of water includes agriculture or is limited to domestic usage or struggling for better water and soil conservation and reduction of environmental hazards. The majority access water directly from the river and the hydrology of the catchment has a direct impact on their livelihood system. They can be considered as the key resource users. Their actions are critical in defining resource management patterns. Hence their involvement in the CMF is crucial.

In the Kat, community representatives constitute the majority of stakeholder members on the CMF. There were about 36 villages in the Kat catchment. The original list of community representatives on the Kat CMF indicates that there were 45 members representing 15 different villages. This indicates that only 50 percent of the catchment villages are represented on the CMF. The Mthatha River Catchment Management Strategy document (DWAF 2002; p 8) indicates that there are up to 1050 rural and peri-urban settlements (villages) in Mthatha and yet only up to 4 members came from villages to attend CMF meetings. The CMF management committee in Mthatha indicated that this was an unacceptable situation, which they were keen to address.

Representatives from local communities were elected or indeed nominated by their respective villages. In the Kat, core members of the CMF called a village meeting specifically to discuss the CMF and its functions and then solicited for elections of village representative(s) (in some cases up to 4 members were nominated to the CMF from a single village).⁵⁵ Elections were done by show of hand as a voting procedure after a name was proposed. I observed that the process of electing village representatives in the Kat was considerate to gender balance. This was as a result of the influence of the researchers who originally initiated the process. Communities were encouraged to make deliberate effort to include women representatives. As a result, records of membership and meeting attendance lists show that at least 35 percent of village representatives in the Kat CMF were women. The process of recruiting village representatives in the Kat seemed to be a continuous one as a result of the CMF's interest to involve as many stakeholders as was possible. In Mthatha however, the process happened only once, at the initial formation of CMF.

As argued earlier, the critical issue regarding stakes held by community members in both these two catchments was not necessarily access to water resource, but rather productive utilisation of the resource. My observation and informal survey results indicated that it was the systems and the capacity to harness their claims to water that

⁵⁵ The number of representatives from a given village was determined by the size of the village. The bigger the village the more members it was allowed to nominate to the CMF. However, there were no written guidelines on the mechanics of estimating the sizes of village and the number of representatives required. This was arrived at arbitrarily.

were absent⁵⁶. A combination of factors which included natural factors such as insufficient rainfall to support crop production and use of marginal lands with low natural fertility as well as man-made factors which include the legacy of apartheid which had left local people with no meaningful entitlements to productive resources, had created an impoverished community, dependant on claims from government and sale of labour where possible. This meant that improved access to water resources would become meaningful only if it were accompanied by sufficient means to exploit the resource.

A common description can be attributed to Community Stakeholders in both Mthatha and the Kat. They are impoverished with no jobs and hardly any farming opportunities. Statistics indicates that approximately 84 percent of households in Mthatha catchment earned less than two US dollars a month (DWAF 2002) while in the Kat, 63 percent earned less than a dollar. Only 39 percent of the community members in the Kat catchment were in any gainful employment while 51 percent relied on old-age pension grants and the rest depended on income from informal trade and remittances from distant relatives. Except for urban and peri-urban residents, there were no standing water pipes for Community Stakeholders. Past inequity in water services between the different groups in South Africa indicate that only 45 percent of blacks had piped water against nearly 100 percent of the other groups (Thompson *et al.* 2001; p 41). The large majority of rural residents are still dependent on water from open streams, boreholes or stagnant sources. (Schreiner 2002, *quoted in*: Mlazbender *et al.* 2005). In the Kat, only three villages of the 15 villages participating on the CMF had piped water. The rest relied on river water. Unlike urban dwellers, Community Stakeholders had no waste collection services. Access to water-borne sewerage is non-existent. Most of them used pit latrines or the bucket system⁵⁷. The major problem of such sanitation is the leaching of waste into groundwater and rivers, especially where pit latrines are built within close proximity to the river and when individuals choose to use bushes to relieve themselves. This is a matter of concern considering that Mthatha had experienced 3 cholera outbreaks during the period of my research study⁵⁸.

Stakeholders are serviced by dust roads, poor bridges, few public phones and highly dispersed and poorly staffed clinics and schools. There was limited public or private transport available to Community Stakeholders to facilitate participation in CMF meetings and workshops. Thus, for Community Stakeholders, attending a CMF meeting was not an easy task.

⁵⁶ Local residents were aware that they could abstract water from the rivers as they wished without being stopped. All DWAF required was to ensure that such abstractions were registered.

⁵⁷ The bucket system is a method of using a bucket as a toilet, which is later emptied when full.

⁵⁸ This comment does not necessarily intend to impute a direct link between the use of pit latrines or the bush and the outbreak of cholera. The outbreak of cholera in Mthatha may be linked to several other factors and such a discussion lies beyond the scope of this research. However, it is important to note that there were several sources of pollution of river water including poor municipal wastewater management. Many people affected by cholera were those that depended upon open rivers or stagnant sources.

Table 6.1 Summary of Stakeholder Typology

<i>Stakeholder</i> ⁵⁹	<i>Stakeholders' interests and expectations in relation to water or environment, expressed through the CMF</i>	<i>Present in the Kat</i>	<i>Present in Mthatha</i>
Local communities <u>Stake</u> <u>Expectations</u>	<p>First level users of water. Most of them accessing water directly from the river. Water quality is crucial. Currently demanding provision of piped water. Hope to access water for agricultural purposes.</p> <p>They see CMF as a process through which they can gain access to water and land entitlements and improve their livelihood.</p>	√	√
DWAF <u>Stake</u> <u>Expectations</u>	<p>DWAF is the guardian of water resources in South Africa. Also responsible for ensuring that CMFs are in place and operate efficiently in assisting DWAF's task in resource and catchment protection.</p> <p>DWAF hopes that CMFs will improve the processes of monitoring and regulating water use in catchments. Thus it is through the activities of institutions such as CMFs that DWAF hopes to achieve its mandated role of protection, use, development, conservation, management and control of the water resources in water management areas. The CMF in Mthatha was also viewed as the initial stage towards the establishment of the statutory CMA in the area.</p>	√	√
DEAT <u>Stake</u> <u>Expectation</u>	<p>As a department responsible for ensuring sustainable catchment ecology and promoting tourism industry, DEAT strives to maintain an attractive and healthy environment.</p> <p>DEAT hopes that through the CMF, all stakeholders will appreciate DEAT's programmes and strategies and that CMF will become a platform where information can be shared and community needs identified.</p>		√

⁵⁹ For full descriptions of abbreviated titles of stakeholders, refer to the preceding discussion on stakeholder typology.

<i>Stakeholder</i> ⁵⁹	<i>Stakeholders' interests and expectations in relation to water or environment, expressed through the CMF</i>	<i>Present in the Kat</i>	<i>Present in Mithatha</i>
DOA <u>Stake</u>	Responsible for providing support to farming community including irrigation and land-care initiatives.	√	√
<u>Expectation</u>	DOA hopes that CMF will provide a platform for the justification of its programmes and where information can be shared.		
Municipalities <u>Stake</u>	Responsible for the provision of water and sanitation services to all residents of the catchment.	√	√
<u>Expectation</u>	Municipalities hope that the CMF will provide backstopping of its service provision efforts and that stakeholders will empathise with its struggles related to limited capacity.		
SANCO <u>Stake</u>	Main interest is in ensuring that community members received their entitlements as promised by government in the freedom charter. SANCO works as a pressure group to ensure that government organs provided the community services to required standards. SANCO sees itself as a lobby group and whistle blower over sub-standard community services.		√
<u>Expectation</u>	SANCO expects that CMF will ensure appropriate service delivery to poor communities.		
Universities <u>Stake</u>	Provide knowledge backup for catchment management practices and database generation on flooding, water quality, quantity, distribution, land management, social processes etc.	√	√
<u>Expectations</u>	Improved capacity among stakeholders to be able to undertake sound catchment management.		
Mpofu Training Centre. <u>Stake</u>	Sees itself as a training venue for catchment management processes. In its individual capacity, it is an important user of river water through irrigation practices.	√	
<u>Expectation</u>	Hopes that through CMF, it can gain recognition as a training institution and make a contribution towards knowledge information dissemination regarding water resource management		

<i>Stakeholder</i> ⁵⁹	<i>Stakeholders' interests and expectations in relation to water or environment, expressed through the CMF</i>	<i>Present in the Kat</i>	<i>Present in Mthatha</i>
Water User Association <u>Stake</u> <u>Expectations</u>	Entirely relies on Kat River and dam to irrigate its citrus crop. Hopes that the CMF will take into consideration its water requirements when dealing with upstream water management.	√	
ECATU <u>Stake</u> <u>Expectations</u>	Provides appropriate technology for the utilisation of catchment resources. Hopes that CMF will be a channel through which technological needs for rural communities could be identified and those already developed could be promoted.		√
ESKOM <u>Stake</u> <u>Expectations</u>	Major water user in the Mthatha catchment. It also has an environmental impact through its damming practices which affects river flow and consequently affects estuaries down stream Hopes that CMF can become a channel through which company operations could be justified and a platform where catchment management plans can be accessed for the information of the company.		√

It is clear that there was a wide range of concerns among stakeholders that determined the stakes. Reading through the expectations articulated in Table 6.1, it is apparent that Organisational Stakeholders considered that participating in the CMFs would accord them with the leverage they needed to promote and defend their existing actions. Thus the CMF accorded them a platform to legitimise their own projects and programmes. For Community Stakeholders, their main concern was gaining access to clean water and its productive utilisation and reducing environmental hazards to their livelihoods. Thus participating in the CMF was anticipated as means through which the expected services would be received.

6.5 The fit of CMF purpose and agenda: Exploring the CMFs' purpose

What purpose did different stakeholders give to the CMF and how did that influence the functioning of CMFs and consequently the benefits accruing to society? In this section I attempt to scrutinize the issues that the CMFs concern themselves with by exploring the agendas and how this was translated to the actual management of water resources. It is

hoped that this process will resolve the first part of the second research question that needs to be probed, which is; what problems have CMFs acted upon?

The purpose of a CMF – the ‘official’ view

I begin this exploration on the premise that CMFs emerged as non-statutory institutions with no legal power to enforce their decisions. Evidence from documentation indicates that from the point of view of the state, the intended purpose of CMFs was simply to initiate the participation processes that must underpin the establishment of CMAs (DWAF 1999; p 2). In Mthatha, DWAF (2001a; p 2) specified the purpose of CMF as being:

- To provide all interested and relevant stakeholders in the Mthatha Catchment Area with a communication channel for raising water resource management issues at a local catchment level.
- To provide a platform for consultation and interaction of a wide spectrum of stakeholders on water resource management issues.
- To provide a platform for debate, and stakeholders ‘buy-in’ of the Mthatha Catchment Management Strategy, which addresses the ways and means of achieving objectives of managing water resources in the catchment area.

This list of functions for Mthatha CMF indicates that it was set-up as a dialogue platform as well as to undertake planning functions. It should be noted that these functions were generated by DWAF, which initiated the Forum.

With respect to the Kat CMF, documents that explain the emergence process (Motteux 2001; p 2) state that the purpose of the CMF was to provide a platform to discuss water-related issues of common concern to people living in the catchments and seek ways of addressing these. The picture emerging from these statements indicates that CMFs were essentially committees with representation from various government departments, NGOs and community groups, meant to discuss water related issues and make decisions and plans. However, since CMFs were non-statutory bodies with no legal power, their decisions were not expected to be binding. They therefore were to rely largely on the willingness of other agencies to comply with the decisions.

The purpose of a CMF – the stakeholders’ view

During the first joint workshops between Mthatha and Kat CMF, held as part of this research strategy, CMF members were offered an opportunity to define the purpose of their CMF from their own perspective (as a group) rather than from the government point of view⁶⁰. The Mthatha members presented a concise purpose:

“A platform where representatives of each stakeholder in the catchment come to discuss catchment management issues.”

⁶⁰ The exercise of defining the CMF was undertaken in separate groups – the Mthatha CMF as a group and the Kat CMF as another group. Brainstorming approach was used, whereby every member of the group was asked for his or her opinion regarding what he/she thought was the purpose of the CMF. The answers were then collated into one concise statement.

The Kat CMF members presented theirs as being

“Organised to deal with environmental issues. Also ways of using water. The aim is to educate community about environment awareness. It is a liaison between community and government, sharing ideas, how to improve the status of our water and how to care for our land for future generations. It is intended to clear our minds about the importance of our environment and land e.g. the dongas (gullies), trees, water.”

It is interesting to note that while the Mthatha group perceived their Forum as a ‘deliberative assembly’ by using the word “discuss’ in their definition of the purpose, the Kat CMF members used ‘action’ words (which have been underlined) in describing the purpose of their CMF. In a recent document that the Kat CMF prepared for soliciting funding for their projects, the goal of the CMF was stated as

“to fulfil the Catchment Management Strategy which aims at a situation in which stakeholders in a Catchment would be able to identify critical issues affecting them and take ownership of how best could these be addressed.”

The dual purpose of the CMFs

It is evident from the preceding discussion that the two categories of stakeholders – Organisational Stakeholders and Community Stakeholders, held different perceptions with regards to the purpose of the CMFs. The Mthatha CMF, having been dominated by Organisational Stakeholders defined their CMF as a dialogue Forum while the Kat CMF having been dominated by Community Stakeholders defined theirs as being responsible for ‘dealing’ with environmental issues. Thus while Organisational Stakeholders’ discourse emphasises ‘dialogue’, Community Stakeholders tend to emphasize ‘action’. This implies that CMFs could embrace both perspectives to include dialogue and action in their purpose, as one senior staff of DWAF, explained in an interview:

“The purpose of the CMF is taken from what the National Water Act which states basically the need for participation by stakeholders in decision-making regarding water use. But this does not limit the CMFs from taking on a wide range of roles that might include projects and programmes” [FM]

Considering the socio-economic conditions that the Community Stakeholders endured, specifically poverty, environmental vulnerability and poor access to clean water and irrigation, it is logical to anticipate that they (Community Stakeholders) would expect that the emergence of a Forum that addressed water issues in a catchment would bring ‘hope’ of having their conditions bettered. In the face of poor service delivery that they were experiencing as a result of failures by government departments and municipalities, CMFs could have been perceived as a ‘glimmer’ of hope towards resolving their concerns. Therefore, being able to sit in a Forum where they could engage service

providers (government departments and municipal officials) was a more than welcome development. It is logical therefore to conclude that Community Stakeholders were ready to participate in CMFs on the understanding that the Forums would be able to take ‘action’ on decisions arrived at.

For Organisational Stakeholders (particularly government departments) on the other hand, the mere existence of a Forum that provided a platform for dialogue was the end in itself. Thus by implication, while Community Stakeholders perceived CMFs as the means to the end, Organisational Stakeholders saw them as the end in itself. As a matter of fact, certain Organisational Stakeholders even assumed that CMFs could not achieve results desired by Community Stakeholders as the following statement captured in my interview with a stakeholder representing the University in Mthatha testifies:

“I see the CMF as a policy body with regards to water utilisation and quality issues. Implementation roles such as projects, supply and distribution of water are a prerogative of municipalities and government departments. It is something beyond the CMF” [OC]

Some Organisational Stakeholders even thought of CMFs as merely whistle blowers as the following comment shows;

“We need these Forums to monitor the actions of service providers, as eyes of the state on the ground, to warn the national government what is going wrong or right” [NM]

6.6 CMF purpose and agenda - the case of Mthatha CMF

What did the CMFs actually do and how did their activities impact on participation and management of water resources? The answer can be obtained by sifting through the activities that took place in the years that I spent with the CMFs. Being informal groups, CMF activities were punctuated by long periods of inaction. The most usual and vivid activity was meetings. If meetings were a measure of efficiency, the Mthatha CMF could be considered very efficient. Keeping to the culture of expert systems, meetings in Mthatha were scheduled to a regular cycle of once every quarter. At the end of each meeting, the meeting date for the next meeting was determined. In the Kat catchment however, the culture was that of the traditional systems, where a meeting was called only when the need dictated. Without any important business to be handled, there was no need for a meeting. The need for a meeting sometimes emerged from a community meeting unrelated to the CMF or from the need to attend to requests emerging from outsiders, researchers or visitors. In most cases, the Kat CMF met when there were issues to resolve regarding the Land-care project.

Table 6.2 on the next page shows actual activities that the Mthatha CMF undertook during my research period. This information was extracted from the minutes of meetings and workshops conducted by the CMF throughout the period of my research. Table 6.2 shows that dealing with internal operational issues, (poor participation of stakeholders and reimbursements of travel costs) took a large portion of the CMF

agenda, followed by the preparation of the Catchment Management Strategy and resolving the problem of pollution of the Mthatha River. It is evident from the number of times that the issue of pollution was discussed⁶¹ that the CMF had limited power in ensuring that its decisions were acted upon by relevant agents.

Table 6.2 Issues that Mthatha CMF concerned itself with during research study period⁶².

AGENDA ITEM	No. OF MEETINGS IN WHICH ITEM WAS RAISED	RESOLUTIONS
Decreasing number of participants. Non attendance of meetings by local municipality and community members	5	<ul style="list-style-type: none"> • Publicity campaigns to be intensified. • Forum and DWAF to put pressure on OR Tambo municipality to address the problem. • An editor from a local newspaper to be invited to the CMF as a way of giving the CMF public recognition.
Travel costs reimbursements for Forum members	4	Secretariat to collect money from DWAF to reimburse community representatives who attend meetings at a rate of R75/person/meeting.
Mthatha Catchment Management Strategy	3	<ul style="list-style-type: none"> • A consultant has been contracted to undertake the preparation of the Mthatha Catchment Management Strategy (MCMS). • Capacity building workshop to be organised to enable members to understand the process of preparing the MCMS.
Pollution around circus triangle (Raised by SANCO)	3	<ul style="list-style-type: none"> • The problem too complicated for District municipality to address. • Publicity campaigns to be intensified. • Forum and DWAF to put pressure on OR Tambo municipality to address the problem.
New faces attending meetings each time	3	<ul style="list-style-type: none"> • Problem attributed to non-reimbursement of travel costs. • Also requires awareness meetings to be held again.
Vision statement for the Mthatha Catchment Management Strategy (MCMS)	2	To be presented in meeting by consultants

⁶¹ The issue of pollution was discussed in three consecutive meetings. Since these were quarterly meetings implies that the problem remained a concern over a period of more than nine months.

⁶² This information was extracted from the minutes of a total of 13 meetings.

AGENDA ITEM	No. OF MEETINGS IN WHICH ITEM WAS RAISED	RESOLUTIONS
Registration of farmers as water users. Lack of interest among farmers causing concern.	2	<ul style="list-style-type: none"> • Farmers, workshop to be organised. • Department of Agriculture to facilitate this exercise as an educational activity for farmers to learn and appreciate the importance of water user licenses.
Preparations for National Water week	1	Members invited to attend DWAF planning meeting and to participate actively.
Priority issues that need to be addressed in Mthatha catchment	1	Each stakeholder to present their priority issues that need to be included in the MCMS and to reach DWAF regional offices before next meeting.
Joint workshop with the Kat CMF	1	<ul style="list-style-type: none"> • DWAF to contribute towards transport and accommodation costs for Mthatha participants. • Members to start preparing for the workshop.
National Water Resource Management Strategy	1	Members should fully acquaint themselves with this strategy as it has been gazetted.
Bridge construction across the Mthatha river	1	The consulting firm that intends to put up a bridge will be addressing the CMF at the next meeting to inform members of the implications of the project (Environmental impact)
Arrangements for Mthatha catchment tour	1	Arising from the experience during the Joint workshop in the Kat, a tour of Mthatha catchment will be arranged by consultants.
Poor circulation of minutes of meetings	1	DWAF would draw up new contract for secretariat
Water Services Development Plan for OR Tambo District council	1	To be presented to the CMF at next meeting

Source: Minutes of Mthatha CMF meetings. 2002 - 2004

Based on the list of priority concerns (reproduced on next page) raised during the initial community workshop in Mthatha (Chapter Four), it can be argued that the Mthatha CMF did not concern itself with the salient issues raised in that workshop. Except for the pollution issue, the rest of the concerns did not seem to feature in the CMF agenda.

- Hydroelectric schemes affecting ecosystems down stream
- Alien vegetation on river banks reducing runoff and stream flow
- Lack of piped water supply in many areas

- Pollution of Mthatha river
- Land degradation causing sedimentation of the river
- Poor sanitation as a result of poor management at the Municipal Sewerage Plant
- High water losses in existing water distribution system
- Poor payment by consumers for water services
- Land tenure system pressure
- Poverty

Based on Table 6.2, it can be concluded that the Mthatha CMF concerned itself with mainly information sharing and planning. During information sharing sessions, invited presenters prepared handouts and made power-point presentations of their departmental activities. Planning meetings involved strategising on how the water week⁶³ would be spent, how a workshop would be organised and preparation of the catchment management strategy. Preparation of the Catchment Management Strategy was mainly undertaken by DWAF with the assistance of consultants. CMF members were then requested to submit their contributions. I however observed very little input from most Organisational Stakeholders and none from Community Stakeholders.

Commentary on Mthatha CMF activities

This analysis of Mthatha CMF activities raises questions for consideration. It is difficult to imagine that Community Stakeholders would be prepared to incur transactional costs involved in attending CMF meetings when the agenda addressed largely those issues and resolutions that appealed to the *modus operandi* of Organisational Stakeholders. This argument elicits conclusions reached in earlier discussion in section 6.2, that the waning in the interest of Community Stakeholders in the CMFs was related to rational decision-making on their part. Community Stakeholders had to shelve their domestic chores (a high opportunity cost particularly for women in the rural areas), as well as incur transport costs and inconveniences involved in making the trip from their remote villages to the meeting place. To sustain the interest of Community Stakeholders, DWAF in Mthatha CMF arranged to pay them an allowance for attending the CMF meetings. It was considered as a reimbursement for the cost of attending CMF meetings. However, there were delays encountered in processing these reimbursements through the government bureaucratic machinery. Hence in four different meetings, this problem was tabled for discussion and was blamed for the absence of community representatives during CMF meetings. During my interviews, one honest response regarding this problem, from a Community Stakeholder was:

“We community members are not on level ground with our colleagues from organisations since in attending meetings; we have to draw on our personal resources, time and money, while our colleagues draw on official resources. We need to be compensated promptly and appropriately.” [GS]

⁶³ National “Water Week” were weeks designated for campaigns to make civil society conscience and aware of the importance of wise-use of water as a scarce resource.

One suggestion made during a CMF meeting, to attract the interest of Community Stakeholders, was to move the venue for CMF meetings to the villages. Even though this suggestion never received serious consideration in Mthatha, meeting venues could have been a serious factor in creating conditions amenable for a transparent participative atmosphere. Meetings in Mthatha took place in the heart of the city, at the fourth floor of a tall concrete building, with stringent security checks at the entrance. I saw this environment as a composite of intimidating factors for community members some of whom came from remote informal settlements (Plate 3). In the Kat catchment, meetings were held in the village community halls, which local people identified with. During the organisation of my first joint workshop between the Mthatha and Kat CMFs, the Kat CMF which was responsible for hosting the workshop chose to hold the workshop at a distant, less glamorous and less expensive venue for the reasons that community members will find the venue more accommodating and less intimidating than if the workshop were to be held at an expensive and exclusive Katberg hotel nearby.

The difficulty that the Mthatha CMF encountered in dealing with the water pollution problem could be considered to be as a demonstration of the dilemma that could be encountered when an institution has decision-making powers but lacks mandate to enforce its decisions. In one of the Mthatha CMF meetings, a SANCO representative tabled water pollution of a section of Mthatha River as a serious problem that needed urgent attention. The problem was located at a place called Circus Triangle, which was a section of Mthatha town centre where the river crosses the town. Local residents and small informal enterprises dumped all kinds of waste materials alongside the banks of the river all of which eventually ended up into the river. Other pollutants came from untreated sewage discharges from the surrounding squatter camps and from a nearby prison located upstream. Resolutions were passed in three meetings requiring that the municipality attend to the problem. As it turned out, there was no action from the municipality and there was not much that the CMF could do than to continue searching for alternative means of alerting the municipality to the seriousness of the problem.

6.7 CMF purpose and agenda – the case of the Kat CMF

As mentioned before, CMF meetings in the Kat catchment were not as frequent as in Mthatha. In the Kat catchment, meetings were mainly called when there was a specific task to be attended to. Table 6.3 is a record of issues that the Kat CMF attended to during the seven meetings that took place during the period of the research study.

Table 6.3 Issues that the Kat CMF concerned itself with during research study period⁶⁴

<i>Agenda item</i>	<i>Number of times that the issue was discussed in meetings</i>
Land-care project	5
CMF joint workshops	3
Campaigns for participation of more villages	2
Environmental awareness meeting	1

⁶⁴ This information was summarised from a total of seven CMF meetings. Unlike Mthatha CMF, the Kat CMF did not produce and circulate minutes of its meetings. The CMF secretary took at each meeting a brief record of proceedings in a book. The researcher therefore also made his own record of proceedings.

The Land-care project took the largest portion of time in Kat CMF meetings followed by workshops. Since the meetings were intended to discuss the ongoing implementation activities of the Land-care project while workshops were intended for knowledge generation and information sharing, it is logical to conclude that ‘action’ distinguished the Kat CMF from the Mthatha CMF. The list of issues covered under the agenda of each of these two CMFs reveals that while the Mthatha CMF spent most its time ‘dialoguing’ and ‘planning’, the Kat CMF spent most its time ‘doing’ things, such as implementing the Land-care project, conducting workshops and undertaking environmental awareness campaigns. Results of my informal survey indicate that the Land-care project was the main reason why most community members (those that did not participate in the CMF) knew about the existence of the CMF. Participating community members cited the Land-care project in the Kat catchment to be their main reason for their interest in the CMF.

Commentary on Kat CMF activities.

Unlike the Mthatha CMF, the Kat CMF had limited finances for conducting its meetings. While the Mthatha CMF could afford to hire a catering company to provide meals and snacks and offered reimbursements to Community Stakeholders for attending meetings, the Kat CMF members prepared their own meals and did not provide reimbursements to members for attending CMF meetings. Organisational Stakeholders who came to the meetings made an effort to assist participants with transport to and from the meetings. The ‘little’ funds used for conducting meetings were drawn from the Land-care project (if the meeting was held to discuss the project matters) or were contributed by researchers and other partners. Where then did the commitment by Community Stakeholders come from in this case? Considering that the meetings were not merely deliberative, but the decisions reached in the meetings resulted in visible activities on the ground, it is logical to conclude then that Community Stakeholders considered attending such meetings beneficial on the basis that they saw tangible results that resulted from their decision-making process.

Box 6.1 The Land-care project in the Kat catchment.

The Land-care project emerged as an initiative of Community Stakeholders to begin addressing some environmental problems in the catchment soon following the formation of the CMF. Land-care was prioritised due to the extensive and vivid land degradation that had occurred as a result of the steep slopes that characterised the landscape of the catchment coupled with the communal land-use system of communal grazing of livestock. Soil erosion had created huge gullies referred to as *dongas* in the local language (Plate 1). Land degradation was blamed for the sedimentation of the Kat River and the reduction in cropped land. Sedimentation was also blamed for excessive water treatment costs in Fort Beaufort town water supply scheme down-stream. The CMF (Community representatives, representative from the Department of Agriculture and Researchers from Rhodes University) worked together to develop a funding proposal for the project, which was submitted to the National Department of Agriculture and successfully attracted a three-year funding. A financial consulting firm was contracted to assist the CMF in managing the overall project funds while the day-to-day running of the project was the responsibility of a

Box 6.1 continued ...

four-person management team who were employed by the project and selected on merit from among CMF members. They were responsible to the CMF Steering Committee. The CMF Chairperson was the chair of the steering committee but was not part of the management team. It was a point of principle that no steering committee member could also hold a paid post. Handling of huge sums of money in rural South Africa is relatively risky due to rampant heists, but the Kat CMF never encountered any thefts of either their funds or project equipment. CMF members transported large sums of cash from the bank to the villages, a distance of about 70 kilometers in remote countryside. This exercise had been done more than eighty times without a single hold-up. The financial manager of the consulting firm that facilitated the funding of the project attributed this relative security to the approach of allowing local people take ownership of the project including handling and administering of the cash payouts.

The project budget included wages, purchase of equipment, and work allowance for committee members (amounting to \$7 for each planning and management meeting attended) and mobile phones. The Land-care project became the main source of income for community members, members involved with the project as well as for the CMF. Besides paying for the implementation of the project, project funds were also used to cover expenses incurred in holding CMF meetings. The project employed local community members to construct loose-rock check dams across the *dongas*, planting of regenerative plants, and erecting fences around the excessively eroded areas to restrict movement of grazing animals. Effort was made to employ as many women as men in the project. Teams of workers were contracted to the project for a maximum of two weeks after which new teams were contracted. The aim was to provide an income to as many local people as possible.

Benefits of the project were described as a regenerated environment and an improved river health as a result of reduced sedimentation. In essence, commercial farmers, who farmed downstream and the municipality, which pumped water from downstream were indirect beneficiaries of the Land-care project since with reduced sedimentation, more and better quality water reached them. In this respect, commercial farmers and the municipality could be referred to as ‘free riders’ in that they enjoyed the benefits of a participatory initiative upstream without having to contribute to the process. The major benefit accruing to Community Stakeholders upstream was considered to be the improvement to their environment and the quality of river water. However, during the informal survey, community members perceived the provision of employment and consequently the much-needed income, as the major benefit of the Land-care project.

Despite the existing lack of management skills and project management experience among the community, the operations proceeded well. Undertaking the financial and organisational aspects of the project provided a way to gain important management skills and confidence. From the Kat CMF experience, I saw how projects could be a driving force in a cooperative participatory initiative by providing a platform that propels a group into positive synergy. During my interviews with local people in the Kat catchment, I noticed that they referred to several social outcomes of the land-care initiative, which included trust (local people perceived the CMF initiative as a worthwhile activity), creation of partnerships (several researchers were involved in the designing and implementation and mere study of the project. Their involvement brought with it alliances between themselves and their organisations and local people) and capacity building and empowerment.

Box 6.2 Meetings as a CMF activity

Meetings were a major function of CMFs. Unlike the Kat CMF, I observed very little activity that the Mthatha CMF performed other than meetings. A secretariat, contracted by DWAF, administered the meetings in Mthatha. The administration of meetings included activities such as making announcements for meeting dates, circulation of minutes, preparation of documentation for meetings and hiring catering services. Even though the CMF had its own secretary, her duties were limited to taking of notes during the meetings and reading out to members the minutes of the previous meetings. The actual compiling of the minutes was done by the contracted secretariat. In my observation, this arrangement led to a situation where the CMF secretary occasionally gave excuses for being unable to come to meetings or to prepare minutes. She was aware that a paid secretariat was on hand to do the job.

CMF meetings in Mthatha were usually held in the DWAF boardroom on the fourth floor of a ten-story concrete and glass building which housed most government departments including DWAF, and sometimes in the auditorium on the ground floor of the same building or were held in a hotel in the heart of the city. I saw this to be most suitable for Organisational Stakeholders who had their offices and homes in the city. Meetings were conducted in an atmosphere of formality and procedure - an agenda to be followed, speakers speaking through the 'chair' and the chairman guiding members to keep to the issues on the agenda. At one of the meetings in Mthatha, a community member who addressed his concerns directly to another member was served with a 'point of order' and asked to redirect his concern through the 'chair'. English constituted the official language. It was rare for Community Stakeholders to actually speak in these meetings except for influential community leaders who were already acquaintances of government officials. I saw how 'expert culture' became a form of exclusion for community members.

In Mthatha, most resolutions coming out of CMF meetings were those that were to be addressed by organisations outside the Forum. It was not unusual to repeat the same resolution in more than one meeting as was demonstrated by the pollution problem. This situation was created partly by the fact that departments that were expected to act on certain resolutions were not present in CMF meetings.

In the Kat catchment, CMF meetings were held alternately in three different community halls within the villages. Members from distant villages traveled to meetings either by hiking or with the help of Organisational Stakeholders who drove to the meetings. Such travel arrangements meant that meetings could not start at scheduled times. There were instances when it was lunch before the meeting could commence. The chairman and secretary came from among the community members. CMF members themselves undertook all activities pertaining to the administration of meetings including preparation of meals. As this activity traditionally fell on women, it deprived them of the opportunity to participate fully in the proceedings of the meetings since they spent most of their time preparing the meals.

The Kat CMF used the local language - *IsiXhosa* as the main mode of communication during their meetings. Someone was always available to interpret to English and vice versa. This atmosphere led to active participation of community members with heated debates

Box 6.2 continued

between the old and the young, women and men. It is possible that this relatively better articulation of ideas among community members in the Kat CMF, compared to community members in Mthatha CMF, was partly due to the smaller number of experts present in the meetings in the Kat CMF. In Mthatha CMF meetings, experts outnumbered community members. This difference could also be attributed to the discursive styles, whereby in the Kat, discursive styles were more accommodating (language and formalities) than they were in Mthatha. Most resolutions in the Kat were those that were to be implemented by participants. If a workshop was being planned for example, participants shared the roles for organising the workshop.

6.8 Relevance of CMF activities to the wider environment

An important question that remains to be probed is the awareness of the CMF activities, explored in the preceding sections, among the rest of the catchment residents. To resolve this question, results from the informal survey conducted using a semi-structured questionnaire (Chapter Five) became handy. Table 6.4 below shows the summarised results from the informal survey.

Table 6.4 Results of the informal survey

<i>Important concerns raised by interviewees</i>	<i>Kat Catchment</i>	<i>Mthatha Catchment</i>
	Number of times mentioned out of 60 respondents	Number of times mentioned Out of 60 respondents
Employment	44	28
Agricultural Development	16	35
Piped water supply	25	46
Water quality	6	15
Capacity building	5	3
Public phones	3	7
Electricity	4	9
River health	2	1

Source: This research informal survey

The average distance to the nearest source of water, whether a standing public tap or river, was recorded as 150 meters in the Kat catchment and 70 meters in Mthatha. This information revealed that many community members walked relatively long distance to access water, thus making the provision of domestic water a serious concern for them. Considering that fetching of water is a traditionally women's activity in these areas, and the majority of households are female-headed, it follows then that domestic water supply is a concern of the majority of the population. Related to the provision of domestic water is the concern for water quality, which emerged as the fourth most important concern. The insignificance of river health in relation to the other issues was notable. One would expect that with river-water pollution problems in Mthatha, river health would rank high. However, the need for piped water supply, which was ranked highest in Mthatha, would explain the puzzle. Piped water supply could have been perceived as a solution to poor river health. This is a cardinal point in understanding how local communities perceive issues. If one receives water from a tap, one is out of

danger of contamination from polluted river water since tap water is considered better quality in comparison to water collected directly from the river. This is probably because tap water is known to be treated water. From this perspective, the need for piped water supply is paramount over river health. It was not surprising then that piped water supply was ranked higher in Mthatha than Kat catchment considering that Mthatha had experienced three cholera outbreaks (which is a waterborne disease) during the period of this research.

Unemployment emerged as the most important concern in the Kat catchment. It was blamed for outward migration of young people in both catchments. Outward migration of young people to urban areas left these rural areas with a generation of old people who saw themselves as too old to make any meaningful contribution in initiatives such as the CMFs. As one interviewee lamented in the Kat catchment:

“What do you expect from an old man like me. I no longer have sufficient energy to be travelling to attend meetings and workshops and participate in community projects. Our young people are supposed to be taking over from the older generation. But look at what they are doing, they are all going to towns and leaving only the old people in the rural areas. What will become of us and our environment?” [MM]

In Mthatha, agricultural development emerged to be more important than the need for employment. This may be indicative of the fact that rural people realised that opportunities for formal employment were limited. Agriculture was therefore viewed as an alternative to formal employment. Agricultural production was considered as the best alternative means for earning an income. However entering agriculture implied access to secure land, irrigation facilities and inputs such as seed, fertilizer and chemicals.

This discussion of the survey results reveal that without addressing issues relating to poverty and domestic water supply, CMFs were not addressing ‘real issues’ that concerned the majority of catchment residents.

6.9 Conclusion

It is evident that the different views, on the purpose of CMFs, held by the two identified categories of stakeholders, created a problematic situation that affected the mode of participation and retrogressively the operations of the CMFs. Organisational Stakeholders attached abstract terms of reference to CMFs by defining their purpose as being generally institutions for dialogue and planning. For instance, a senior officer from DWAF stated in one of the Mthatha meetings⁶⁵ that the CMF were formed to disseminate information and *were not decision-making bodies* (emphasis supplied). Community Stakeholders, on the other hand, attached salient goals that gave practical purpose to the CMFs. They expected that CMFs would contribute towards the provision of better conditions for catchment residents. Thus Community Stakeholders emphasised outcomes rather than processes. In Mthatha CMF, participants were merely providing

⁶⁵ Minutes of the forth Forum meeting of the Mthatha CMF page 2.

information regarding the perspectives and interests of the groups they represented and in advising how to resolve emerging water issues in the catchment. In the Kat, stakeholders were more involved in implementing resource management activities.

An emerging conclusion from this exploration also points to the fact that the manner in which a group of stakeholders define the purpose of their MSP influences the agenda and consequently the functions that will be pursued. In the discussion, I showed how different categories of stakeholders in Mthatha and Kat catchments gave different purposes to the CMFs. Community Stakeholders defined CMFs as institutions that could 'deal' with environmental issues. As a result, they participated in CMF activities with an expectation that their participation would contribute to their self-realisation. By self-realisation here, I refer to material development and/or the improvement of living conditions. Taking the Land-care project in the Kat catchment as an example, the community members' desire to attend to environmental degradation problem was also related to the desire to earn an income from the process of attending to the environment. As pointed out in the evolution of the Kat CMF, the group consisted largely of unemployed youth. In my discussions and associations with them, I saw in them a desire to make rural life worthwhile. Even though most of them had completed their primary school education, they were aware that without a college qualification, urban life was beyond their reach. The emergence of the CMF brought with it a new realism that new skills and capacities could be gained to make the needed shift in self-worth. The group was committed towards generating proposals for funding of various activities ranging from workshops, trips and projects.

It is important to note however that the 'self-realisation' argument can only be advanced in the context of contemporary social order, which in return is rooted in the theoretical notions developed earlier in this chapter. This is that contemporary societies consist of individuals who are boundedly rational, and that they will try to pursue activities that will yield their goals. However, they also struggle in strategies of actor networks to build new opportunities and gain agency for social transformation. The attribute of self-realisation becomes stronger as local people become integrated into the market economies. Emerging paradigms in the functioning of community organisations argue that stakeholder organisations should be considered as collective answers for self-realisation of its members, in particular those members considered as marginal (Shallcross and Robinson 2006). As mentioned earlier, this argument is in complete opposition to the imagery of stakeholders, particularly the rural poor individuals, as voluntaristic agents whose involvement in water resource management is motivated mainly by the interest in their environment and that of society at large. Statements captured during interviews with community members in the Kat catchment confirmed that Community Stakeholders did not participate as voluntaristic agents:

“Voluntary work is not highly rewarded in this area and it is difficult to keep people interested and enthusiastic when there is no progress or nothing going on.” [Tim Smit]⁶⁶

Traditional business ethics respond to such rational human behaviour by defining the purpose of the business solely in terms of satisfying the interests of stakeholders. Accordingly, since we are dealing with contemporary societies, in which individuals pursue self-realisation goals as they participate in a collective action, I wish to argue that water management goals and complex resource management problem solving will be realised only when the outcomes of the water institutions are defined in terms of satisfying the interests of stakeholders and when stakeholders are able to build the collective capacity they need to contribute to problem resolution.

⁶⁶ The statement was recorded by Tim Smit who was one of three student researchers who had worked with me in the field as part of his own fieldwork towards his MSc degree. He spent one month in the Kat and one month in Mthatha observing and investigating the day-to-day activities of CMF members and how these related to the functioning of the CMF (see Smit 2003).

CHAPTER SEVEN

MSPs AS ACTORS IN FLOOD HAZARD MANAGEMENT

In Chapter One, I showed that flood hazard management was a potential field of responsibility in all the water management frameworks and resource care frameworks presented in section 1.6, and that new paradigms for integrated management of water should offer priority to ecological understanding of extremes and preparedness of people. Using information contained in Box 1.2, I showed how flood hazard management strategies form part of water management strategies and how in many countries, water agencies played a central role in flood disaster management. Arguably, the inclusion of concerns related to flood hazard in water resource management strategies by relevant management structures is imperative. However, the discussion regarding institutional frameworks for water resources management and flood disaster management, presented in Chapter Three, revealed that in South Africa, these functions remain segregated institutionally, consequently foregoing the advantage inherent in the interrelated nature of these two realms and consequently limiting official action to providing relief. Is there indeed no role for water MSPs in flood hazard management in South Africa or for MSPs also to debate planning for hazard management? How does the current policy environment create a paradox in the implementation of IWRM within catchments? This chapter explores these questions with the aim of establishing the breadth and depth of CMFs agenda in the context of IWRM. The chapter includes narratives from the field to show the views on the ground from Community and Organisational Stakeholders, and shows how social conditions still keep apart useful frameworks and hopeful dialogues.

7.1 Flood disaster management – paradigm shifts.

The global scenery indicates that the world is becoming increasingly vulnerable to flood disasters. Between 1991 and 2000, the number of people affected by natural disasters rose from 147 million per year to 211 million per year. In the same period, more than 665,000 people died in 2,557 natural disasters, of which 90 percent were water related. Of these water related disasters, floods represented about 50 percent (UN 2003b). Floods make some three million people homeless every year (IFRICS 1999; p 11). Globally, flash floods are considered second weather related killers. Southern Africa and South Africa in particular is an increasingly flood disaster-prone area (Bladeren 1996). Science, management and people have over time evolved varying frameworks for dealing with disasters. Warner *et al.* (2002) have categorised these frameworks into four different paradigms, which even though not necessary mutually exclusive, they have been sequential in dominating disaster studies and management over time. The first framework is the *technocratic paradigm*, which is explained as an era of technological and scientific solutions to flood hazards. During this era, disaster studies remained a domain of geologists, seismologists and hydrologists whose response to flood hazards was physical intervention to “tame” the rivers and safeguard life. This was followed by the *behavioural paradigm*, which sought to eradicate flood hazard by

changing the behaviour of people living in the floodplains. This paradigm is said to be based on the premise that people strategically choose to live in floodplains due the incentives that the environs provide and that people can be dissuaded in doing so by providing them with incentives that attract them out of the danger zones, through educational programmes or by putting in place legislation that deters people from choosing to live in hazardous environments. For instance, section 169A of the repealed Water Act 54 of 1956 in South Africa specified that no township could be established or extended in areas below the floodlines established by local authorities.

Following criticisms that the behavioural paradigm neglected structural relations that caused people to move into danger zones, the *vulnerability* or *structural paradigm* era emerged, placing emphasis on the political root causes of disasters. This paradigm has its concepts embedded in the definition of disaster risk, which is explained as a complex interplay between natural hazard on one side and vulnerability on the other. This paradigm understands the poor and powerless to be more at risk because of social, political and economic exclusion (Hewitt 1983) and the solution would be to transform social and political structures that breed poverty. Finally, the more contemporary thinking has been the *complexity paradigm*, which Warner *et al.* (2002) explain as the complex interrelationships between nature and society in which humans become vulnerable to hazards as a result of their environmental activities. As response to flood disasters, this paradigm places emphasis on preparedness and stakeholder participation and understanding of the ecosystem of a region and how to live in it. The paradigm shifts from the technocratic through to the more contemporary complexity paradigm, even though all co-existing⁶⁷, hold strategic important implications for research and practice. Operationalising the complexity paradigm for instance, implies appreciating that significant intellect resides in stakeholders who are in contention for water resources. Warner *et al.* (2002) argue that Multi-Stakeholder Platforms (MSPs) specifically, can play a significant role in flood risk management. The integration of multiple disciplines that MSPs offer, together with the active participation of the grassroots who in most cases are the victims of flood hazards, make the MSPs more suitable institution for this task. Watson (2000) has also indicated in his research that flood disaster mitigation can effectively be dealt with by an MSP. This argument becomes the basis for probing how institutional frameworks in South Africa's water resources and flood disaster management arenas complement or indeed conflict with each.

7.2 Vulnerability of local people to flood disasters

Research data reveals that poorer nations of the world are disproportionately affected by flood disasters and the most vulnerable and marginalised people in these nations bear the brunt (IFRCS 2002). In agricultural based economies, floods and droughts threaten people's lives as well as their livelihoods, thus requiring their participation in a co-ordinated collective response to fundamental risk and insecurity. Some of the narratives collected during the informal survey, discussed in Chapter Five, revealed how local

⁶⁷ These paradigms are sets of references that frame the way in which science, management and people understand and act upon the world around them. They are not necessarily mutually exclusive since many organisations hold more than one view at any one time (Hilhorst *et al.* 2002).

people are affected by flood hazard and disasters in Mthatha and Kat catchments and the government's response to flood risk.

Narrative 1: Ntombikhaya Maqubela. Female household head, living with two grand children. Platform Village. Kat River valley catchment.

"I am 63 years old. Even though there isn't much rain in this area, I have witnessed two floods of the Kat River. It is difficult for me to remember the exact years when the floods occurred. No one was reported dead in both flooding but a number of fields were swept away including the bridge towards Balfour, as well as a few houses, which were built near the river. As you can see, not many people here build too close to the river due to the steep slopes towards the river.

On the other hand, one cannot build too far away from the river, since we get our water straight from the river. Building a house far away from the river, on the higher ground is a problem when it comes to collecting water. One has to walk long distance for water. We try to strike a balance ... not too close and not too far away. Especially when the children grow up and they leave home, and at that time we are much older and may not have enough energy to walk up and down to and from the river."

Can you choose where to build your home in line with your needs?

"Not exactly. The place where one wishes to stay is not determined by ones own wishes. One has to stick to the place where the family has lived for a long time because all other places belong to other people or maybe to the government. It is very difficult to get a new place where one can build a house. Maybe one can easily find a free place in really bad places where no one wants to be."

Like where?

"Like where there are too many rocks, or too much slope or very low-lying areas which easily flood or where the land is bare and eroded."

How do you respond to calamities ... like if your house is destroyed by a storm, what do you do?

"If something like that happens to me, like if my house got washed away in heavy storm or got burnt, I would count on my relatives and friends and church mates to help me. I know they would come to my aid. If I lost everything I would stay with them for a while. They are my only security. Most of the time it is helpful to have grownup children working somewhere because it is their responsibility to help their parents. Unfortunately for me, my two-grownup sons are not in any gainful employment so I would not depend on them."

Would you not expect to be supported by the government?

"The government helps, but it is not dependable. They take a long time to respond. They have to have meetings, lots of meetings before they respond."

Narrative 2: Vuyolwethu Mahlangu. 58 years old female household-head living with four grownup children and one grand child. Mqanduli Village. Mthatha catchment.

Do you remember any flooding of your local river?

"Yes, I am not sure of the year... but it is some where in the early 70s, most probably 1974 when I heard that three people had died from the heavy downpour that happened. The disaster started unfolding late in the evening after the rain had been pouring for the whole night and the whole day. By the evening of the following day, there was a lot of water coming down the river. The river was so big and all the houses near the river were swallowed into the water. Our house was close to the river but not so close. Water came only up to somewhere close to my knees. But because it was not such a strong house, we had to move our things quickly fearing that it would be swept by the floods. The rain had been so heavy that the rushing water had created huge erosion dongas and gouged deep into vegetable gardens and maize fields. I think that the loss of our crop fields was as bad as the loss of houses."

How did you manage to move your things?

"We did not have too many things. Mainly the beddings and kitchen stuff. We only needed little help from other people."

Where did you go?

"To my auntie,...my mothers sister who lived nearby, her house was on higher ground and she was safe."

Did she have a big house?

"Not so big, but we fitted, we stayed in her lounge and shared the kitchen."

How long did you stay there?

"Maybe one week or so ... until the water subsided, then I went to clean my house. We were lucky it did not fall down. Many other people lost their houses."

What happened to them, did they get help from the government?

"Most of them stayed with other people ...their relatives. The government asked people to stay at the community hall where they provided them with some blankets and food. But that was after a day or two... most people went to stay with their relatives."

Did you not know that the floods were coming?

"People were talking about how it had rained through the night and the possibility of the river bursting its banks ... and we saw water in the river rising slowly initially. But we were not sure, you see ... and it is difficult to decide to move when you are not sure."

Did you not receive official warning about the possibility of floods and to evacuate?

"No, who is responsible for doing that? The government? Do you think there is an office for things like that here? Maybe the radio or TV can tell people, but then how can the media know about it when they do not live here?"

Do you think it might happen again?

“Yes it can happen any time ... I know that. But what can I do... I have no money to build a big house on another ground ... on top there. And the river where I get my water will be too far from me.”

Are you not aware of anything that is happening here about discussion forums on how to prepare for disasters... through ward committees?

“No I have not heard anything about that. We just hear that if we have a disaster the government would help us.”

How?

“With money ...maybe to build new houses and also with food.”

These few quotes form part of the many narratives captured during informal survey and focused interviews, and are ‘typical’ of the concerns and responses of the actors to the real threat of flood disasters in the catchments. They show that people are aware of flood risks yet are limited in their possibilities to take action. As Mrs. Maqubela neatly points out in the first interview, people have to balance the fact that the river can pose a threat with the fact that the river is also the primary source for water, by building not too close yet not too far from the river. The interviews depict a people at risk⁶⁸ and how flood hazard⁶⁹ is an integral part of the social system. However, it is also the cumulative effects of social exclusion outlined in Chapters Three and Four that have left people in vulnerable places dependent on their own social networks. Population densities and settlement patterns keep affected numbers low but perhaps also invisible. Indeed, the variations of discharge of water in a catchment affects the way local people make a living and hence justifies the need for a concerted flood disaster management framework that takes local people, who constitute the victims, as important stakeholders.

7.3 South Africa’s flood disaster scenario.

Flood disaster management in South Africa is necessitated by annual and seasonal variations of rainfall that create incidents of unexpected flash floods, which can rise to a peak in less than 10 hours. Rainfall of the magnitude of 150mm within an hour (personal experience on 21st December 2004)⁷⁰ is not a rare occasion. Catchments in the Eastern Cape particularly, are moderately sized with sparsely vegetated steep slopes. Many poor people are settled in low-lying areas in close proximity to rivers, which constitute their source of water. They live in temporary housing not sufficiently strong to withstand any amount of flooding. This combination of rainfall pattern and the landscape geography, create catchments that are highly prone to flash floods, while the

⁶⁸ The term ‘risk’ is used here in the context of Blaikie *et al.* (1994) definition in which ‘risk’ is equated to hazard + vulnerability. Risk is the extent of anticipated losses (lives, injuries, property damage, disruption to economic activities) from the impact of a given hazard.

⁶⁹ The concept of ‘hazard’ is used to refer to a latent danger or an external risk factor of a system or exposed subject.

⁷⁰ This particular storm, which ravaged the whole of Eastern Cape Coastal area, caused extensive floods that resulted in power failures, collapsing of houses and death of one person.

housing conditions of poor households contribute to their vulnerability to flood hazards. Box 7.1 and Box 7.2 illustrate the seriousness of flood hazard while Table 7.1 gives an account of the history of recent floods in South Africa, highlighting the impact in Eastern Cape Province.

Box 7.1 Four die in floods

Two girls aged between twelve and seventeen years are among four people believed to have drowned in separate rivers in Lady Frere following heavy rains this week.

Queenstown Area Police spokesman Superintendent Gcinikhaya Taleni said in one incident, the body of a 12-years-old girl, believed to be from Bhomeni village, was recovered at the Cacadu bridge near the town of Lady Frere.

“We believe that the victim was with two other children at the time and we are busy searching for more bodies,” he said. In the second incident, three bodies were found in a car believed to have been washed away by a flooding Mtshula river near the Kubengu Administration Area in the Lady Frere area.

According to Taleni, the victims included a 48-year-old female school principal, a teacher aged 37, and a 17-year-old learner. All the three victims were reportedly from Luthuthu Junior Secondary School. Chris Hani District municipality spokesman Nolitha Mbangcolo said “several low bridges had allegedly collapsed due to the floods. This had resulted in restricted access to many schools in the area. We have been informed that more than four low bridges, including Mthwakazi, Mtshula, Myakube and one in Kubengu, had collapsed because of heavy rains, but our disaster management team is still assessing the damage.” At the time of going to press, police continued to search rivers in the area for more bodies after reports that more people have drowned.

Source: The Representative (*Queenstown Local Newspaper*)
Friday January 20 2006

Box 7.2 The Southern Africa floods of 2000.

In 2000, South Africa, Swaziland, and Mozambique suffered devastating floods. Napier and Rubin (2002) report that the region received almost three quarters of its seasonal rainfall in just over three days. In Swaziland 10 of the country’s rivers overran their banks while the Inkomati, Umbeluzi and Sabie Rivers in South Africa reached their highest levels ever recorded. Some rivers rose more than eight meters above their flood level. It is estimated that 2.5 million people were affected in one way or another by the floods. About 20 000 cattle drowned and 140 000 hectares of crops were destroyed. Health centres as well as water supply and sanitation infrastructure in many towns and villages suffered extensive damage, exposing a million people to water-borne diseases such as cholera, malaria and diarrhea. The destruction caused by floods was estimated at \$600 million. In Mozambique, it is estimated that 250 000 people lost their homes. The floods killed 900 people, washed away roads, destroyed schools, grazing land, agricultural land, crippled hospitals and ruined people’s livelihoods. Those worst affected by the floods were people in informal settlements who lived in dangerous locations and whose houses could not withstand the floods.

Table 7.1 Recent histories of flood disasters in South Africa.

<i>Place</i>	<i>Disaster</i>	<i>Details</i>
Ladysmith	1994 flood disaster	R50 million damages 4000 families evacuated
Merriespruit	1994 flood disaster as result of dam failure	R45 million damages 17 lives lost
Pietermaritzburg	1995 floods	173 lives lost Emergence shelter needed for 5500 people
Ladysmith	1996 floods	Damage to infrastructure worth R25 million
Northern Province	1996 floods	R105 million damages
Mpumalanga	1996 floods	R500 million damages
Northern Province	2000 floods	50 lives lost R250 million damages
Eastern Cape Province	2000 floods	13 lives lost R20 000 worth of equipment lost
Eastern Cape Province	2004 floods	2 people lost lives Millions of Rands in damages

Source: Green Paper on Disaster Management. 1998.

While drought, floods, veld fires and mining disasters continue to be areas of concern for disasters, most people interviewed during the course of this research, indicated that floods presented the most frequent and freakiest disasters in South Africa. The Climate Information Project indicates that between 1975 and 2001, South Africa experienced 16 major floods, which led to the loss of 1179 lives, directly affected another 76 300 people and left 22 835 people homeless (Napier and Rubin 2002). The Provincial Coordinator for disaster management in Eastern Cape Province, considered floods as the second most important hazard in the Province, after fire (Narrative 3).

Flood vulnerability is not only related poverty but also movement of people, risky leisure and sound anticipatory risk design of technology. An account of how thirteen people, all workers and family members from one company drowned in one of the most tragic flood disaster in South Africa illustrates this argument. The disaster happened on the Storm River, which lies within WMA 15, below the Kat catchment. The river cuts deeply through the coastal plateau as it flows southwards towards the Indian Ocean. Towards the confluence with the sea, the Storm River is joined by its tributary, the Witteklip River, forming a fast flowing stream with rapids, cutting through deep gorges. This part of the river is popularly known as the Storm River Resort, famous for black-water river tubing.

On Saturday 25th March 2000, a group of family members from mainly one company in Port Elizabeth took time out for black-water tubing recreation. Unbeknown to resort

managers, the rains of Friday and Saturday night had created a sudden swell of water up-stream. The combination of the landscape and an unexpected rainfall, created a sudden freak flood that swept through the Storm River catchment that day, tragically sweeping away children and their parents. Thirteen people were reported drowned in the most tragic flood disaster in South Africa. Historic rainfall records from rainfall stations around the area indicated that rainfall of the magnitude experienced over the accident period had a recurrence interval of three times a year (Horgan 2003).

Flood risk can be expected to increase in the future due to increasing encroachment on the flood plains in both urban and rural areas as well due to climatic changes. Most flood damage in urban areas is related to loss of life, destruction of buildings, and disruption of water supplies, sewage reticulation and communication. In rural areas the damage, besides loss of life, includes the loss of production due to inundation, and the damage to land due to erosion and the deposition of sediment. This results in long-term disruption of rural peoples' livelihoods. Other potential consequences in both urban and rural areas are the contamination of water sources and the incidence of water related diseases such as cholera and typhoid. In the Mthatha and Kat catchments, flood forecasting and flood hazard assessment has little visibility, creating a potential hazardous situation, particular when both catchments have dams upstream that are not necessary designed for flood control.

7.4 Frameworks for building flood awareness and preparedness

To emphasize the rationale for involving water MSPs in flood hazard management and to show why local water institutions could have a key role in flood disaster management, this section presents a relevant conceptual approach to understanding flood disasters. In the two preceding sections I have tried to show the link between flood hazards and vulnerability by showing how factors such as the occasional high rainfall, the local landscape, the hazardous location of settlements and the structure of the homes have placed local people at risk. The situation is exacerbated by the socio-economic conditions discussed in chapters 3 and 4 and confirmed by the narratives in the preceding section. Some of the socio-economic and environmental factors cited in the earlier discussion include, high population densities and growth, unplanned urban settlements, inappropriate land use (e.g. overstocking of animals) and poverty. All these are important determinants of vulnerability. In this context, Blaikie *et al.* conceptual framework (1994) can be used to understand the situation. According to Blaikie *et al.*, risk is a result of interaction of hazards and vulnerability. Meaning that there would be no risk if there were hazards but vulnerability was nil or if there were a vulnerable population but no hazard event. A disaster occurs when a significant number of vulnerable people experiences a hazard and suffer severe damage and/or disruption of their livelihood system in such a way that recovery is unlikely without external aid.

Vulnerability, which is understood here as the extent to which an individual, community, sub-group, structure, service or geographical area is likely to be damaged or disrupted by the impact of a particular disaster (Kotze and Holloway 1996) is an important concept in understanding the extent to which risky events could be disastrous. As a socially determined concept (O' Brien *et al.* forthcoming; p10), vulnerability

explains why some people will suffer loss and others escape. For instance, the woman in the first narrative attested to the limited choice that some people have on deciding where they can settle. Concerns for old age resulted in her choosing to settle close to the river to reduce her walking distance to her source of water. This situation also meant that she lived in an area where the risk for flooding was great and therefore she was in great danger of suffering in an event of a flood disaster. Some studies have shown that those at the extremes of age can be expected to suffer proportionately more in hazard events (see for example WCC 1992). Another example is the rural-urban migration that has created rapid and unplanned growth of shanty compounds in Mthatha (Chapter Four) and consequently creating potentially disastrous situations due to the large numbers of people who live in threatening homes built in floodplains.

Bankoff *et al.* (2005; p 2) and Frerks *et al.* (1991) assert that understanding disasters through the lens of vulnerability provides a precise measurement of exposure to risk. They argue that critical to discerning the nature of disasters is an appreciation of the ways in which human systems place people at risk in relation to each other and to their environment. It is a relationship that can be understood in terms of an individual's, a household's, a community's or a society's vulnerability. Thus proponents of vulnerability, as a conceptual explanation of risk, assert that while hazards, such as floods, may be natural, disasters are generally not (Bankoff *et al.* 2005), rather they are an outcome of accumulated risk produced through years of vulnerability and underlying hazard. Thus measures to mitigate the risk need to focus on reducing vulnerability.

Since risk is a function of both hazard and vulnerability, and hazards are – at least to some extent – known and constant, vulnerability emerges to be the main factor that distinguishes those who suffer loss and those who escape (O'Brien *et al.* forthcoming). Consequently, vulnerability concept for flood disaster management suggests, among its measures, initiatives to alleviate vulnerability of affected people (Allen forthcoming). This is also the growing global policy option on disaster prevention, preparedness and mitigation. In this respect, participation of local people in disaster prevention, preparedness and mitigation and local capacity building has been receiving increasing emphasis in the last two decades (Allen forthcoming) as a means of increasing resilience to natural hazard events. However, building preparedness and mitigation needs conscious public concern, combining knowledge of public agencies and local people. Previous paragraphs suggest that there is neither public nor local framing of flood hazards and vulnerability within existing water management structures. The next sections look at “consciousness building” from “disaster” perspectives

Since participation of actors in collective action is embedded in institutions, MSPs being a prime example, an exploration of the institutional framework for flood disaster management in South Africa can reveal the margins of collaboration or conflicts among participatory institutions intended to build local people's resilience to flood disasters. Both concepts - the water management at catchment level and the disaster management, recognise that local people and stakeholders who have to live with the consequences of floods should do most of the work. It is in this context that the argument regarding the potential role for CMFs in flood disaster management is explored in this chapter.

7.5 Flood hazards and disaster management policy environment

Narrative 3: Peter Hlazo. Provincial Co-ordinator – Provincial Disaster Management Centre. Eastern Cape Province. BISHO

“I have been involved with disaster management since 1998. The initiative for disaster management in the Eastern Cape Province has been in place since 1998 because of the many disasters that befall people in the province.

Up to 70 million Rands has been spent on disaster management in the Province since 1998. Before the formal government legislation regarding disaster management came into place, the province had in place some informal structures, which included using existing Rural Development Programmes (RDP) to monitor and respond to disasters. However these structures were not properly coordinated and most people did not take this activity seriously as it was not seen as part of their own mandate.

Since the promulgation of the 2002 Disaster Act, workshops are being held at provincial as well as local (grassroot level) to discuss disaster mitigation and preparedness with all people that can play a role in line with the recommendations of the Act.

The Disaster Management structure has now been made clear and formalised. Meetings are held once every month at Provincial Level.

Each member government department is responsible for appointing a representative to the Advisory Management Forum. We also require attendance of representatives from district municipalities and metropolitans. In future, we shall have representatives from ward level were we expect that public participation will be encouraged.

We do not have a concise database for disasters yet. We compile the database as disasters happen. Our operational plan is that should a disaster occur, our ward chairman, or any representative present sends a report from the local level, to the district municipality who should then relay the occasion to us at Provincial level. I am responsible for relaying information to the National Level.

Strategies for mitigations and response are required to be included into the district management plans and this is a responsibility for each municipality.

If I were to rate the disasters for Eastern Cape, I would say bush and house fires are the most problematic due to the dryness of the province and the large numbers of informal settlements as a result of poverty levels in Eastern Cape province. I would rate flood disasters as second most important.

Flood disasters were reported in most catchments during the wet season of 2000. Except for assistance provided to people who lost possessions (assistance in form of food, blankets and temporary housing such as tents) the government did not respond strategically and in a coordinated manner. But we hope that once the plans are drawn in advance, a better response can be achieved.”

As this interview from a disaster coordinator shows, disaster management in South Africa has only recently become institutionalized at lower administrative levels. It was a flood disaster that occurred in June 1994 in Cape flats, Cape Town that prompted the Cabinet to resolve to re-evaluate South Africa's ability to deal with risk reduction and disaster management (Green Paper 1998). The disjointed response and the unpreparedness to the disaster led to the creation of a single disaster management centre to be responsible for disaster management in the country. Before the implementation of the new disaster management Act, management of various forms of disasters fell under diverse government departments (Police, Fire services, Mining sector etc). This was a reflection of the past apartheid policy approaches of 'separate development.' Institutionally, the management of floods and droughts for instance, was the concern of the Department of Water Affairs. Management processes were embedded in the historical systems where experts within the department controlled the means for mitigation based on the perception that they had the necessary data and the means to make an economical and timely response to disasters. No supportive lower level or civil society institutional frameworks existed. This disaster management scenario fitted well within the dominant structure of emergency and disaster planning and management, which is based on a 'command and control' model. It was a pragmatic response that emphasised centralized, 'top-down' approach.

After 1994, there was a growing awareness that disaster losses could be more effectively reduced and, in fact, averted through improved development planning and civil society participation. After several consultations, and a process to which the green paper of 1998 contributed, a Disaster Management Act No. 57 of 2002 was passed. The Act provided for (i) an integrated and co-ordinated disaster management policy that focuses on preventing or reducing the risk of disasters, mitigating the severity of disasters, emergency preparedness, rapid and effective response to disasters and post-disaster recovery (ii) the establishment of the National, Provincial and Municipal Disaster Management Centres (NDMC, PDMC and MDMC respectively) and (iii) the formation of Disaster Management Advisory Forums (DMAF) at National, Provincial and Municipal levels.

The new disaster management strategy incorporated the management of all forms of disasters (floods, droughts, fire, wind, earthquakes, snow, mining etc) under one comprehensive institutional framework. The institutional framework falls directly under the responsibility of the Minister of Housing, Local Government and Traditional Affairs. The Minister of Local government chairs an Inter-governmental Committee that coordinates disaster management among the spheres of government at National level. At National, Provincial and Municipal levels, Advisory Forums, chaired by the heads of the NDMC, PDMC and MDMC respectively are responsible for coordinating the preparedness, mitigation, effective response and post-disaster recovery activities at their designated level. This disaster management institutional framework is presented in Figure 3.3.

At the time of writing this thesis, only national and provincial disaster management centres and their respective Advisory Forums had been established. More aggressive

educational campaigns and capacity building was required to take municipals onboard (Provincial Disaster Management Coordinator – Eastern Cape Province; pers. comm). To be able to achieve grassroot participation, Advisory Forums will need to be established at ward level, which is the lowest political level within local government (voting boundary). Ironically, the Disaster Management Act does not specifically suggest participation of the grassroots at this level, implying that grassroot participation is absent in the current framework.

In the context of the conceptual framework for understanding disasters, discussed in the preceding section, this policy environment presents a complex scenario for grass-root level participation. In the current framework, ward committees would be the local-level institutions anticipated to redistribute flood risk by setting rules and assigning roles for actors in their wards. Ward committees subscribe to political boundaries, which in many cases are not aligned to hydrological boundaries such as catchments. Municipalities, within which wards exist, straddle more than one catchment and so do some wards, falling partly in one catchment and the other part in another.

While under the Disaster Management Act, mitigation, preparedness and response to disasters was brought under the responsibility of the government authorities, certain policy statements in the NWA assign water institutions a managerial role in the management of the flood hazards. For instance the NWA carries a regulation requiring that water management institutions be involved in the management of flood and drought hazards. Part 3 of Chapter 14 of the NWA requires that certain information relating to floods, droughts and potential risks should be made available to the public. As a matter of fact, one of the objectives of the NWA is to contribute to public safety and security in water matters. To this effect, water management institutions are required to use the most appropriate means to inform the public about anticipated floods, droughts or risks posed by water quality, the failure of any dam or any other waterworks or any other related matter. The Minister of DWAF is required to establish early warning systems to anticipate such events. Thus in one way or another, water management institutions are required by law to attend to disasters relating to floods and droughts.

The requirement to include management strategies for the safe and sustainable use of the floodplains in Catchment Management Strategies is also evidence of the strong relationship between water resource management and flood hazard management. In its flood disaster management strategies, DWAF intends to ensure that flood hazard management plans are incorporated into all catchment management strategies and in the business plans of water user associations. In my visits to DWAF head offices in Pretoria, I observed that computer based information system in DWAF is appropriately and directly connected to the South African Weather Services to ensure that rainfall data is efficiently and speedily shared between the two organisations, allowing DWAF to efficiently monitor and respond to flood hazards.

Much of the risk to life and property associated with floods is the result of the inappropriate occupation and use of floodplains and other flood-prone areas. However, there is yet another relation between water management and the occurrence of floods.

Technological failure can also be a source of serious flooding. Effectively, water institutions can be held accountable for flood hazards resulting from failures of their water structures, which place at risk, people who occupy and use floodplains. The story in Box 7.3 is a case in point:

Box 7.3 DAM FAILURE CAUSES FLOODING IN CAPE FLATS.

Cape News. Sunday 30 March 2003

Controversy surrounds the failure of a dam near Montagu to stand up to heavy rains during the floods that ravaged towns in the Klein Karoo last month. The Water Affairs Department vowed this week to bring to book those responsible for the dam, the failure of which they say contributed to the mayhem caused by the flood.

But, in another twist, the body responsible for the dam appears to have been disbanded with no one taking responsibility for it. The Bellair dam, with a 16m-high wall, was built in the Gourits River catchment area north of Montagu in 1922. It sits on the Sanbona Wildlife Reserve and stores 10 million cubic metres of water.

The rain started falling in that catchment area at about 9pm on a Sunday night at the end of March. By the following day the area was flooded, and on Monday night the dam wall burst, devastating lucerne crops, orchards, and some homes.

The same flood - the worst since the Laingsburg floods in 1981 - also cut off Montagu, washing away bridges at the town's entrances. The dam's failure contributed to flooding in the area, but did not worsen the damage to infrastructure in Montagu itself.

The Department of Water Affairs and Forestry said this week that the Bellair Irrigation Board was the registered owner of the dam and that it would consider taking legal action "once more information becomes available about the failure of the Bellair dam".

Schofield said that the dam - built for irrigation purposes - had been in perfect condition and "structurally sound" until the walls broke. "It was unbelievable the amount of water that fell - 375mm in 18 hours, killed the dam," he said. "The area was already flooded before the dam wall broke."

Schofield said that the dam had "failed" when the water went over the top of the wall, washing the wall away and resulting in some damage to the 100ha of lucerne, 19ha of fruit trees and some houses.

Croucamp said the dam had been classified as having "high hazard potential", but not because there was anything wrong with it structurally. "Because of road crossing downstream and the proximity of river beds to dwellings, this dam was classified as being a high hazard," he said.

He said they were surprised that the dam had failed as it had a high storage capacity in relation to the annual run-off in the area.

DWAF acknowledges, through the National Water Strategy framework (DWAF 2004), that water institutions have a responsibility towards flood disaster management in their designated catchments and the newspaper story in Box 7.1 affirms this argument. The National Disaster Management Centre too, recognises the leading role of DWAF in flood disaster management and has appointed the Department to lead the working group for the development of a national flood management policy.

Considering that flood disaster management falls under the wing of a ministerial responsible for political administration while other state regulations still hold water institutions responsible for flood management may indicate that some ambiguity prevails in the policy environment regarding appropriate participatory institutional arrangements for flood disaster management at local-level. This situation has potential of creating operational gaps among grassroot institutions. The use of multiple institutional spaces, whereby political structures are assigned the responsibility of attending to flood hazards within an environment in which relevant water related local institutions exist, has potential of resulting in disjointed disaster management interventions. Supposing that water institutions were to respond to their mandate as stated in the NWA, they would logically address the flood hazard problem in the context of hydrological boundaries within which they operate. On the other hand, disaster management plans made by political structures would logically be in the context of political boundaries, which straddle catchments. In fact, there currently exists a disaster management-training programme funded by the provincial departments for local government, which draws participants from political circles through municipal structures and does not take recognition of water management actors in the catchments. Such a nebulous situation could create ambiguities in flood disaster management. The central argument in this discussion is that considering that flood hazards affect floodplains of catchments, catchment-wide institutions could be considered better placed in dealing with flood hazards than would politically oriented disaster management institutions that straddle catchments.

7.6 An anatomy of disaster management actions

The Disaster Management Act 2002, in Chapter Two section 7 (2)(b), identifies the core principles of disaster management as preparedness, prevention and mitigation: that is, reducing the potential for loss of life and injury, and the economic and environmental costs that result from disasters by taking appropriate steps aimed at:

- Increasing preparedness for disasters and improving response capacity among all sectors of society by, among other things, disseminating relevant information and undertaking programmes of awareness creation, education and training;
- Reducing the probability of disasters occurring and reducing the severity of the consequences when they do occur; and
- Reducing the vulnerability of communities, especially the poor and disadvantaged, to the hazards and threats posed by disasters.

Following from the above core principles, most flood disaster management activities have involved contingency planning and emergency management. Since current activities involve high level meetings and training of Provincial and municipal actors, is

an indication that expert systems perceive that these functions do not require the involvement of local grassroots actors. The Green Paper (1998) described the responsibilities of Disaster Management Centres to include:

Prevention

Actors are expected to prevent disasters by conducting certain activities before a disaster occurs. These can include constructing a dam or levee to control floodwaters; or control burning-off programmes in a veld fire area. Civil society has an important role in this function in planning and identifying zones that need specific attention. However little grassroots involvement is currently observable in this respect.

Mitigation

These are measures that can be taken to minimise destructive and disruptive effects of hazards and thus lessen the scale of a possible disaster. The establishment of a Forum at local level can, in itself, be considered as a mitigation strategy since such Forums contribute towards preparation and implementation of disaster management plans. For example, rural Forums may have plans for controlling veld fires, responding to droughts and improved water management.

Preparedness

This is the function that is currently receiving most attention at National and Provincial levels while very little to nothing is being done at local levels. The measures currently being undertaken can be described as logistical readiness to deal with disasters. This is being done by investing in response mechanisms (e.g. fire brigades) and procedures, rehearsals, workshops for Advisory Forum members, public education and building early warning systems, which includes provision of cell phones to Advisory Forum members for relaying urgent messages to the National Disaster Management Centre.

Relief and rehabilitation

If a disaster occurred, then response and relief have to take place immediately. The Disaster Management Act 2002 part 2, assigns the responsibility to deal with a national disaster to the NDMC, irrespective of whether a national state of disaster has been declared. Currently, contingency plans are being put in place at mainly National and Provincial levels. Response to disasters such as the one cited in Box 7.1 for instance is left as the responsibility of the Provincial office, which responds by assessing mitigation measures to reduce further occurrence of similar incidences. In management terms, relief and rehabilitation functions are undertaken mainly by National and Provincial level disaster management centres since local level capacity (municipals) is not (yet) well developed. Thus this set up does not seem to be essentially different from the pragmatic centralized top-down approach since it still excludes grassroots participation specifically in activities that would contribute towards reducing risk such as risk mapping, advocacy, early warning and preparedness.

7.7 MSPs and flood hazard management.

Public participation is considered as one of the crucial components for flood disaster management and public awareness and conscientisation on action is a forerunner to this.

The central argument of this discussion has been that measures to reduce vulnerability and prevent disasters, cut across several socio-political spheres such as local-rural to urban development patterns, and hence requires multi-stakeholder approaches to problem solving. MSPs can play a crucial role in disaster risk reduction as concerns and measures to curb disaster losses, raising awareness on hazards and vulnerability and gaining local and scientific knowledge on how to reduce risk through minimising hazards, reducing vulnerability and enhancing coping and adaptive capacity (Helmer and Hilhorst 2006).

Thus, there is credible rationale for CMFs' to play a role specifically in flood risk reduction through flood risk reduction and hazard management. The overriding rationales being that first, flood management plans are required to be included into CMF's catchment management strategies and second, participation of grassroot level multi-actors in flood hazard management is still missing in the current flood disaster management framework in South Africa. Therefore, rather than crowding the institutional landscape for managing water by introducing new institutions for monitoring and responding to flood risk, it may appear logical to strengthen the already existing water institutions and consequently improve their legitimacy. Flood hazard monitoring could provide an opportunity for a CMF to garner resources, increase its capacity to contribute towards reducing local vulnerabilities and hence improve its legitimacy.

On the other hand, in the face of all these compelling factors for involving CMFs in flood hazard management, several considerations militate against the incorporation of flood hazard management activities into the agenda of the current format of CMFs:

(i) Classification of flood disasters in South Africa: While the argument that the context and dynamics of flood hazards can be better understood and resolved within the context of IWRM is plausible, the South African approach to disaster management has been to integrate all forms of disasters (floods, droughts, fires, wind, earthquakes, snow, storms, mining, famines, technological disasters etc.) into one management framework overseen by political structures. To 'formally' involve CMFs in flood hazard monitoring might result in complex linkages between political structures and hydrological management structures, both of which operate in different institutional spheres. To management information systems needed to perform activities such as early warning and flood disaster response when actors resided in diverse institutions might render flood disaster management even more complex. Hence the centralisation of the management of all forms of disasters under the local government ministerial was considered most appropriate.

(ii) Perceived magnitude of disasters; Flood disasters are generally considered to be serious and expensive events particularly when there has been poor preventative and response action. The traditional perception is that local institutions rooted in civil society, are generally not well equipped, particularly in terms of financial resources and communication facilities to deal with the occurrence of flood disasters. Therefore mitigation, preparedness and response prerogatives tend to be vested in provincial and

national level administrative structures where financial resources and professional expertise reside. However this approach has resulted in the erosion of the incentive to take responsibility for disaster preparedness among local people as the following comment captured in one of my interviews with a Community Stakeholder illustrates:

“The government has lots of resources to address local problems. I just don’t understand why they should even waste local people’s time to start discussing these issues in various local committees.” [JK]

Experience has shown that there is capacity and determination among local people to take responsibility even for activities that experts might consider beyond local action such as rescue and relief. One example is an incident in Ica, Peru narrated by Warner and Orè (forthcoming), in which local people rose to the challenge to deal with a flood crisis situation in the face of failure of central government structures:

On 23 January the riverbanks started to overflow. Citizens called for Lima and for the Civil Defense to supply heavy machinery to reinforce the river defenses and clean out the channel. But unlike other zones declaring emergency zones, no support was forthcoming from the capital.

The volume coming down the river was approximately 660 m³, while the river channel capacity was only 250m³ and on 29 January heavy rains started to fall again. In the end the floods in the city left 70 dead and 22 000 homeless, in what is said to be the worst flooding in Perú in 50 years (CNN 1998).

In the absence of formal mechanisms, sudden crisis gave rise to local self-organisation...In the face of disaster, the days following the flooding were followed by spontaneous formation of organizations. Neighbours and mothers’ clubs (who provided emergency food distribution) took the lead in forming the Civil Front of Ica, constituting neighbourhood organisations, agriculturalists, irrigator organizations, professionals, local authorities and dignitaries.

Warner and Orè contend that in a way, community-based impromptu disaster response should not come as a surprise. They assert that ‘chaotic’ local response to disaster remains the primary coping mechanism, despite the best efforts of disaster management agencies and institutions to take care of the need to act.

(iii) *Extensive nature of political structures:* In terms of geographical coverage, formal political structures tend to have an advantage over many other forms of social organisation. Therefore, positioning flood disaster management within political institutions may be considered as a form of ‘widening participation’. For instance, the whole country is demarcated into wards as micro-level zones for the participation of people in the politics of the country. The existence of these micro-level zones was

therefore recognised as a more appropriate avenue through which a larger representation of ideas and concerns regarding disaster management could be achieved. However, this advantage could only be realised if indeed the flood disaster management framework included grassroot level institutions since such grassroot level institutions built up their knowledge and folklore on ecosystem extremes and flood hazards that have occurred over an extended period of time.

(iv) *The current role, capacity and visibility of MSPs:* The discussion in Chapter Six revealed how, as a result of participation problems and unclarified purpose, CMFs were struggling to cope with their agenda due to primary weaknesses with regards to resources, mandate and absence of legislatives and regulatory powers. It is evident that CMFs were still poorly conceived institutional arrangements. For instance, the issue of sustainability of CMFs was raised by participants of the first joint research workshop in the Kat catchment as a serious concern. CMF members were not certain of the permanency of the institutions due to financial concerns. On the other hand, the certainty of flood risk and insecurity requires reliability and embeddedness of institutions involved in prevention and mitigation strategies. Warner and Orè (forthcoming) contend that like IWRM, MSPs have not yet yielded immediately appealing success stories. They argue that the integration of water management with flood hazard monitoring can bring specific problems in a river basin context. They assert that in many cases, the interest groups may be different for water management and disaster management. For example while inhabitants of the floodplain could be interested in risk reduction activities, farmers on higher fields might not be interested so much in flood reduction.

7.8 Conclusion: Room for manoeuvre?

Thus it is still debatable whether a CMF's agenda should be expanded to include flood action planning and flood monitoring activities. However, are political structures, as presented in the South African case, indeed better suited for incorporating local priorities in reducing vulnerability and preventing disasters?

The exploration of South Africa's disaster management scenario revealed that while flood assessment stays focused on high impact locations and within expert systems, public concern and awareness does not get built into flood action planning. Statistically, flood risks are low or even not studied in the CMF areas researched. However, risks are there. It is social forces apart from such risks that leave people living in vulnerable places and fatalistic and unmobilised towards any future flood events as reported in narratives in this chapter. Thus a more holistic approach to water management has been argued in this chapter to enable planning with an understanding of these hydrological and social extremes.

I have consistently argued that the relevance of water MSPs in contributing towards flood disaster management lies in their direct connection with water in the catchment as well as their multi-stakeholder approach and consciousness raising on hazards, information sharing and social learning. The multi-stakeholder approach enjoins a dialogue among various sectors and groups of society, a process that facilitates

information sharing and learning. I see these arguments as transcendent. While the newly proposed disaster management strategy in South Africa relies on building new multi-actor consensuses, there are counter arguments to this approach, which suggest that a strategy that uses existing user-based institutions rather than setting up new organisations or committees *in vitro* will likely be more successful, and yet this option is rarely selected. Sharma and Krosschell (*quoted in*: Rhoades 1998). Sharma and Krosschell argue that any new initiative has a greater chance to succeed if the project uses and strengthens existing structures. Only in those cases where there are relatively separate populations with conflicting use rights, will it be necessary to build new institutions capable of mediating between and communication with diverse stakeholders (Fisher 1995). Since no conflicting roles exist in assigning CMFs the responsibility of monitoring flood hazards in their catchments, it can be argued that there is no necessity to build new local institutions for flood hazard monitoring. However, it has yet to be prioritised by them, and made part of a social network that builds secure possibilities for action.

The Kat CMF can be used as an illustration of the potential and synergy that can exist within well-mobilised local MSPs to deal with all relevant water related issues. The Land-care project in the Kat was a demonstration of local people's awareness of the link between the amount of water that is shed off denuded surfaces rather than seeping into the soil and degradation of land and its effect on the river. Thus the Kat CMF shows a start in adopting the complexity paradigm (Hilhorst 2005; Warner *et al.* 2002) discussed at the start of this chapter. White (1957) reports that early in the histories of scientific agriculture and river engineering, the idea took shape that the management of land and its vegetative cover is closely linked with the proper management of the flow of water in the streams, that the magnitude, variations and quality of water moving in a drainage basin is, in some measure, influenced by the treatment of the land. Thus the Kat CMF demonstrated their 'advanced' understanding of land-water interactions. The implementation of the solution to land degradation also took concerns for poverty alleviation by offering an income to mostly women through employment on project. Local communities could not scientifically articulate these facts. However, they were able to tackle the land degradation problem through strategies which included awareness workshops in which a large number of community members were involved in discussing how to address their environmental problems. The Kat CMF experience is an example of how a well-mobilised MSP was capable of selecting and implementing a measure, which specifically and uniquely addressed the vulnerability of marginalised groups within the community. Given this amount of capacity and ingenuity, demonstrated by Community Stakeholders, we can conclude that CMFs can be capable of incorporating, into their water management actions, initiatives that contribute towards flood risk reduction.

CHAPTER EIGHT

INSTITUTIONALISATION OF CMFs

MSPs are envisaged to be viable mechanisms for achieving new outcomes relating to sustainable water resource management since they create platforms for change and action and are central to IWRM (Chapter One). The management of water resources is a continuous function and requires committed monitoring of users and uses (abstractions, distribution, quantity, quality etc) and gaps and needs in services. Empirical evidence emerging from this study reveals that these functions pose special demands on the functioning of CMFs as groups especially when they occupy the ‘lowest tier’ in an existing state agency. The question to be probed is whether the studied CMFs manifest sound ‘institutional arrangements’⁷¹ through which the expected results could be achieved? This chapter explores how CMFs are able to function as a group and be able to achieve their anticipated results discussed in the preceding chapters. The concept of ‘*institutionalisation*’ discussed in the conceptual framework (Chapter Two) is used here to undertake this exploration. This concept was found appropriate for this purpose because it examines the internal processes that earn institution legitimacy for having satisfied people’s needs (Uphoff 1995). The more legitimacy an institution enjoys from the various sectors of the public the more it will be able to command respect and other resources that raise the level of compliance. Institutionalisation results from ‘*regularised*’ practices arising from established processes. The four criteria developed in Chapter Two, which include autonomy, adaptability, internal operations and outcomes and outputs, are used to undertake this examination of the functioning of CMFs. Three additional external factors which include stakeholder representation, operational scale, and confirmation of entitlements, are also discussed to capture a full picture of the variables that influence the operations of CMFs.

8.1 Autonomy

Autonomy represents a concern with the capacity of an institution to make and implement its own decisions. It also represents the capacity of an institution to manage its own workload and to develop procedures to process tasks in a timely and reasonable manner. In addition, an institution would be expected to make its own decisions about its core tasks and beliefs and filter out diversions, arguably, to the extent that it is not dependent upon a charismatic leader, influential persona, an organisation or indeed another institution. In externally induced institutions, autonomy may represent the extent to which decentralisation and evolution of decision making powers to local actors has happened. Mollinga and Narain (2001) contend that IWRM implies decentralization and devolution of decision-making powers to local users. In South African philosophy, the process of IWRM also requires that stakeholders be involved in a ‘*self-regulatory*

⁷¹ The term ‘institutional arrangements’ has been defined in many different ways. In this thesis, institutional arrangements are defined after Mitchell (1990) as the combination of legislation and regulations, policies and guidelines, administrative structures, economic and financial arrangements, and key participants or actors.

process'. In essence, autonomy is a measure of the level of 'self-governance'⁷² of an institution. Autonomy of the CMFs was observed based on the following criteria:

(i) Management structures

Management structures of both CMFs portray a picture of self-governed institutions. At their inception, both CMFs adopted structures in which a management committee (referred to as steering committee in the Kat catchment) would run the day-to-day activities of the CMF. The committees had a chairman responsible for coordinating the activities, a secretary to keep the records and conduct correspondence, a treasurer to be in charge of funds and committee members to provide support. The committees were expected to undertake administrative functions of CMFs, which included planning of CMF activities, arrangements of events such as workshops, meetings, tours and archiving of information.

Notwithstanding, the members of management committees in both CMFs were not necessarily in the employ of the CMFs. As stakeholder representatives, they performed their duties voluntarily. The demands placed on them by CMF functions cannot be underestimated. This scenario can be blamed for the inability of the CMFs to attain sufficient autonomy. In Mthatha CMF for instance, most members of the management committee were staff of government departments. They were fully engaged in the activities of their respective organisations to the extent that they were unable to perform CMF tasks at all. The chairman of the Mthatha CMF, who was also a University lecturer asserted:

"I have a demanding schedule at work since I am also pursuing my PhD studies besides lecturing. It is difficult to keep track of CMF activities. Many times I pick up the minutes on the morning of the meeting and quickly update myself of the issues of the previous meeting. I often discover I hadn't acted on a number issues that I was required to, before a meeting. I am lucky to have the secretariat. It makes follow-ups on behalf of the management committee. I cannot see how the CMF could have functioned without the secretariat that DWAF engaged."

The Kat catchment, where most of the management committee members were community stakeholders, experienced a similar problem. Unemployed community members have commitments too that require their attention. On several occasions, management committee members missed meetings because they were away attending to their personal demands such as visiting a relative, attending a funeral or seeking employment. This was done without taking 'official leave' from the CMF and justifiably so since they were not in the employ of the CMF.

(ii) Physical resources available

The unavailability of office facilities emerged as another crucial barrier to CMFs' autonomy. Both CMFs depended on the good will of participating Organisational

⁷² This refers to the functions, balances and structures internal to the group.

Stakeholders who provided office space, furniture and equipment for the CMF to perform its operations. The Mthatha CMF used DWAF facilities and the services of the secretariat for its operations while the Kat CMF used local government facilities. The Mthatha case could provide a useful illustration of how resources such as office facilities could impact on the autonomy of these institutions. In my discussion with the chairman of Mthatha CMF regarding the roles of the secretary and treasurer when there was a secretariat, which performed most of their functions, he confirmed that without office facilities, it was difficult for CMF management to function:

“It is not easy to expect our secretary or treasurer to perform their duties since they are also busy at their workplaces and most importantly, they do not have access to computer, printer and telephones that they need to perform their duties.” [SN]

This sentiment underscores the importance of office resources in performing administrative tasks. Both CMFs did not have their own office space and facilities for conducting their business. It is difficult to imagine how an institution expected to manage a highly contested resource such as water, could function without resources to maintain records, run awareness campaigns and correspond effectively with stakeholders and the wider external environment.

The strategy of engaging a secretariat in Mthatha catchment was indicative of the necessity of a fully functional administrative set-up. On the other hand, the fact that DWAF had made the arrangements to contract the consulting firm to provide secretariat services, without needing the approval of the CMF, was also indicative of the overriding power that DWAF had on the CMF and the dependence of the CMF on DWAF. As a matter of fact, the Mthatha CMF momentarily ceased its activities for eight months during 2003 when DWAF could not meet its financial obligations to the consulting firm.

In the Kat, the steering committee members performed all the administrative tasks voluntarily. The appointed secretary compiled the minutes of meetings and other members prepared all that was needed for meetings and workshops (including preparation of teas, lunch etc). The limited capacity to document minutes and archive proceedings was evident from the absence of these documents. Without access to office equipment, all documentation was hand written, except for documentation that researchers assisted with.

(iii) Decision-making

Autonomy includes the capacity for an institution to define its own problems and manage its own workload. My observations revealed that since DWAF provided funding for activities in Mthatha catchment, the CMF was largely dependent on DWAF in making decisions on what was to be done and by who. DWAF determined the social and technical information that needed to be collected and it undertook capacity building and empowerment workshops in cooperation with the consulting firm that provided the secretarial service. Consequently, it was only a small group of experts who defined the

key problems and assessed the urgency of one problem over another and who implicitly often conceptualised the solutions to the problems. Thus, the community stakeholders, and other lay individuals were totally disqualified from the process. In the Kat catchment, on the other hand, stakeholders took part in activities that identified environmental issues of concern and they worked together with researchers in producing documents on the status of their environment. Table 8.1 on the next page shows some activities undertaken by the CMFs and the extent to which members of the CMF were involved in executing the activity. It is interesting to note that all activities in Mthatha catchment were undertaken by consulting firms while in the Kat catchment, CMF members participated in executing most tasks.

Table 8.1 Operations undertaken by CMFs

Mthatha CMF		Kat CMF	
<i>Activity</i>	<i>Undertaken by</i>	<i>Activity</i>	<i>Undertaken by</i>
Generation of Catchment Management Strategy	DWAF	First environmental awareness workshop	Rhodes University
Generation of Vision Statement for the Catchment Management Strategy	NS/GMA consultants	Land-care project	Kat CMF
Capacity building workshops	Social and Rural Development Consultants (RDA)	Community out-reach programme	Kat CMF
Awareness campaigns	RDA	Research in determining the water quality of Kat River	Participatory research approach between Rhodes University and Kat CMF members
Joint workshop in Mthatha catchment	RDA	Joint workshop in Kat catchment.	Kat CMF

Source: Field data. 2004

(iv) Mandate

Autonomy also includes having a mandate to act on the decisions made. The CMFs' ability to act on their decision was limited by the fact that they were non-statutory institutions with no legal power to enforce decisions arrived at in their deliberations. They therefore relied largely on the willingness of affected agencies to comply with the decisions. The chairman of the Kat CMF lamented to me that:

"The only way we can begin to be seen to be serious is to have our Forum formally registered as a legal institution capable of enforcing our decisions". [LN]

The Mthatha CMF also expressed similar frustration when its decision to summon the Oliver Tambo Municipality to the CMF meetings, to come and explain how it was addressing the pollution problem of the Mthatha River, went unheeded. It is evident

from this analysis that CMFs were had little power to enforce its decisions and were largely dependent on external support. In top-down collective initiatives, such as the Mthatha CMF, the initiator of such processes usually remains in control of the processes and provides resources to sustain the initiative. In bottom-up initiatives such as the Kat CMF, members struggle to sustain the initiative on limited resources, which in return hampers performance.

8.2 Adaptability

This criterion measures the extent to which an institution is capable of adapting to changes in the socio-economic and political arenas or more importantly is capable of moulding that environment. Water resource management in a wide environmental and developmental arena such as a catchment is affected and controlled by a set of interacting and overlapping institutional and interpersonal social processes embedded in political and social life of the area. The existence of processes that allow an MSP to fit into this set of relationships is a vital precursor for establishing a framework for negotiation over competing claims. MSP participants would require knowledge and better still, a personal transformation that allows them to understand the issues at stake and be able to position themselves as key and legitimate players in water resource management. Adaptability of the CMF was observed using the criteria as follows:

(i) Political arena

In the political arena, I observed that while a difference existed between Mthatha and the Kat catchments in terms of political activism, whereby Mthatha catchment was a more highly politically charged area⁷³ than the Kat catchment, political dynamics did not seem to shape the activities of either CMF, whether directly or indirectly. In fact it was the pervasive absence of the 'political' that had a profound influence in the functioning of these institutions rather than its presence. The absence of the political, as the reader should have observed, also meant that I ignored using the 'political discourse' when examining the emergence and functioning of my MSPs and rather focused on 'institutional discourse'. This was not ignoring the fact that participatory resource management initiatives can be essentially political, considering that they can involve power to accumulate and redistribute resources from the state and among participating individuals. Rather it is a revelation of the fact that the studied MSPs had no real mandate and support from the political sphere. As such, actors (particularly political actors at grassroot level where CMFs exerted their influence, such as ward councilors) considered that CMFs were not potent arenas where they could contest their interests. Political leaders are known to strategically seek out avenues that will earn them recognition. They do not seem to have time and resources to deal with issues that contributed little political credit to their names.

⁷³ As a matter of fact, a number of South Africa's famous politicians originate from Mthatha area including Nelson Mandela and the current president Thabo Mbeki. This area is also the home of the first South African post Apartheid multi-racial opposition party called the United Democratic Movement (UDM) headed by Bantu Holomisa who once was president of the former Transkei Homeland and lived in Mthatha.

With reference to concerns aired by local people in the Mthatha catchment, CMFs represented environmental concerns that were silent in the political arena, at the time. Since the real stakes of water management related to distribution of domestic water and access to productive uses of water, issues that seemed to fall outside CMFs' concerns at the time, a real socio-political contest in water management happened outside the CMFs. This implies therefore, that by disengaging themselves from 'real issues' in water management, CMFs assumed apolitical nature and consequently lost legitimacy, at least in the political arena. I did not observe any strategy adopted by CMFs to adapt and reassert themselves in this context.

(ii) Multiplicity of institutional spaces

The real challenge for CMFs came from the multiplicity of institutional forms or forums dealing with water or generally catchment management issues. Table 8.2 shows the list of other related institutions that engaged local actors into catchment management related activities.

Table 8.2 Wider institutional environment in the Mthatha and Kat catchments.

<i>Type of Institution</i>	<i>Issues of concern</i>
CMF with membership from diverse sectors.	Water Resources Management, specifically environmental care and water quality and quality monitoring.
Working for Water Programme (WWP). DWAF sponsored agency employing local people.	Elimination of alien plants that are seen to be responsible for the excessive encroachment of crop and livestock lands, the reduction of groundwater and nutrient mining.
River health Programme. DWAF sponsored programme. Recruits local people to form village committees that monitor the status of river health.	Monitoring of quality and quantity of river water as a result of the activities of water users. Requires participation of people leaving along the rivers.
Farmers Union (Mthatha only) Cooperative movement of emerging commercial farmers	Securing inputs, product markets and land use advice including irrigation water use for members.
Water User Association (Kat catchment only) Largely white commercial farmers.	Securing cooperative support in irrigation water use for members.
Ward committees. Political platform of local community actors within a voting zone.	Responsible for the identification and overseeing of community development projects such as road building and water and sanitation projects.

Source: Field data: 2002 – 2004

Table 8.2 shows that CMFs were apparently not the only institution that engaged with water related issues. Since multiple interacting institutions can shape peoples' resource access and control, CMFs came under pressure to validate their identity, retain the interest of participants and continue attracting resources and interest of stakeholders. In

addition to institutions listed in Table 8.2, there were also up-coming small-scale water user associations⁷⁴ that were being introduced by DWAF in rural areas.

All these institutions, which were crowding the institutional space for resource management in catchments, sought participation of local community members. They provided different entry points to resource management for local people and consequently shaped local peoples' access to and control of catchment resources. Even though there was congruence between them, several of these institutions were not fully aware of the activities of their counterparts. For instance, interviews with Working for Water Project (WWP)⁷⁵ in the Kat revealed that they were not fully aware of the activities of the Kat CMF. However, most members of the CMF were fully aware of the activities of WWP. How could this have been so? A simple investigation pointed to the possibility that as a government-sponsored institution, WWP was endowed with financial resources that attracted the interest of community members. Not surprising then, I discovered that certain members of the CMF were negotiating with WWP, to get involved in their activities by processing alien plants that WWP was eliminating from the catchment. The idea was that the uprooted alien plants could be processed into charcoal, which could be sold as a source of the much-needed income. This was indeed an innovative idea. However, it was ironic that this idea never surfaced within the CMF as an institutional initiative in which the CMF could engage with the WWP, to establish a strategic institutional alliance that would allow the CMF and WWP to address environmental and poverty issues jointly. After all, the CMF's Land-care project was in some way related to WWP alien plants elimination project. Both were concerned with soil and water conservation goals. For example, since a key strategy in the CMF's Land-care project was the introduction of fast-growing plants in eroded patches of land, the CMF could have benefited from the plant species knowledge that the WWP had. Rather than seeking ways of establishing a bilateral relationship between the two institutions, some members of the CMF (apparently all of whom were in the management committee) sought to access resources from the WWP as individuals, outside the CMF, by seeking to process WWP plant wastes.

Indeed, in a multiplicity of institutions, that are offering varying levels of resource endowments, actors become unsettled by the allurements of benefits offered by the different institutions. Different actors come to rely on different institutions to create space for themselves in order to carry out their own 'projects.' Thus local community

⁷⁴ The formation of WUAs for historically disadvantaged communities was a new approach initiated by DWAF in response to the poor accessibility to financial resources that small-scale irrigators were experiencing. It was anticipated that accessibility to resources for small-scale irrigators could be improved if they formed groups that were recognised and registered.

⁷⁵ The Working for Water Programme (WWP) was a job creation and environmental program of DWAF. It was a high profile program of the national government and perceived to be particularly successful, it had received very high levels of funding and expanded rapidly. DWAF calculated in 1998 that it had grown to 240 projects with over 42,000 workers nationally (DWAF 1998b, p 6). The program had two main benefits: job creation, and increasing water availability. The WWP included skills training and education, support for SMMEs, and local institutional capacity building as part of its mandate. It also encouraged secondary industries, and targeted women, youth, and the disabled as beneficiaries.

based institutions can become launch pads upon which local actors build alliances and garner resources.

Strategic partners

Establishing strategic alliances, as a means to survive in a multiple institutional spaces was a useful strategy used by both the Mthatha and Kat CMFs. For example, when DWAF introduced its River Health Project, and offices in Mthatha in 2003, the CMF requested that the River Health Project become a CMF member. The Mthatha CMF also requested the membership of WWP. Such initiatives can be viewed as positive ways of co-opting newly emerging institutions and establishing linkages with other congruent actors to adapt and maintain position in a dynamic institutional environment. The Kat CMF too had established several alliances and networks with:

- Rhodes University researchers (who provided information and skills for running the Forum).
- University of Witswatersrand researchers (who provided support information on environmental issues).
- Wageningen University researchers (who provided research information and facilitated interactive learning through workshops).
- Spiral Trust (NGO which provided skills in personal transformation and social change). The Kat CMF and Spiral Trust now view themselves as permanent partners to the extent that the Spiral Trust attended most CMF activities and provided guidance to the CMF.

The Kat CMF also made an effort to obtain recognition with the Nkonkobe municipal council by attending a municipality development-planning meeting in which they submitted their report. This move was also a strategy to attract funding from the municipality. Rhoades (1998) contends that partnering and collaboration with other agencies to implement projects are commonly cited as a characteristic of successful watershed initiatives.

In conclusion, it is evident that in order for CMFs to claim their 'space' in resource management in the catchments, they needed to adapt in a multiple institutional environment. Both CMFs achieved this by forging coalitions and networking with collaborating institutions as well as with the newly emerging institutions. The desire to establish political links was also apparent. This was evident from the fact that the presence of a ward councilor (a local political figure) during a CMF meeting or workshop was highly sought for, acknowledged and appreciated. Thus adapting to their environment was a function that both CMFs strived for through partnerships and alliances within and across the various institutions.

8.3 Internal operations

This criterion refers to rules of engagement⁷⁶ (forms of membership, leadership, and management procedures) that were in place for achieving the specified purpose of the CMF. This criterion demonstrates the capacity of the institution to construct internal structures to fulfil its goals and cope with its business environment. Institutional structure and function should reflect and be appropriate to the type of goods and services that are "produced" by the catchment (Aylward and Gonzalez 1998). Gittel (1980; p 89-113) has demonstrated in her research on the characteristics of community organisations, that the internal structures of an organised group of actors are a significant determinant of the ability of the group to be effective in its endeavours. The internal characteristics, she argues, are at minimum, decisive factors in how the organisation functions and in its selection of the means of survival. Indeed, organizational structure of an institution is a factor in effective catchment management (Dreager 2001). Four key variables were identified to define the internal operations of the CMFs: operational rules, membership, financial status and staffing.

(i) Operational rules

The immediate observable feature of the CMFs was the lack of guidelines relating to membership, administration and financial procedures of the institution. The situation was further exacerbated by the absence of a constitution or comprehensive operational rules. CMFs operated under informally accepted rules, which governed meeting dates and procedures, membership, finances and agendas. As a result, a CMF could engage in varying functions that were difficult to verify with respect to its purpose. Without established rules to be followed, members could not predict what was to be done in different circumstances and invariably the chairman could always 'call the shots'. For instance, commencement time for meetings in the Kat was not, in many instances, one that was set by the CMF but one that the chairman determined to be appropriate in accordance with what he saw to be a 'good' number of members present.

(ii) Membership

A significant administrative complexity was observed in the 'open door' membership system whereby any resident of the catchment could attend the CMF meeting and make his or her contribution. Thus anyone was a member of the CMF. This implied that these institutions did not have specified or registered members. Participants had the freedom to belong as well as the freedom to leave whenever they felt that their participation was no longer beneficial. During the first joint workshop, participants recognised the 'open door' membership approach as a strength of the CMF. Affirmatively, I observed that the open door membership approach was a means for widening the solution space of the CMFs. This presented a paradox though, since having a constitution that specified membership regulations could have improved participation through recruitment of

⁷⁶ Ostrom (1992) defines rules of engagement to comprise (i) operational rules (boundary and access rules, allocation rules, input rules, penalty rules and conflict resolution rules) (ii) collective choice rules (guidelines for formulating and changing operational rules which define who is eligible and how future rules will be made) (iii) constitutional rules (rules relating to how an organisation interfaces with groups beyond its collective boundaries). There was no need in exploring the CMFs rules of engagement to this depth since they were only newly emerging informal institutions.

‘committed’ participants. The open door membership approach also translated into ‘felt-need participation’ approach, which had serious repercussions on the efficiency of CMFs. These approaches left CMFs with no recourse for dissenting key stakeholders, such as municipalities, whose participation was a prerequisite towards efficient water resource management.

(iii) Financial resources

Performing administrative functions or indeed to implement plans requires funds. Financial independence is critical to any institution that hopes to produce results. Both CMFs had no secure sources of operational funds. Throughout my interviews, members pointed to the lack of operating funds as the major impediment to the success of CMF practice. Nonetheless, DWAF remained the financier by default in Mthatha catchment. The Mthatha CMF did not need to make any official request for funding from DWAF. As for the Kat CMF, Rhodes University provided the initial funding from its research budget. This scenario changed when the CMF acquired funding for their Land-care project. Funds for all CMF operations were then drawn from the Land-care budget. This was obviously not a sustainable situation because the Land-care project had its own life span.

(iv) Personnel

Money produces results only when there are appropriate human resources to effect wise expenditure and management of processes. During the period of my research, I observed that the availability of a ‘driver(s)’ or ‘champion(s)’ to administer the operations of the CMF was crucial to a smooth functioning of the CMF. Since most CMF members tended to stay away from CMF activities soon after meetings, someone had to ensure that the resolutions were followed up and that preparations for the next meeting were taken care of.

In Mthatha catchment, in addition to the secretariat, a DWAF officer, whose official responsibility was to coordinate the implementation of catchment management, played the role of ‘driver’ or ‘champion’. The DWAF officer ensured that the secretariat was appropriately remunerated and he personally worked in close collaboration with the secretariat in ensuring the implementation of CMF activities. It was clear from the comments recorded during interviews with members of Mthatha CMF that the DWAF officer was the central pillar of the CMF. The following sentiments captured during interviews attest to this (Mr GD being the DWAF officer):

“The agenda for all our meetings has to be prepared in consultation with Mr. GD. Even meetings dates have to, in most cases, to fit into the DWAF schedule to ensure that there is a DWAF official attending the meeting. [UNITRA representative]

“We have to consult Mr. GD whether to proceed with workshops. Mr. GD also assists in ensuring that our meeting venues are secured”. [Secretariat]

“I think the Forum has so far achieved what it has because of the commitment of Mr GD”. [Department of Agriculture representative]

It was not easy to identify the ‘driver’ in the Kat catchment. A number of young men took an active interest in the running of CMF affairs. However, the chairman of the CMF was the immediate contact figure with outsiders and he played a central role in coordinating CMF activities. Being an unemployed community member, he dedicated most of his time towards CMF activities.

Without doubt, MSPs need champions to carry the cause. Caplan *et al.* (2001) assert in their findings about partnerships in water resources management, that champions can reduce layers of management in order to propel projects into action. They further contend that champions should be created if they do not exist. They see that champions assist participants in engaging in social intermediation, which is essential for creating ownership of the process.

Notwithstanding, perceptions of coercion are reinforced when such ‘champions’ originate from the initiators of a collective action. Such was the situation in Mthatha catchment. Since Mr. GD who was considered the champion of the CMF was also staff of DWAF, the organisation which initiated the CMF, his activities were perceived to be motivated by DWAF’s interest in ensuring the success of the government policy of participatory water resource management. Thus such a situation can become a limitation on the process as it creates dependency and participants lack ownership of the process and ultimately communities begin to feel patronised.

8.4 Outputs and Outcomes

The actual results achieved by an institution are probably the most crucial indicators of effectiveness of an institution. Without demonstrated positive effects, the commitment of stakeholders is unlikely to be maintained. Local people find it more rewarding to participate in initiatives that are oriented towards achieving tangible goals as the case is with institutions like WUAs, Farmers Unions and WWP.

Outputs are considered as goods and services delivered whilst outcomes are non-tangible benefits such as experience gained (which leads to self-actualisation), processes developed and overall objectives that are being achieved.

(i) Outputs

A recurring argument of this thesis has been that, achievement of self-realisation and tangible benefits, constitute the fundamental reason why stakeholders, particularly Community Stakeholders will take interest in participating in collective resource management. I have argued that the two categories of stakeholder members - Organisational Stakeholders and Community Stakeholders - perceive the purpose of CMFs differently. To reiterate momentarily, Organisational Stakeholders engage in catchment management more as managers, facilitators and implementers and therefore see their role as merely planning, consultative and advisory. As far as Organisation Stakeholders are concerned therefore, the current processes of participation through

dialogue and joint planning meet the desired outcomes of an MSP. Their concern is in setting explicit technical goals for environmental management, such as maintaining water of a good ecological status. On the other hand, Community Stakeholders engage more as users and desire that their participation in MSP initiatives yield some tangible results. They are concerned with use of catchment resources for service provision and poverty reduction. These seemingly contradictory goals have also been a source of frustration in the functioning of the MSPs from both groups of stakeholders.

It is evident that CMFs need to pursue multiple goals to embrace these seemingly contradictory goals. Besides developing sustainable solutions to water resource management, the purpose of the CMFs should include goals that attempted to provide survival strategies for the poor, building poverty and gender concerns into catchment management strategies. While the Kat CMF can bank on its Land-care project as evidence of tangible results through income to residents of the catchment and improvement to the environment, it was still hampered by the lack of a sustainable source of financial resources to maintain its activities. As a matter of fact, the funding for the Land-care project was coming to the end towards the end of this research. I could sense the amount of anxiety that was developing among CMF Community Stakeholders. Mthatha CMF had pursued mostly the expectations of Organisational Stakeholders, with little attention to the expectations of Community Stakeholders', consequently losing their participation.

(ii) Outcomes

Benefits resulting from CMFs activities cannot be measured only in terms of tangibility. CMF processes bring about other significant outcomes. Opportunity for social learning that CMFs created could be considered one important outcome of CMF activities in both Mthatha and Kat catchments. Workshops and meetings brought together people from different walks of life (peasants and commercial farmers, black and white people, bureaucrats and private business people, upstream and downstream residents) to a formal interactive learning situation through formal meetings, catchment tours, as well as through informal associations over lunch, coffee breaks and relaxation time. The list of expectations generated at the beginning of the first joint workshop showed that 50 percent of what participants expected to come out of the workshop was networking and social learning. Participants emphasised their desire to know more people involved in this practice, to share experiences with each other and to have a better understanding of the practice of participatory water resource management. At the end of the workshop, more than 50 percent of the expectations met, were those relating to interaction and social learning. During the first joint workshop, the list of strengths generated by the Kat CMFs included the opportunity to learn from and to mix with others. For instance, one exercise I observed with interest, during the first joint workshop, was a group exercise that required members of the same CMF to describe their catchment by drawing catchment maps and listing river tributaries, dams and villages that fell within their catchment. Since Community Stakeholders came from different corners of the catchment, I noticed how quickly the catchment maps were developed, with each participant citing a physical feature from his/her area. Physical and social characteristics of the catchment became less conspicuous. There was extensive knowledge sharing. For

example, when the Mthatha group drew village boundaries, there was a sudden realisation that there was only one village which fell completely within the boundaries of the catchment. Consequently participants were faced with a new realisation – that, since most villages did not completely fall within the boundary of the catchment, the population figures for the catchment, which were largely based on village population figures, might not have been accurate after all.

The social bonding that collective actions create cannot be underestimated. For instance, one year after the first joint workshop between the Mthatha and Kat CMFs, which took place in the Kat Catchment, I discovered that a small-scale farmer from the Kat catchment had established a professional bond with an academic from UNITRA in the Mthatha catchment and they had kept in contact with each other through telephone communication. The farmer narrated to me how he had enjoyed the time they spent sharing experiences during the two-day workshop and how their ‘friendship’ had developed thereafter. At the end of the joint workshops, many participants could be seen exchanging contact details indicating the establishment of social and professional bonds. At the second joint meeting between the two CMFs, a spokesman from Mthatha CMF remarked in his opening speech that a cordial friendship had been established between individuals from Mthatha and the Kat catchments.

Indeed, increased interaction can lead to a feeling of camaraderie and even shared values. For South Africa, this outcome can provide a beneficial end in itself when the process manages to build relations of trust and respect between individuals from groups that have been at odds with each other in the past. In many cases, unless for those stakeholders engaged in community work, Organisational Stakeholders often have little information about and ignore the poor. Through the continuous interactions with Community Stakeholders, (meetings, meals, tours and workshops) Organisational Stakeholders have an opportunity to gather and relay information from the field to the higher decision-making levels in their departments and other networks.

Pooling of information can be considered as another valuable outcome of the MSP processes. Most information relating to water resource management and environmental concerns is traditionally kept separate in different government departments and often may be contradictory. In both Mthatha and Kat catchments, the MSP initiatives provided an opportunity for the participating organisations to share and refine information. For instance, the development of the catchment management strategy in Mthatha involved the collection of information lying in various departments and NGOs and discussing its authenticity in one forum. This resulted in the development of a single, common database and source of information about the catchment. This situation was also advantageous for this research since there was mainly a single source of information in Mthatha (CMF secretariat) and the Kat catchments (Rhodes University).

8.5 Impediments to successful institutionalisation

While the CMFs were faced with several challenges within their echelons, other external factors contributed to this complex interplay of variables that rendered the

running of the CMF affairs notoriously difficult. During the research process, three major impediments to successful institutionalisation of these CMFs were observed:

(i) *Stakeholder representation*

Of all folklores I ever heard in my childhood, the folklore about the race between a hare and a tortoise fascinated me most. It is also generally a very popular folklore in Africa. In this folklore, the fast running and witty Mr. Hare lost the race to the slow moving Comrade Tortoise. The hare lost the race because he grossly underrated the tortoise to the extent that he took a nap on the racecourse while the tortoise remained focused and committed to his task. While the lesson in the folklore focuses on the need for one to never give up even in the face of tough competition, I found the gist of the story to lie in the implications of the win. The animal kingdom had organised the race in order to identify a quick runner who would keep watch over bush fires. It was agreed that the winner of the race would represent the animal kingdom as a fire disaster early-warning monitor. Since most animals believed that the hare was the fastest runner, they did not find it necessary to enter the race, except the tortoise of course, whose reason for entering the race was not necessarily winning, but to receive recognition as an eminent member of the animal kingdom. The result of the race spelt doom for the animal kingdom because obviously the tortoise was not the right candidate for the task. Thus, their 'system' for nominating a 'representative' was flawed.

In MSPs, participants or members are often 'delegates' or 'representatives' nominated by their respective social groups or organisations. They are 'delegates' because they are supposed to be 'delegated' to do so by a group of actors they represent. The degree to which the MSP is representative of the broader society becomes an important proxy for public participation. The question to be probed is whether MSP members are capable and genuine delegates of their respective bodies with a mandate to represent the interests of their organisation or community and how this situation affects the functioning and legitimacy of the MSP.

Accepting that MSPs are viable systems for incorporating diversity and addressing common problems, achieving a form of stakeholder representation that incorporates this diversity and produces results is crucial. To clarify my argument, let me evoke the discussion on theoretical notions discussed in Chapter One, regarding the term 'stakeholder'. In water resource management, everyone is a stakeholder in the sense that everyone is a water user. Theoretically therefore, everyone should participate in the management of the resource. However, it is practically impossible to enlist the membership of all (water users) stakeholders on the MSP since the population, catchment size and individual interests preclude the participation of everyone. Nonetheless, participation of all stakeholders (all water users) is achieved through direct and indirect participation. One participates directly when one is personally involved in the activity of planning and deciding how things should be and what ought to be done. When a person acts on behalf of another through representation or delegation, the represented person participates indirectly. This is how the concept of public participation in water resource management in South Africa can be explained. It implies that the needs and desires of all inhabitants of a catchment are expressed through

representative democracy. To attain this state of affair where the public participates through representative democracy, it is logical to expect that first, the few members of an MSP should be a close reflection (representation) of all sectors of the catchment society and second, that the public which participates through representation will be aware of the activities of the MSP and can react if necessary to the decisions reached.

To what extent did this form of representative democracy occur in the studied CMFs? There were 1055 villages in Mthatha catchment. Out of a total of 30 members who 'regularly' participated in the CMF, only four members (representing less than one percent of the villages) represented local communities whose population constituted 71 percent of the catchment residents. These four Community Stakeholders were nominated during the first round of public campaigns supposedly by the 'public', which attended those meetings. During interviews with Community Stakeholders in the Mthatha CMF, I was interested in knowing the extent to which their contributions in the CMF were a reflection of the interests of communities they represented as well as how the activities of the CMF were reported back to their constituencies. Responses were common and predictable;

"Because of the way our communities are, it is not easy to get an opportunity of meeting all community members where one could solicit for input to the CMF meetings or even to report back what was happening in the CMF." [MT]

"I know in general terms what my community needs are since I am a community member, therefore I do not necessarily need to meet all community members to solicit for their input." [GJ]

"As a matter of fact, I have not come across issues that need the attention of my community. Our CMF meetings mainly involve reports from departments and consultants and are not relevant for community consumption." [KN]

Notwithstanding, a community member who attended a CMF meeting in Mthatha for the first time intimated in my interview that:

"I am surprised at the things I heard in this meeting. I have never heard them discussed at any of the meetings in my community even though I know someone from our community has attended this meeting before. What I know is that people come to represent themselves here. On the other hand, even if I wanted to represent the interests of the community at large I would not know how to do that because community meetings which would provide me with the opportunity of seeking out community interest do not take place so often" [NM]

With respect to representation of Organisational Stakeholders in Mthatha catchment, only three departments were represented on a regular basis – Agriculture, Water Affairs

and Forestry and Environment and Tourism. The local municipality sent someone only occasionally. However, since in many instances these departments sent new faces at each meeting, these representatives were often ignorant of the matters from the previous meetings. The local University in Mthatha (UNITRA) always sent a large contingent of representatives to CMF meetings. However whether they could be considered 'delegates' is questionable since they were not necessarily nominated by the University but rather came as faculty staff that had interest in community action in environmental management. ESKOM was the only organisation that was represented by the same member consistently, who also was a senior staff member of the company.

A similar difficulty with representation existed in the Kat catchment. Community representatives on the CMF came from 15 of the 36 villages found in the catchment. The CMF was non-existent in the lower Kat catchment where irrigated commercial farming took place. Participation of Organisational Stakeholders remained extremely problematic. One ward councilor occasionally represented the local municipality. It is therefore logical to conclude that the interests of organisations were not sufficiently represented on the Kat CMF.

This under-representation of stakeholders, particularly local communities in Mthatha catchment along with the questionable system of selection of delegates from communities clearly demonstrates how 'unrepresentative' these institutions were. In return, this situation raises questions regarding the extent to which stakes were epitomised in the CMFs. In considering of the sizes of the two catchments, (5500km² for Mthatha and 1700km² for the Kat) there was just too thin stakeholder representation to legitimately administer management of water resources on behalf of catchment residents.

The issue of appropriate stakeholder representation in terms of numbers and mandate (delegation) is crucial rather than trivial in MSPs. It interrogates the fundamental principle in the MSP ideology, since by simply referring to 'multiple stakeholders' the ideology does not take into consideration the fact that these 'stakeholders' are not single entities, but each one represents a complex conglomerate of individuals each of which is highly differentiated internally (hierarchy, gender, ability, culture and individual interests etc). Such factors have tended to be left out in the theoretical assumptions of the potential for multi-stakeholder platforms. In effect, without addressing this complexity of stakeholder representation, the ideology of multi-stakeholder participation becomes a vague concept. It follows from this that a pertinent issue in the design of stakeholder participatory institutions may not be how to improve participation, although that is essential, but how to facilitate the representation of the different groups with mandated delegates.

To further clarify this argument, reference can be made to two situations in Mthatha and Kat catchments. In one of my interviews with a staff member of the Department of Agriculture in Mthatha, regarding irrigation projects in Mthatha, the Agricultural Engineer for the department indicated that he had not heard about the existence of the CMF. However what emerged as most intriguing was his mention of an integrated

landcare project that was being launched by his department around Mthatha dam area. Apparently this important project, which had serious implications for water resource management in the catchment, had not (yet) been heard by the CMF. Meanwhile, in one of its meetings, the CMF had discussed the problem of silting of the Mthatha dam as an urgent concern. The project that was being planned by the Department of Agriculture would in effect address this concern. How could this kind of discrepancy in information sharing occur when the Department of Agriculture was represented on the CMF?

The only way that the CMF could have become aware of the plans of the Department from Agriculture regarding a landcare project around Mthatha dam was through the 'delegate' from the Department of Agriculture. Apparently, this 'delegate' was unaware of the launching of the landcare project because he came from a different section of the department. While the Agricultural Engineer, who was unaware of the existence of the CMF was busy with his environmental development projects in the catchment, the agricultural extension worker, who represented the department on the CMF was unaware of such plans. This situation raised questions regarding 'appropriate stakeholder representation'. Thus with regards to Organisational Stakeholders, who decides which individual in the organisation sits on the MSP? When an MSP delegate is nominated, how does he/she collate the departmental information relevant for the consumption of the MSP and how does he/she feed back to the department, MSP activities, in a manner that informs the department about water resource plans for the catchment?

The complexity of this issue can further be illustrated from the following conversation I had with the dam operator in the Kat catchment. The dam operator could be considered a key DWAF personnel in the Kat catchment considering he controlled the quantity of water that flowed in the Kat River, even if he did it under the command of another senior officer away from the catchment. He resided in the catchment and he knew the conditions under which local people lived. However his insights were a reflection of the difficulty of stakeholder representation in MSPs:

Researcher: *What do you know about what is happening to the water released from the dam?"*

Dam operator: *All I know is that there is a group of farmers in Fort Beaufort who request for water from my boss in Sommerset East. Then my boss calls me to tell me about how much water I should release from the dam.*

Researcher: *Do you know how many farmers there are and how much water they use?*

Dam operator: *No. I know they have an irrigation board, which coordinates their activities including the payments for water use. However I don't know how much money they pay as it is done directly with DWAF.*

Researcher; *What about other water users in the catchment, what do you know about their water use?*

Dam operator; *I know there are people who pump water from the river in the up stream before it reaches the farmers down stream. They are not supposed to be doing that because they are stealing from the water allocated to the farmers in Fort Beaufort. When they pump water from the river, it means the water released for the farmers down*

stream will not be sufficient. However, to meet the requested amounts, I usually release more than the amount requested by my boss.

Researcher; *Do you know about the Kat CMF?*

Dam operator; *Yes, I know the guys. I know they are trying to do something for the catchment.*

Researcher; *Have you ever been asked to be a member of the CMF?*

Dam operator; *Yes, but I cannot be a member without the permission of my superiors.*

Researcher; *But your superiors do not live in the catchment and therefore do not know about these problems regarding users extracting water they are not entitled to.*

Dam operator; *Yes, but even if I attended the CMF meetings, I do not think that I would be allowed to make statements on behalf of the department since I am not officially delegated to do so.*

It is not difficult to see that both DWAF and the Kat CMF could have benefited from the presence of the dam operator in the CMF meetings. Since the actions of residents up stream affected the amount of water that reached irrigation farmers down stream, the CMF could have provided DWAF a useful platform for resolving this problem. While the dam operator was prepared to participate in the activities of the CMF, his participation depended on some other senior official outside the catchment and furthermore, even if he were to be allowed to participate, he doubted his ability to make statements on behalf of DWAF.

The foregoing illustrations explain how stakeholder representation relates to MSPs capacity to perform. They reveal that since MSP members do not necessarily participate in MSPs in their individual capacities, the manner in which the delegates are nominated can influence the results an MSP can achieve. Referring to the folklore presented at the beginning of this section, even though the tortoise had legitimately won the race, he obviously lacked capacity to undertake the required task. Therefore, while the animal kingdom recognised the fact that the tortoise had become their delegate, they obviously did not put their trust and confidence in his ability to provide prompt warning for an impending fire outbreak. This could have prompted the animal kingdom to rely on individual fire security strategies. This could be a very likely outcome for many water resource management initiatives in which stakeholders representatives lack proper mandate from their respective groups. As testament to this argument, below are some comments captured during interviews regarding the ability of CMFs to produce results:

“I really doubt whether these institutions can make any difference. Our ward councilor has failed to make any difference, who will pay attention to these local community members” [GB Kat catchment]

“May be they will do something, even though when I consider their credentials I wonder what impact they can make. You see the underlying problems are bigger than what the CMF can achieve. I think our problems require political commitment more than community participations” [HM – Mthatha catchment]

“Do they have any power to hold liable anyone that contravenes their decisions? If not, then what difference can they make?” [CN – Mthatha catchment]

“What can they do that the departments involved in water – our municipality and the government departments have failed to do? They can talk but the power to act still remains with government departments and municipality.” [JC – Mthatha catchment]

“Even though the CMFs exist, I am sure organisations, communities and individuals are carrying on as though they did not exist ... “ [JM – Mthatha catchment]

The conclusion emerging from this discussion is that without a systematised procedure or process for selecting suitable and mandated MSP delegates, and without a systematised liaison process between the representative and his/her constituency, there is a likelihood that the MSP participants reflect their own biases, interests and sympathies. Consequently, there is little chance of the rest of resource users to follow proposals and management procedures suggested by such an MSP.

(ii) Operational scale

Participation and conflict resolution become complex with the increase in spatial scale and number of participants. A Zambian proverb confirms this assertion with a proverb, which says *“Ubwingi bwaminwe, tabusanfya mpoto”*, literary translated as, *“it does not get easier to wash a pot by introducing more hands to do it”*. This proverb emerged to contradict a traditional belief that larger families were advantageous. While this might have been true in the olden days⁷⁷, local people used the proverb to argue that there was a downside to a large family. It meant protracted and complex negotiations to reach satisfactory and equitable sharing of the meager resources.

Accordingly, having a catchment-wide CMF implies having catchment-wide representation of stakeholders and consequently requiring that down-stream and up-stream issues be negotiated on a single platform. The temporal and spatial issues of management of an MSP are challenged by the diversity of perceptions and interests brought to the table. The difficulty in resolving the up-stream down-stream complexities can logically be expected to be directly related to scale. The bigger the catchment, the more complex the management will become since the scale has a bearing on the diversity of interests, stakeholders and the ecosystem. Rhoades (1998) contends that as the number of stakeholders increase, the likelihood of conflict increases. He argues that this reality runs counter to a participatory rhetoric which envisions good-willed people

⁷⁷ In old African settings, large families were a form of security against extinction as a result of the many diseases and other life threatening devices that plagued society. Since aging parents were to depend on surviving children for care and support, a large number of offspring increased the chances of having ‘caretakers’ when parents aged.

sitting down around a mythical ‘conversation table’ to resolve their differences. In effect, resolving differences at a crowded table will involve more than just a dialogue.

The problems of stakeholder representation experienced in the study catchments as discussed in the preceding section can also be linked to the issue of spatial scale. Achieving a meaningful stakeholder representation at catchment level poses a unique challenge in developing countries due to socio-economic challenges highlighted in Chapter Three. This was also confirmed in a discussion that occurred during the first joint workshop in Kat catchment, between a Kat CMF participant and one from Mthatha CMF:

Kat CMF participant: *How many community representatives are there in your Forum?*

Mthatha CMF participant: *There are lots and lots of villages. Our area is so big, that you cannot have village representatives from every village – otherwise there would be thousands of people in the Forum. So we have representatives from each organised group in each town – so it is not really village specific. Like Farmers’ Unions from each town and other organised groups.”*

Logically a catchment-wide institution that requires the participation of community members has serious implications on the transaction costs that community members have to incur in terms of travel and time spent away from their activities. In the absence of any form of compensation, the participation of Community Stakeholders comes at the expense of their personal time and meager resources. During the first joint workshop, I heard pitying words from the Mthatha CMF members towards the Kat CMF when they learnt that unlike the Mthatha situation, there was no form of monetary compensation received by the Kat CMF members for participating in CMF activities. Not surprisingly then, that travel costs were largely to blame for poor participation of community stakeholders in the Kat catchment.

Catchment-wide MSPs also present the challenge of dealing with diverse actors. Smaller scales or local environments are known to present more homogenous groups who may share common concerns, such as a farming or fishing community, creating a ‘community of common concerns’ (Bandaragoda 2000; p 12). On the other hand, larger scales bring together actors from different walks of life. What skills are intrinsic in participants of such collective actions to accommodate divergent views, interests and cultural differences? This difficulty was demonstrated by the behaviour observed among white commercial farmers and the white-owned Katberg hotel management in the Kat catchment, whose lack of interest in the CMF can conclusively be linked to their divergent attitudes they held towards local community initiatives (Chapter Six).

In the face of the difficulties faced by catchment-wide MSPs in developing economies, the rationale for management of water resources at scales as large as catchments is an issue that warrants careful consideration. The Dublin Statement and Agenda 21 state only that water should be *managed at the lowest appropriate level*. Technically, as also argued by an FAO report (1977), impacts of land use activities on hydrological and

sediment-related processes can only be verified at smaller scales (up to some tens of square kilometers) where they can be distinguished from natural processes and other sources of degradation. This suggests that the use of economic instruments and mechanisms will also be most effective at this scale. Assumptions that relationships observed at smaller scales hold at the largest scales, and that processes observed in one particular region can be applied to another, have often led to inappropriate and ineffective responses, because different processes are dominant at different scales. Of course it is true that certain impacts of land use on water quality, such as salinity, have an impact at larger scales as well. However, at the large scales, impacts are difficult or impossible to verify because of a long time lag between cause and effect, and many overlapping factors. This situation makes decision-making on large-scale resource management a complex matter, and it is difficult to arrive at agreements between users about rights and responsibilities needed to implement management decisions and benefits at large river-basin scales.

Given this scenario, should not a possibility of alternative modes of organising water resource management be considered? During the first joint workshop in Kat catchment, I captured a thought-provoking conversation between two participants:

Question: *What negative impact can the villagers have on the river – particularly because most of the villages don't have representatives on the Forum?*

Answer: *The villagers can be part of the water catchment committees in their own area, which are looking specifically at water issues. They may not have to be members of the Forum.*

I followed up this discussion with the Mthatha participant who gave the above response to establish whether what he said was indicative of what was happening in Mthatha catchment. He explained that village water committees had been suggested in many district forums including municipal council meetings and village meetings. Even though this arrangement had not happened yet, it is an ideal way of mobilising participation of catchment residents. Logically, allowing local users to create nested platforms, which are committees of smaller groups of villages, whose representatives then become members of the main CMF, constitutes sound planning. This way, 'the sub-forums' become responsible for management of smaller scales and in return, the level of participation is improved both at local levels and at catchment level since members of the catchment Forum emerge as genuine delegates of the sub-forums. The larger catchment-wide CMF, with representatives from the sub-forums, then becomes nested and supported by a larger institutional network, such as a CMA. This approach could go a long way in resolving dilemmas such as faced by MSPs like Mthatha and the Kat CMFs, which had representatives from only a fraction of the catchment.

(iii) Confirmation of entitlements

Currently, participants in the CMFs, and particularly Community Stakeholders, have to participate in decision-making over the management of land and water resources to which they have no entitlements and in many instances no access. Response to participatory resource management among local actors can be expected to be deeply

intertwined with the entitlements and rights to land and water resources that the locals enjoy. In South Africa, political history and apartheid-induced disempowerment is manifested in the communities' neglect of their environment, characterised by pollution, erosion and the deteriorating quality of water resources (Motteux *et al.* 1999; p 227-231). Indeed, property rights can affect the incentives individuals face, the actions they take and the outcomes they achieve.

The recurring argument of this thesis is that contemporary societies rely on commodity and labour exchange as the main mode of interaction and as the means towards self-realisation. Subsequently, to be an "owner" means to be capable of bargaining with others. Ownership (of factors of production specifically) determines economic independence of individuals and reduces uncertainty. Failure to ensure that people own (that they have title deeds to land and rights to water) renders sterile the enormous value of these assets since insecurity of tenure has been seen in many societies as the heart of the matter in resource utilisation (Derman and Ferguson 2000). Research in many NRM sectors has indicated that the more complete the 'set of rights',⁷⁸ held by an individual or group, the more likely they are to invest in authority and developing rules that define how they exercise their rights of extraction of the resource (Ostrom 1990), meaning that when people have to face the consequences of their decisions, they make better decisions.

Even if attempts have been made through the NWA to replace the previous system of water rights and entitlements, many of which were based on the ownership of riparian land with a system of administrative, limited-period and conditional authorisation to use water, the majority of the catchment residents in Mthatha and Kat catchments still live under the previous conditions. In both study catchments, those without access to land constitute a largest proportion of stakeholders. My informal survey revealed that only five percent of those interviewed could resolutely claim ownership of a piece of land they were cultivating. The rest of the residents of the catchment, if not commercial farmers, were merely farm workers residing on farm owners' land or they occupied state land. Given the historical fact that black people in South Africa were systematically stripped of their land rights, the principles of South African previous water law ensured that white landowners enjoyed privileged access to, and use of the country's water resources.

In general, it has been estimated that more than 65 percent of all water currently used in South Africa is either privately owned or used under historically obtained riparian rights (Mukherjee 1996). The previous water law remained substantially irrigation-oriented. Private owners of riparian land had rights, based on their riparian landownership, to divert and use a portion of both the normal flow and surplus flow of a public stream.

⁷⁸ Ostrom (1990) identifies this 'set of rights' as consisting of three main categories of rights: (i) Operational rights; which include access rights and withdrawal rights which translate to the user's right to harvest from the resource and to retain benefits from the harvest, (ii) Collective rights which include management rights – the right to exclude others as well as alienation rights (such as rights to sell) and (iii) Constitutional rights, which is the authority to decide who qualifies to make decisions on the granting of operational and collective rights.

Groundwater was considered private water unless it was drawn from a public stream. Mukherjee (1996) explains that the distinction between public and private was not altogether clear as the terms were not defined in such a way as one being the opposite of the other.

Community Stakeholders' land entitlements

Fifty nine percent of land in Eastern Cape Province is still in the hands of 6 500 white commercial farmers who employ approximately 70 000 farm workers (ECSECC 2000). A substantial proportion of households, in both former Transkei and Ciskei areas, are landless or near landless. While no precise figures are available for landlessness estimates of 40 – 50 percent of households are commonly cited (Lahiff 2003). The land tenure system that currently exists in both in Mthatha and Kat catchments has its basis in African customary law, particularly outside the urban centers (Mthatha and Fort Beaufort towns). It combined elements of individual and collective property rights. An individual's entitlement to land flows from membership of a traditional, ethnic community (a village or tribe). Land for arable or residential purposes is usually obtained through the relevant chief. A chief is the tribal head of an area, which usually includes several villages. Usually, each village has a headman who represents the chief of that area. Once allocated, the land is reserved for exclusive use of the occupying household, which cannot be sold or transferred. Unallocated land is available to community members as common resource, mainly for grazing. This arrangement takes away the collateral value of land and does not provide security for credit use. This land tenure system also eliminates any form of rational management of land

In the early 1990s, the local magistrates were tasked with the authority to issue permission to occupy certificates (PTO), which granted exclusive life-time usufructuary rights to individuals, but not allowing for selling, mortgaging, leasing or subdividing. However, while the PTO guaranteed permanent occupation, the holder was nevertheless vulnerable. For instance, PTO holders could be forcibly removed without being consulted, if the government, the nominal owner of the land, deemed it fit (Ntsebeza 1999). Eventually, PTOs were not recognised by financial institutions as collateral, even though the two 'homelands' in the current Eastern Cape Province (Transkei and Ciskei) continued to issue them. Legally, most of the communal land is owned by the State, but held in trust for special tribal communities and allocated by the authorities to people living under their jurisdiction on a usufructuary basis (Thompson *et al.* 2001)

Today, a Land Rights Act exists that would (i) give legal recognition to the rights of occupiers in communal areas, (ii) create a system of democratic community-based land management and (iii) provide additional land in areas of severe overcrowding or overlapping rights. However, communities residing in the study areas have not yet started benefiting from this Land Act. Without access to private land, water use by the majority of the stakeholders in these catchments remains to this day, what it was during the apartheid era.

Community Stakeholders' water rights

With regards to water rights, the NWA has now allowed free entrance to all local small non-riparian water users into the legal water rights system. There exists a general authorisation to abstract limited amounts of water without having to apply for a license. Schedule 1 of the NWA permits the use of relatively small quantities of water, mainly for domestic purposes, including non-commercial gardening and stock watering. There are no specified generally applicable numerical limits to any of the Schedule 1 uses. However, the NWA requires that the extent of such uses must be reasonable with regard to users' needs and not be excessive in relation to the capacity of the resource and the needs of other users.

The Act's provisions in respect of Schedule 1 use, and use under general authorisations, are primarily intended to reduce the administrative effort of authorising every use in the country individually. However, any water use that exceeds a Schedule 1 use, or that exceeds the limits imposed under general authorisations, must be authorised by a license. A license to use water is reviewed by the responsible authority at least every five years. For this purpose, DWAF has embarked on a process of registering all existing water uses and users.

In the Kat catchment where irrigation is important due to commercial farming of export fruits, the Water User Association still dictates how much water is released from the reservoir up-stream. In the previous political dispensation, local communities fell outside the jurisdiction of the then Irrigation Board and therefore did not have legal access to the river water for the purpose of irrigation. The NWA has revoked those exclusive rights that white farmers had then. However, at the time of this research, the control of water supply from the dam had remained what it was previously. Water was still being released from the Kat dam based on requirements dictated by white commercial farmers in the lower Kat. A few black small-scale farmers in the upper Kat were now pumping water from the Kat River to irrigate their plots. The dam operator indicated that this was creating problems for him since the amount of water released was calculated according to the needs of the white commercial farms only. Based on the current legal water rights system, everyone now has 'water rights' on the basis that the term 'rights' refers to particular actions that are authorised, but not necessarily 'ownership'. The authorised actions include access and withdrawal rights. An access right is the right to gain entry to the resource (river) and withdrawal rights being the right to obtain or extract the resource (water).

One would wonder why the historical allocation of water from the Kat dam and water-use rate from the Mthatha dam and River has continued without much contestation from the local people. The answer can be found in the interrelationship between water and land use. Access to water for most local people will only make a difference if they can withdraw it for use in productive uses such as agriculture. This would mainly become possible if they had access to land and agricultural inputs. The historical imbalance in land tenure can therefore be considered as an impediment to peoples water use and retrogressively to their participation in a collective action that discusses these resources. While some areas in Mthatha have begun benefiting from the land reform programme

(Leyseele, 2004), a number of applications for land restitution are still pending in the Kat catchment. Given these factors, it is difficult to see how Community Stakeholders can be attracted in participating in catchment management in the absence of resource use rights.

8.6 Conclusion

In summary, both the CMFs show limited institutionalisation and very few regularised practices. The autonomy, adaptability, internal operations of these institutions need more thought and action to improve outputs and outcomes and indeed to allow them earn legitimacy for having satisfied people's needs. In general, no specific rules were established that could provide guidance regarding the operations of these MSPs. Meaning that activities were undertaken based on unwritten and ad hoc rules. Faced with such a situation, it is very unlikely that such MSPs could transcend the three external impediments (stakeholder representation, operational scale and confirmation of rights and entitlements) and be able to express themselves fully in the management of water.

CHAPTER NINE

CONCLUSION

The newness, complexity and ambition of multi-purpose, multi-scale and multi-stakeholder participatory water management institutional models warrants progressive analysis of the approach to establish whether and how the approach adds value and transforms IWRM. The objective of this study was to investigate the potential of establishing institutional designs for water management that are based on participatory approaches at levels as high as catchments, with actors from extremely diverse socio-economic and cultural backgrounds and that are also able to pursue holistic water management. The objective of the study was pursued by investigating (i) how and why CMFs in Eastern Cape Province of South Africa developed as an institutional arrangement for water resource management, (ii) exploring the problems these CMFs acted upon and how this impacted on the process of institutionalisation as legitimate groups capable of achieving water management goals and satisfying peoples' needs and (iii) exploring the potential for MSPs that emerge as the study CMFs, to pursue a holistic water management approach that also incorporates flood hazard management.

In addressing these research questions, the study focused on two participatory multi-stakeholder initiatives in the Mthatha and Kat catchments that had different origins, and studied how they were set up and evolved as organisations for collective actions in water management. This study has unearthed the potential and limitations that exist for MSPs such as the study CMFs, to fully express their purpose in water resource management. While keeping to the fore, the arguments on the importance of holistic water resource management, which also includes flood hazard management as a contributory strategy towards flood disaster management, the study unearthed problems associated with multi-stakeholder participation of highly diverse actors and also the complexities inherent in expanding the agenda of these groups to include flood hazard management. The study has shown that although it has been argued that effective management of water resources in catchments requires multi-stakeholder participation, the practice is confronted with several predicaments and complexities. This concluding chapter is a critique of the manner in which CMFs emerged and functioned in relation to their anticipated purpose. It then reflects on some lessons that can be learnt which could be used in reinterpreting and reshaping the MSP approaches in natural resource management.

9.1 A critical overview of CMFs

Can water management institutions such as the studied CMFs, function as collective actions in which all stakeholders express themselves equitably and can such groups effectively address themselves to holistic water management issues and adequately attend to the diverse interests and concerns of participants? On the basis of this study, the prognosis is not encouraging. Intrinsically, the MSP discourse makes an implicit assumption that 'participation' would make a quantum leap from the early simple

processes of collective initiatives among more homogenous groups who shared common concerns within a familiar geographical zone, to complex interactions of layers of diverse actors, who have to make decisions over a vast mosaic of complex ecosystems and diverse needs. This study has revealed that without legal and regulatory frameworks to support participatory processes and emerging institutions, such an expectation is illusory, at least in developing countries.

Evidence examined in this thesis has shown that while the rationale behind an MSP approach to transforming water management is appealing, institutional arrangements that take the format of the studied CMFs will be inadequate in achieving their expression and purpose in the holistic management of water in a catchment. A particular finding of this study coming out of Chapter Six is that achieving a *common ground* that facilitates the needed internal collaboration and coherence among participating stakeholders is highly elusive. This is attributed to the contrast that exists between the general nature of the lifeworlds of Organisational Stakeholders and Community Stakeholders who are the fundamental constituents of these MSPs. The multi-stakeholder approach advocated in IWRM tends to draw attention away from (or ignores) the very real social and economic differences that exist between stakeholders, which also shape priorities and purpose of the MSP. The absence of a *common ground*, vividly demonstrated in Mthatha for instance, led to the absence of a shared vision, resulting in varying interpretations of the purpose of the MSP among participants. While Organisational Stakeholders professed a management and planning role for the MSP, Community Stakeholders professed an executing and service delivery role. Thus, without resolving access to water for drinking and growing food and eradicating poverty as desired by Community Stakeholders, there was no common platform for the two categories of stakeholders that constituted the MSP. In his analysis of the challenges faced by multi-stakeholder platforms, Fayssé (2006) also observed that one of the 'unfavourable circumstances' for MSPs was the high social inequity among participants. This argument is further expounded upon in sub-section 9.3 where I explore whether or not these collective actions were indeed 'coalitions of the unlike'.

Second, the examination of the institutionalisation processes revealed that the 'institutional arrangements' as exhibited by the study CMFs were not appropriate for the anticipated task of these institutions. The study revealed that non-statutory MSPs were hampered by their archaic institutional arrangements, including unstructured administration, lack of mandate and absence of financial support, which rendered their contribution to the management of complex water regimes and service provision that obtain at catchment level a far-fetched objective. CMFs were essentially informal structures since they lacked supporting legislation, regulations, guidelines and financial support. Informal institutions also come with informal boundaries. In the absence of evident and clear boundaries regarding rules of engagement, the management task is unattainable. Information contained in Table 5.5 indicated that there was an overwhelming agreement by participants from the Mthatha and Kat CMFs (over 84 percent in all cases) regarding propositions (vi), (ix), (xi) and (xii), which relate to rules of engagement. Participants recognised that more was needed to be done regarding the institutional arrangement of CMFs.

Without a clear mandate and decision-making powers, it is difficult to claim that the CMFs were involved or even making real progress towards the management of water as intended in the core governance goals discussed in Chapter One. Since water users were not accountable to any decisions reached by the CMFs, resource conservation could not be achieved through the actions of CMFs. Only few tasks could be proposed or coordinated through the actions of CMFs, although Landcare activities did continue under the CMF in the Kat catchment. Chapters Six, Seven and Eight showed that no other new initiatives came from CMFs to improve water use for livelihoods or reduce vulnerability to hazards. Clearly, if the desired situation was to *achieve equitable access to water*, *achieve sustainable use of water*, and *achieve efficient and effective water use* through the establishment of *suitable regional and local institutions*, then the CMF were weak institutions for achieving the desired situation. A major reason for this is that, within policy formulation regarding stakeholder participation at catchment level, there were neither legal nor administrative provisions to provide the means to implement and fulfil proposed courses of action, and give the attention and support these emergent institutions.

9.2 Avoiding throwing away the baby together with bath water.

Is the formation of catchment-wide MSP a virtuous act that people will feel pleased to see and comply with or indeed as Wester and Warner (2006) contend, a quintessentially political process that revolves around matters of choice and legitimacy? This thesis has shown that it will be both, but it is important to continue to work with MSPs to build new options and address dilemmas between the views. Many natural resource management practitioners will agree that it would be illogical to return to the expert dominated and centrally controlled systems that ignore the importance of placing stakeholders at the helm of management decisions. Indeed, the centrality and importance of stakeholder participation in natural resources planning and management cannot be overemphasised. Wengert (1957) contends that no matter how suitable a catchment may be as a spatial unit for the solution of water and other resource problems, the absence of political and administrative organisations and institutions competent and responsible for decision-making, hampers this approach. Scudder (1989) also contends that catchment management is too important and too complex a process to be left to state authorities alone. Riparian populations as represented by their local organisations must be involved throughout. In the absence of stakeholder institutions in natural resource management, there exists a possibility of enforcing decisions that have not been examined in terms of public interest and can permit development decisions to be made by default. Undeniably, MSPs have a central and crucial role in the implementation of IWRM.

South Africa's National Water Management Strategy was quoted in Chapter One, confirming that DWAF will continue to support existing Forums and encourage the creation of new ones where the need arises. Therefore the role of CMFs is likely to be maintained for as long as the stakes of poor local community stakeholders exist and are protected. In this context, the critical question is not whether MSPs can make a valuable contribution to the manner in which water resources are managed. Certainly, no one can argue against the involvement of actors in planning and management of a resource in

which they hold a stake. Some form of stakeholder representation in water resource management appears to be indispensable.

Therefore, as argued by Leeuwis (2004) when he discusses rethinking innovation and agricultural extension, governments may not abandon new uncritically adopted participatory approaches that promise optimism and purpose. Leeuwis contends that it requires the struggle for a new organisational atmosphere. Since, a system of intergovernmental cooperation, which also strives to promote private and civil society partnerships, is still emerging in South Africa, cooperative relationships among actors in regional and local areas are anticipated to develop over time and will open niche areas for MSPs. For instance, since the objective for participatory approaches in South Africa transcends the need for sustainable resource management to include social transformation, MSPs may contribute towards the specific objective of sustainable resource management as well as the wider objective of social transformation, as the outcomes of workshop processes in the Mthatha and Kat catchment demonstrated (Chapter Eight section 8.4). Thus MSPs in South Africa can indeed also play a coalition role, where white and black, rich and poor, the urban and the rural poor can meet to not only resolve resource use and management but also get to appreciate each other's circumstances. In terms of the definitions over MSPs made in Chapters One and Two, the CMFs; did make starting steps to be participatory institutions, they did build in stakeholder participation; they were collective initiatives in how they wanted to discuss new public action in local management needs and to build a platform or network to linked in other groups; and they struggled consciously with being emergent institutions whose remit would be changing – but their were limitations in these steps and further action is needed. A key issue now is what new social learning can follow for new initiatives, which I discuss in sub-section 9.3.

Leeuwis (2004) asserts that the management of collective natural resource management requires new forms of coordinated action and cooperation within groups and between that group and other stakeholders. In this context, with specific reference to Mthatha and the Kat CMFs, I see that there is need for re-negotiating alternative institutional models and concepts that bring stakeholders to a common ground in dealing with water resources. In Chapter Six, I hinted on enabling grassroot participants to build their own institutions (small-scale local platforms) that handle issues according to their own priorities. Sokile and van Koppen (*quoted in: Sokile et al. 2005*) also observed that informal lowest institutional tiers tend to solicit more deference and recognition at the grassroot level of water management and these institutions tend to prevail over the formal arrangements.

Small-scale, local platforms can be further integrated horizontally and vertically into larger associations that transcend individual villages or common customs neighbourhoods to create a web-like institutional framework. In this way, an MSP is also about coordinating multi-stakeholder processes over a range of organisations and locations with a range of social learning tools involved, and not just in one meeting point, as authors like Woodhill 2004 have described. The local institutions (or sub-catchment stakeholder groups) would ensure that catchment-wide groups do not get

overwhelmed by the many interests and conflicts that exist across an entire basin and also does not develop strategies and initiatives that are not relevant to sub-catchments or local areas.

Generally, when local people participate in decisions making, they also desire to act on their decisions. Thus, action and results are key to successful participatory resource management institutions. This was affirmed by findings of a study conducted in India (Molden *et al.* 2001), regarding the appropriate institutions for water management in rural development. The study observed that one of the five most important institutional changes required for most resource management institutions, was to replace administrative institutional forms with action oriented, service delivery organizations. Notwithstanding, further rigorous investigation with greater understanding of the processes of formation of multi-actor water institutions that involve poor local communities and their applicability to water resource management is necessary.

9.3 A final diagnosis

Three specific predicaments can be identified in this study, to be responsible for rendering the MSP approach in developing countries a unique and challenging practice. I see that without addressing these predicaments, the MSP approach to IWRM is flawed, at least in developing countries. The first of these predicaments is *the challenge of externally induced MSPs*. In Chapter Six, where the emergence of CMF was discussed, it was clear that the processes of 'recruiting' stakeholders to an MSP is a complex matter with long-lasting effects on the mode of participation that ensues thereafter. In my observation, inducing participation among socio-economically diverse actors is a great challenge. The second is the *disparity* that exists between Organisational Stakeholders and Community Stakeholders, which emerged strikingly vivid in the discussion on the typology of stakeholders in Chapter Six. The third is the importance of MSPs to *yield benefits that improve local peoples' livelihoods* as a way of legitimising their existence. This closing section analyses how these issues impact on the viability of collective actions for resource management in developing countries.

(i) *The challenge of externally induced MSPs*

To reiterate, by externally induced MSPs, I am referring to MSPs that emerge as a result of initiative undertaken by facilitators from outside the environs of the participants. This study has shown that expectations held by participants about what a collective action intends to achieve influences the ensuing participation and functioning of the constituted institution (Chapter Six). It is evident, as demonstrated mainly by community stakeholders in Mthatha, that when stakeholders come to a collective action, they bring along with them their own diverse expectations and therefore the management of water resources may mean different things to different groups of participants. Therefore the manner in which the mobilisation processes are conducted to resolve these varying expectations and agendas will determine the mode of participation that will ensue. Experiences from the Kat CMF demonstrated the usefulness of an inclusive approach that creates ownership of the mobilisation processes by participants. Years of development experience also have shown that without some sense of ownership by participants, projects are not likely to be sustainable. An essential

requirement for participation is that people must ‘want it, know it, and be able to do it themselves (Frerks 1991).

The South African experience, demonstrates that when faced with a society divided by huge extremes of wealth and poverty, and expert culture versus traditional systems, implementing externally induced MSPs requires sound policies and instruments, and extensive groundwork in identifying and mobilising stakeholders. The act of bringing to one negotiation platform, diverse stakeholders who exist in different life-worlds, with divergent interests, requires a profound understanding of the roots of life struggles that differentiate the stakeholders and shape their life-worlds. Since water MSPs bring together diverse stakeholders to one platform, the initial steps in induced MSPs should include building a *common ground* that creates a shared frame of reference and values among participants. The Mthatha experience is an example of a case where little effort was invested in understanding stakeholder interests and expectations in the early stages and then addressing the divergent interests and expectations to negotiate the boundaries of interests, so as to create a shared purpose or even a shared vision of the direction where stakeholders wanted to go, with regards to the use and management of water resources. The purpose of the CMF was formulated in rather general and vague terms as ‘*to initiate the participation processes that must underpin the establishment of CMAs*’. The Mthatha experience showed that divergent perspectives on the purpose of a collective action must be clarified, acknowledged and addressed before they invariably result into desertion by some stakeholders.

It is evident that even though DWAF invested heavily in the Mthatha CMF, in terms of funds and expertise, the functioning of the MSP was more problematic there, than was the Kat CMF. This situation may not be a surprising occurrence. With reference to the metaphor presented in the opening paragraph of the first section of Chapter Six, regarding the chief who ordered his subjects to donate wine for a tribal celebration at his palace, it is clear that having kept the administrative framework for collection of wine in the hands of the chief’s workers, contributed to the failure of the initiative even though the initiative itself could have been genuine. It follows then that in induced initiatives, the administrative framework for a collective action should be left in the hands of the participants rather than the state, as the case was in Mthatha. Rather than merely, facilitating the emergence of water institutions, DWAF positioned itself as the lead agency in the formation of these institutions as statements from the National Water Resources Strategy (DWAF 2004; p 3) also indicate:

“The Department (DWAF) will lead the creation of the new institutions, which will take a number of years, and support and guide them in the execution of their tasks.”

The state may do the regulating, guiding and supervision, while the stakeholders are left to implement the operational processes at all stages. Participants must *own* the initiative and, as much as possible, have the same understanding of the purpose of the collective action. Polarities of power are easily identifiable when a government organ, such as DWAF in Mthatha, undertakes to spearhead formation of an MSP. Participants evaluate

and analyse the source of initiatives. Non-participation on the part of local actors in such instances may become a strategy or attempt to bargain with the state in order to claim their position. Such could have been the case in Mthatha, where Community Stakeholders' interest in the MSP waned upon realising that there was little attention to their highly prioritised domestic water supply problem.

As shown in Chapter Six, it is overly challenging to strike an objective balance between coercion and facilitation in externally induced MSPs. Many governments adopt a coercion strategy to contain challenges and to 'pretend' to be moving forward. Within the coercive strategy, institutional reforms and talk about participation have dominated political and economic statements. By unilaterally defining how participative institutions are to be constituted and function, participation remains a mobilisation process biased in favour of state interests (Chapter One). This was evident in the Mthatha case where the planning committee established to spearhead the formation and drafting of terms of reference of the CMF excluded Community Stakeholders (Chapter Four).

One aspect worthy considering in the metaphor of a chief who asked for contributions from his subjects, in Chapter Six, was that there were no mechanisms to ensure that everyone did bring their contribution and that the contribution was white wine rather than water. Considering that the initiative originated from the chief with little consensus from his subjects, regulatory measures were necessary to ensure success of the project. Without regulation, there was too much room left for dissenting residents to ignore the chief's order and for those who could not afford wine or did not trust the system, to bring water rather white wine. Similarly, in participatory institutions that emerged in Mthatha and the Kat catchments, there was neither accompanying legislation nor instruments that compelled stakeholders to participate, even though the state had put policies in place for multi-stakeholder participation in water resource management. Stakeholders were not under any form of obligation to come to the table, thus leaving too much room for dissenting. In reality, stakeholders came to the table if and when they felt the need. This "*felt-need participation*" approach resulted in ill-conceived institutions in which stakeholders who were a prerequisite to the effective performance of the institutions, such as municipalities, decided to dissent, consequently rendering the institution impotent.

Woodhill (2004) suggests a combination of approaches in implementing MSPs that also could have made significant difference to how the Mthatha and Kat CMFs emerged and functioned:

- bringing different organisations into the process, and getting their commitment to share information and support the new initiative
- thinking about the diverse forms of activity that help build MSPs and their networks in workshops, in tours, in driving some specific and meaningful new operational goals and achievements and tasks rather than just sitting in meetings
- allowing time for setting up and evolution of group action and cohesion, while also having planning and practical tasks, and undertaking evaluations that help transform processes

(ii) The challenge of melding the unlike

The nature of the coalition that exists among participants is a pertinent factor in the functioning of a collective action. In Chapter Six, I brought to fore the glaring disparities that existed between Organisational Stakeholders and Community Stakeholders in the study catchments and the problems of getting both types of stakeholders to share information and build their wider personal pressures and objectives. In this section, I expound on the areas of inequality and how such disparities impinge on the potential for a cooperative and balanced collective action. The central argument is that the two main categories of stakeholders occupy different 'life-spaces' as well as different 'life-worlds', consequently rendering the CMF a 'coalitions of the unlike' (Weber 2003; p 107).

Two specific areas can be identified that critically distinguish Organisational Stakeholders from Community Stakeholders and also weaken potential for collaborative initiatives. These are: socio-economic circumstances and the technical relations:

Socio-economic circumstances

Contemporary socio-economic conditions in South Africa have created conditions under which material inequality between black and white created by the apartheid government is now being extended to an objective intellectual and economic inequality between expert systems and local poor community members. In turn, these inequalities are redefining dimensions for collaboration in resource management.

Organisational Stakeholders to begin with, whether representing NGO, private sector or government department, attended CMF meetings as delegates from their respective organisations. They were generally trapped in their institutional identity and the mission orientation towards their employ tended to cloud their personal flexibility and innovation in the multi-actor environment. Their participation in the MSP was dependent on the demands made on their professional services (their official diaries). It was for this reason that some government departments were represented by a new member at each consecutive meeting, consequently creating problems with continuity of issues carried over from previous meetings. Sitting in CMF meetings in Mthatha catchment, I observed that the chairman was, in most meetings, compelled to repeat the deliberations of the previous meeting, sometimes even reintroducing the purpose of the CMF, for the benefit of new members. The obligation of Organisational Stakeholders lay with fulfilling their organisational tasks to which their rewards (salary increments, bonuses, promotions to head offices etc.) were attached. For instance, during one of my visits to the office of an organisational stakeholder representative, he confessed that he had not given much thought to the proceedings of the previous CMF meeting due to a pressing workload on his desk. This implied that when Organisational Stakeholders returned from CMF meetings, the proceedings of the meeting took backstage or were completely shelved away. Their actions and contributions were shaped by the policies of the organisations they represented. For example, I was fortunate⁷⁹ to witness an

⁷⁹ I consider it 'fortunate' because this experience confirmed my belief that Organisational Stakeholders were conditioned by policies of organisations they represented. This incident happened when I went to

incident where a superior was warning her member of staff who was to attend a CMF meeting in the Kat catchment, not to make any policy statements at the meeting, that might find their way into public media.

In the economic dimension, local community members view government officials, researchers and NGOs as avenues for accessing the much-needed financial resources. Considering that government departments, municipalities and sometimes researchers invest in rural development, local community members come to associate these groups with the flow of financial rewards. Also there are many instances in which politicians have used handouts of materials and projects as means with which they 'buy' votes. A member of the Mthatha CMF representing the Farmers Union put it this way:

"When local communities see a government official, they see a source of money" [PS]

Unlike most Community Stakeholders, Organisational Stakeholders had an assured monthly income, in addition to various forms of fringe benefits. They worked from the comfort of their offices and many of them drove personal and/or organisational vehicles. They came to meetings with all kinds of paraphernalia from their offices (documents, laptops, diaries, notebooks, pens, mobile phones etc). They are experts with specialised skills within their own fields even though this specialisation also tended to limit their appreciation of problems arising from fields other than their specialty.

Most Organisational Stakeholders live in towns and enjoy the amenities associated with urban lifestyles. At a personal level, they have mainly one single use and source of water, domestic purpose and municipal water reticulation respectively. In essence, catchment water status is not a serious concern at a personal level, except where piped water becomes contaminated or runs dry. To most Organisational Stakeholders, the catchment was a place where they 'worked' rather than where they 'lived'. They existed in a boundless social space, which was a workplace that could change with assortment of incentives. A water engineer of one of the municipalities told me he was considering leaving the place (the catchment) because he was not satisfied with working conditions in his organisation. The catchment was not his 'home'; it was his 'workplace.' A few Organisational Stakeholders originated from the same catchment. However, as a result of a cosmopolitan lifestyle, their lives had been uprooted to the extent that they had little attachment to the catchment.

On the other hand, Community Stakeholders, unlike Organisational Stakeholders, have a defined social space in which they exist. The catchment is a place where they live. Their livelihood is intimately intertwined with catchment resources, giving them a strong sense of belonging and hence they tend to have a local perspective. They depend

give this member a lift to a CMF meeting. I was standing in the corridors of his office when I overheard the member informing his superior about his absence and his superior responded with a warning not to divulge internal organisational strategies at such a meeting.

on the local environment for fuel, water, inputs for the construction of their homes and source of a variety of medicinal products. They have multiple uses of water; domestic, watering of their animals and home-gardens and have multiple sources of water; river, rain, boreholes, hand-dug wells and springs. Community Stakeholders in South Africa come from a background of decades of dislocation, dispossession and confinement to servile status imposed upon them by colonial and apartheid policies. Many are illiterate and economically insecure. For instance, up to 34 percent of the population in Kat catchment had no formal education at all (McMaster 2002). Their knowledge of the catchment is long-term but it is not held in high regard by Organisational Stakeholders because it is sentimental, unstructured and undocumented. When they came to CMF meetings, they brought no gadgetry for note-taking and they presented no written reports during meetings. They came to meetings hoping that there would be a resolution that could improve their predicament in some way.

Technical relations

In the technical dimension, Organisational Stakeholders perceive water management as requiring considerable technical expertise and information, thus portraying that it largely is their preserve than that of Community Stakeholders. Community Stakeholders on their part may perceive their role only as information providers for the expert systems. Such perceptions are also largely driven by power imbalances. Even though the concept of power has not been a central concern of this thesis, the power imbalance can also be seen to contribute towards rendering the CMFs 'coalitions of the unlike'. Rather than presuming that power was an important causal factor, the focus of the study was on observing modes of stakeholder participation and interactions. It is however important at this stage to comment on how power featured in this interplay. Indeed, I would be presenting a truncated picture of CMFs if I did not elaborate the effect of power in the interrelationships between stakeholders.

Having found the characterisation of stakeholders in the two groups as of considerable relevance in this study, I found Greenstein's (2003) analysis of power most relevant to my study. Greenstein asserts that while power has several dimensions, three of them have particular relevance to state-civil society relations. These are (i) social power (access by individual and groups to resources and control over their allocations), (ii) institutional power (strategies employed by groups and institutions in exercising administrative and legal authority) and (iii) discursive power (shaping social, cultural and political agendas). As agents of the state, I observed that Organisational Stakeholders articulated hegemony and exercised these three dimensions of power. For instance, in claiming that the state was the custodian of water resources and owner of land, the state monopolises authority and moves issues beyond contest over decision-making and control to unquestioned acceptance. Thus as a custodian and owner, the state has monopoly over the information and knowledge regarding the status of these resources and how the resources could be preserved or exploited. For example, it is stated in the National Water Management Strategy (DWAF 2004) that the National Government, acting through the Minister (of DWAF), has the power to regulate the use, flow and control of all water in the Republic. Evidently through such discourse, the state, though a bonafide stakeholder and participant of an MSP, has undue advantage

over other stakeholders regarding resource control (resulting in social power), in exercising administrative and legal authority (resulting in institutional power) and in deciding the agenda (resulting in discursive power). In addition, Organisational Stakeholders have better access to policy decision makers and it is generally understood that the closer the stakeholder is to the decision makers, the greater the stakeholders' power (Majchrzak 1984).

In Mthatha catchment, Community Stakeholders were not invited to participate in the planning committee that prepared terms of reference and formed the CMF. This could be a reflection of the social and institutional power that the state and its allies exert over Community Stakeholders. After the CMF had been formed, the discursive tone and interaction style exhibited by the CMF was that which applied to the sensibilities of expert systems. In their discussion on river basin management in Mexico and South Africa, Wester *et al.* (2003) asserted that in cases where the process was driven by government agencies as the major stakeholders, the process was essentially overridden by a combination of technical and economic concerns and interagency politics and there was no room for less organised 'informal' interests' especially poor people, to fully participate and gain access to water resources. Thus I also argued how it was quite rational for some potential Community Stakeholders to be disinterested in taking up roles in CMFs, which had high transaction costs for them with few tangible outcomes and benefits.

My personal experience in one of the Mthatha CMF meetings also confirms this observation. A consulting engineer presented a basin study report, which was extensively discussed exclusively by experts while community members 'watched' the debate with stupefied silence. At the end of the presentation a community member complained that the presentation was just too technical for their understanding and that they could not be able to explain it to their constituencies. No resolution was offered to address this concern. It appeared as though the science-based technical information that had been presented was the only objective basis for creating meaningful plans for the catchment and there was no alternative approach for sharing the knowledge with community members. I saw that what community members really desired was to be able to understand the proceedings and make their contributions rather than the sole reliance on expert specialist knowledge of which they had little understanding.

Nonetheless, on one occasion, I observed a demonstration of shared knowledge and understanding in the Kat catchment. During one of my field trips, I accompanied a group of community members, a technical engineer and a soil scientist from Rhodes University to visit the Land-care project. At the project site, a technical argument ensued between the technical engineer and the soil scientist regarding gully correction works. Even though community members were left out of this discussion for a while, the soil scientist, who could speak the local language, took the trouble to interpret the discussion into the local language and to explain in understandable terms what the discussion was about. As a result, community members were able to contribute their understanding of what could be done to address the concern.

In conclusion, it is clear from the preceding discussion that the contrast that exists between Organisational Stakeholders and Community Stakeholders creates contours between the groups and determines the terrain of cooperation and non-cooperation. Evidently, a class inequality that also shapes knowledge and power inequality, exists between Organisational Stakeholders and Community Stakeholders that would create dominance of one over the other and consequently perpetuate privilege in decision-making and negotiations.

The MSP practice in developing countries hangs on the balance if the disparities between Organisational Stakeholders and Community Stakeholders are not addressed. The problem of the disparity is usually attributed to a lack of empowerment on the part of Community Stakeholders, and consequently, countless capacity building and empowerment training programmes and workshops have been targeted at community members. It is assumed that once the capacity of local people has been enhanced, collaboration between Organisation Stakeholders and Community Stakeholders would improve. This skewed view of the case may be far from the reality. In effect, all participants in an MSP require capacity building and empowerment.⁸⁰

In the course of my rural development practice, I have come to learn that expert discourses construe empowerment as '*enlightenment*', '*awareness*' and '*capacity building*' for 'locals', who are usually 'unschooled' and 'unskilled'. Empowerment is seen as a process of passing on knowledge and skills from experts to locals. However, on the contrary, with regards to stakeholder participatory water resource management, I see empowerment as an education process, which consists of both learning lessons through evaluation and being prepared to *unlearn* and to change. We experts cannot deny that we have a lot to unlearn about the biases that traditional education tends to impose upon us. Attaining the ability to deconstruct the contents and interpretations of one's education and professional experience and transform ones approaches is a necessary and useful skill for us. Mutual respect among stakeholders means recognising that all participants have essential knowledge, be it scientific or indigenous, to bring to the negotiating table. Since stakeholder collaboration in water resource management could be considered as a novel approach, all participants should consider themselves as active members of a research process that presents opportunities for learning by practice, each group of stakeholders requiring a different kind of learning. The process leads all stakeholders to a common ground where participants develop 'joint and complementary competencies' (SLIM 2004).

In participating in MSPs, new facilitation skills that 'traditional education' does not currently provide are required. Organisational Stakeholders, impaired by learning biases that traditional education often imparts, also need their own form of empowerment that encourages critical reflection of their actions (Chambers 1993). Rather than imposing 'expert culture' on MSP processes, Organisational Stakeholders need to take into account differences in styles of conduct such as characteristics of village meetings,

⁸⁰ This was also supported by 70 percent of the participants at the second CMF joint workshop in Mthatha. See Table 5.5

language and discursive styles of local people contrasting with formal practices which expert systems are accustomed to. This is not to argue that science-based information and expert culture is not necessarily an objective basis for creating consensus in an MSP, but the objectivity is usually framed by expert's definition of what the problem is.

A range of core competences which include systems thinking, facilitation skills, emotional intelligence and logical thinking are central to managing job requirements which involve working with multiple stakeholders and arenas of negotiation among individuals and groups (Woodhill 2004). Implementers of the Social Learning for Integrated Management (SLIM) project, which is a European Commission sponsored project in Europe, also observed in their Policy Briefing bulletin (SLIM 2004), that competence to facilitate interactive processes is required and needs to be institutionalised within resource organisations. Indeed, a fundamental reorientation of the minds of Organisational Stakeholders is needed. As one who has gone through 'traditional' education system myself, I feel that formal (traditional) education has its own way of conditioning people. Unbeknown to the schooled, a specific culture is internationalised which makes one believe that 'specific ways of doing things exist' (Chambers 1993). Great effort is being made to empower grass-root level community members to be able to interact as equals in MSP processes without realising that Organisational Stakeholders find themselves "*disempowered*" (or at the very least *maladjusted*) in light of the new approaches.

There is no doubt that Community Stakeholders need capacity building to be able to make meaningful contribution in the MSP practice. People can only participate in a system they understand. It is evident from the existing socio-economic conditions faced by Community Stakeholders that their ability to participate in water resource management is restricted by their level of education and impoverishment. Through a lack of education or a limited education, many people do not have the basic skills and information needed in order to participate in water resource management. One cannot assume that participation will take place by simply calling a meeting or organising a group of people under the umbrella of an MSP. Providing the structures, systems and platforms may not be enough nor does making sure that a body is representative of all water users guarantee meaningful participation.

Thus the glaring disparities that exist between the two groups of stakeholders in MSPs found in developing countries are a unique feature that can be a contributor to weak performance of MSPs. Research reports indicate that most successful cases of MSPs lie in developed countries where the disparities between these two groups of stakeholders are minimal due to well-educated publics. The Tennessee River Authority in North America (Mitchell 1990), the Alouette Water Use Planning Authority in British Columbia (Vanderwal 1999) and Murray-Darling River Basin in Australia (Macdonald and Young 2000) are some examples. In Chapter One, I alluded to the Inkomati case, where the disparity between an educated and wealthy group of stakeholders, who happened to be white commercial farmers, and the impoverished resource poor community members emerged to be the greatest impediment to a smooth and quick establishment of a CMA at WMA level.

(iii) The challenge of generating benefits that improve livelihoods.

This challenge is particularly unique to developing countries where the central concern for one group of stakeholders (Community Stakeholders) is to escape poverty. Two-thirds of the populace in third world countries endures absolute poverty (Myers and Kent 1995; p 71). Poverty levels of up to 71 percent are recorded in the study areas (IDP 2005/06), which is also reflective of the national level statistics.

In its economic dimension, poverty refers to the inability for one to attain a minimum standard of living measured in terms of basic consumption needs or income required to satisfy them (Hazell and Haddad 2001; Neubert 2000). Others expand this definition to include lack of power and knowledge to make independent decisions that contribute to ones well-being (UN 2003c). Both definitions have specific relevance to MSPs. First, if an actor is unable to satisfy his/her basic consumption needs, his/her life strategy can logically be expected to be one that focuses on coping strategies for a sustainable livelihood, rather than on environmental sustainability concerns. Second, if local community members are expected to be equal partners with other stakeholders in MSPs, it is logical to expect that their knowledge and access to and processing of information should be improved to empower them to engage with other stakeholders in a balanced negotiation and consensual decision-making process.

The significance of poverty in developing countries means that resource management should yield benefits that contribute towards poverty alleviation. While some may argue that poverty alleviation is a development objective rather than a water management concern, in essence, there is a paradigm shift occurring from traditional pathways of poverty eradication (such as on-farm productivity increases, greater employment, general equilibrium effects and the lowering of food prices) to newer pathways which include community empowerment in managing natural resources through collective actions (Hazell and Haddad 2001). For instance, the shared water vision for Africa categorically recognises the need to address poverty within the water resource management framework as the following statement made by Africa's water Ministers indicates:

“An Africa where there is an equitable and sustainable use and management of water resources for poverty alleviation, socio-economic development, regional cooperation, and the environment.”
(PANAFCON, 2003; p 12)

The above statement links water resource management with poverty alleviation, implying that water MSPs, particularly in developing countries, should integrate poverty alleviation strategies in their water management strategies. South Africa's National Water Resource Management Strategy (DWAF 2004) also recognises that many South African people are poor and advises that the issue of participating in water resources management cannot be divorced from poverty alleviation. The United Nations too, links water resource management with poverty alleviation when it argues that for humanity, the poverty of a large percentage of the population is both a symptom and a cause of the water crisis. Giving the poor better access to better managed water can make a big

contribution to poverty eradication (UN 2003a). Thus while some Organisational Stakeholders may not consider poverty alleviation to be a priority for a water MSP, Community Stakeholders on their part may not find the relevance of participating in managing a resource that does not contribute towards improving their predicament.

9.4 MSPs and the challenge ahead

The challenge for water MSPs therefore is in generating new forms of consensus in resource management, which also yield benefits that satisfy the needs of all participating stakeholders. For instance, while dialogue, collaboration and negotiation are important ingredients in an MSP, they remain favourite practices mainly for expert systems. As far as Community Stakeholders are concerned, these activities largely produce food for thought rather than food for the stomach. Some NRM practitioners also assert that sustainable water resource management cannot be brought about just by 'talking together' (SLIM 2004; p 6). Thus when Organisational Stakeholders engage in drawn-out deliberations and preparation of plans and documentation, the poor who share the platforms cannot help to think that *"those who eat their fill speak to the hungry of the wonderful times to come."*⁸¹

Rather than remaining a deliberative and consultative platform, the Kat CMF opted to engage with water resource management through implementation of projects and environmental awareness workshops. As a result, the large majority of catchment residents were aware of the existence of the Kat CMF mainly because of the Land-care project which they were able to see and from which many earned their income. Evidently, the Land-care project in the Kat catchment proved to be the driving force behind participation of Community Stakeholders. It provided an operational platform that engaged participants in producing results, which included income earned by working in the project and physical results on the ground whereby degraded patches of the soil were reclaimed.

The United Nations Secretary General, Mr. Kofi Annan, summed up the MSP challenges, all of which have been confirmed by this research, as follows:

"Major groups participation in sustainable development continues to face numerous challenges. Among them are geographical imbalances in participation particularly at the international level, growing dependence on the mainstream major groups as intermediaries, the need for further work on setting accountable and transparent participation mechanisms, lack of meaningful participation in decision making processes and lack of reliable funding for major groups ..."

"One of the major challenges is to find ways of enhancing meaningful and practical involvement of major groups in sustainable development, and governance structures for natural resources management at various

⁸¹ Quote from Bertold Brecht – A German Primer; *quoted in*: Chandhuri and Chandhuri (2003).

levels, both national and international..." [UN Secretary General's report to the UN session. 14th March 2001]

CHAPTER TEN

EPILOGUE

A popular local saying from Zambia influenced my decision to include this chapter in the thesis. In the local language the saying reads '*ubushiku bufwile nsofu, nelyashi lyansofu*' which can literally be translated as '*on the day that an elephant has died, all conversation is about the elephant.*' The saying originates from remote village setting where the death of a single elephant resulted in the availability of meat for the whole village. In many rural villages in Zambia, the death⁸² of an elephant attracted the whole village to the scene of its death. The enormous size of the elephant allowed every household in the village to harvest sufficient meat ration to last for several days. In the days succeeding the death of the elephant, conversations on every dinner table in the village were about the elephant since every household's menu would consist elephant meat. Interesting however, the confusion (resulting from the excitement of the availability of so much meat) at the point of meat collection prevented many 'meat collectors' from noticing each other. Consequently, when the stories of the death and the sharing of the elephant meat were told, villagers recounted similar experiences to each other over and over again on the assumption that the other had missed the drama.

As the world fast tracks conservation and equity in water use, the MSP discourse has come to play an important part in framing solutions and the practice is gaining considerable purchase in the language of mainstream integrated water resource management. As a result, the practice has also attracted considerable research interest from academics, this thesis being one. In an effort to circumvent a similar episode narrated in the folklore about the death of an elephant, from happening among students and practitioners of multi-stakeholder participation, I have included this chapter to share my experiences and approaches to allow others with interest in learning about the MSP practice to avoid 're-inventing the wheel.' This chapter also explains my world-view. An account of events and analysis can only be fully comprehended when one understands the premise upon which one's perceptions were constructed since how we interpret the world depends on the frame of reference we use. This chapter also contains experiences that a researcher undergoes that may not find room in the main body of text. In theatrical arts, such experiences may be referred to as the 'behind the scenes.' Just as the 'behind the scenes' greatly influence the outcome of an artistic presentation, so do research planning and personal life sketches of the researcher influence the resultant thesis. Sharing personal life sketches illuminates one's point of view and consequently provides readers with an appreciation of how and why certain conclusions were made. This chapter presents three activities that were critical in shaping my perceptions: the process of identifying MSPs, relationship between researcher and the researched and my personal life sketches. These are discussed in the respective order.

⁸² This was death brought about by hunters rather than by disease or otherwise.

10.1 The beauty of the beast

Warner (2006) developed the metaphor of a beast as a way of configuring the phenomenon of the MSP and working to find appropriate tools for analysing the concept. In his metaphor, Warner conceived an MSP as a mysterious beast, which was confronted by several inquisitors from different directions, whose understanding of the beast resulted in diverse definitions based on their varied points of view and frames of reference. Warner also speculated about the habitat of the beast and conditions under which it flourished. Warner's metaphor underscores the novelty of the concept of MSPs and hence the absence of clear prior definitions. Based on Warner's metaphor, it became necessary for me to venture out into the 'bush' where the 'beast' could be located, before seriously commencing the research, to get a glimpse of the 'beast' to be studied. Exploratory survey therefore became a key strategy in identifying the unit of analysis.

To undertake exploratory survey, I had the opportunity of travelling to the study area and holding discussions with several practitioners and participants of stakeholder participatory water resource management in South Africa. I spent three months visiting government officials, NGO staff and academics to hear their views and how they interpreted the water policy. Having lived in close proximity to the study areas, I also bore my own understanding of the water practice of participatory water resource management. Since the term 'MSP' did not exist in South Africa's philosophy or in the vocabulary of the water resource management practitioners, it was not easy to articulate exactly what I was looking for in my study. However the discussions were useful in distinguishing specific patterns of behaviour exhibited in different collective initiatives. Since the practice of stakeholder participation in water resource management was just beginning to gain pace in South Africa, fuelled by policy support and political imperatives, there was overwhelming information gathered about forms of collective initiatives that were mushrooming all over the country. To be able to begin my research, I had to identify, from several forms of collective actions that were emerging, the phenomenon that more closely encapsulated the MSP concept (my envisioned beast). Part of this discussion was presented in Chapter One, section 1.8.

In general, I discovered that when one studies a less known social phenomenon, exploratory survey is an extremely relevant and initial step needed to be taken. This step also shapes the research proposal by clarifying where, how and why the suggested activities will be undertaken. For instance, even though my focus of study was originally intended to be exclusively on the Kat CMF, information from the exploratory survey revealed the scope in including the Mthatha Catchment in the study. As result, my research proposal took a new and unforeseen dimension. The reader may affirm that my analysis of multi-stakeholder participation in rural catchments could not have been sufficiently extensive had it been based on the Kat CMF alone, where the problems of participation were in contrast with those of the Mthatha catchment.

Notwithstanding, my meeting with specific DWAF staff who influenced my research direction was not by design. It was really by mere coincidence that I met someone from DWAF Mthatha office who came to give a student of mine from the College I worked,

in Eastern Cape Province, a lift. From a brief discussion we had together before they left, I had developed a feeling that there was a unique story to tell from Mthatha catchment. As a result of this encounter, I had further discussion with several DWAF staff that finally influenced my decision to include Mthatha CMF. When research is likened to mining diamonds (Barley 1983), sometimes I think it refers to exploratory survey. Just like one gets through a ton of rubble to get an ounce of pure diamond, so does one get through numerous liaisons and extensive travelling and discussions, to make sense of the unity of analysis that ones needs to focus on.

10.2 The researcher and the researched

Research can be conceived of as a journey to an unknown destination. While in many types of research, the researcher walks this journey alone, in studying MSPs, I discovered that a researcher was never the only person experiencing the learning, but that the research subjects were actually ‘co-researchers’ with whom the researcher made the journey of discovery. Researching MSPs is unique in that the concept is novel and the participants of MSPs are in a way researchers too as they continually try new ways of doing things and discover what works and what does not. Participants are engaged in a ‘learning by doing’ process in which I saw my role as that of documentalist of the lessons learned.

When I identified the study of CMFs, there was no further sampling and choosing of the units of observation. All members of the CMF automatically became units of observation. Beyond being mere units of observation, I also realised that there was a special kind of relationship that developed between us that earned me sufficient trust to be able to call upon them whenever I found it necessarily. In most research approaches, the traditional role of the researcher as an interviewer has been one of an interested, but effectively detached observer who plays ‘a neutral role on the one hand, casual and friendly but, on the other hand directive and impersonal’ (Fontana and Frey 1994; p 364, 367). I think that in MSP research, one treads on a thin line of being objective while at the same time becoming involved in what happens. Objectivity comes with not being sentimentally attached. The importance of objectivity is that one stands back and sees what is happening from the outside. When faced with the requirements of MSP research, one would wonder whether such objectivity is even possible. LeCompte (1993; p 11 – 12) has argued that positivistic science imposes a false distance between researchers and the researched by mandating that the researcher maintains an artificially impersonal stance towards the people studied and that this detached perspective results in data that presents a partial and therefore false, and an elitist and therefore biased reality. LeCompte suggests that authenticity is achieved, not merely by attributing a sense of genuineness to the quality of the narrative, but that authenticity is reflected in the relationship that exists between the researcher and the researched. She argues further that authenticity cannot be achieved when those who are researched are placed in a position that is subordinate to that of the researcher.

I attribute the quantity and quality of information collected during my research to the cordial but clear relationship that I established with my co-researchers (MSP participants). It was for this reason that I chose to mask their identities whenever I

directly quoted their sentiments in the thesis. In the local culture, it is considered a breach of trust for one to divulge a friend's identify when reporting to the public certain sentiments that the friend shared in privacy. The strength of friendship I established with my co-researchers was demonstrated through their willingness to allow me stay in their homes rather than left to lounge in hotel rooms. Two of my research colleagues from the Wageningen University were also accommodated in the homes of CMF members or close relatives.

Since MSP practice brings along with it distress in achieving results, I saw that participants looked to me⁸³ as a mediator between two silences: the silence within and the silence without. In mediating to the silence within, participants hoped that the researcher would assist in giving voice to their own thoughts and understanding of events and circumstances in the larger context of their own lives. This was evident especially during workshops and other meetings whereby participants looked up to me to resolve certain issues. I remember one incident for instance, during one of my visits to the Kat catchment, when one of the members of the Forum invited me to accompany him to visit a local NGO officer who was overseeing an irrigation project. My presence was to give credit to my host in brokering his deal with the NGO staff. In mediating to the silence without, the researcher's role can best be understood as mediating between local people and those in power. This was evident in the Kat where the absence of Organisational Stakeholders took a toll on the activities of the CMF. The incident narrated in Chapter Five, in which I was requested to seek the presence of a DWAF official at a Kat CMF meeting was an example. As a researcher in MSP practice, I recognised that serving as a mediator in bringing out these inner silences and making visible these silences to those in positions of power, who might otherwise not see or choose to know them, is a noble cause.

10.3 The researcher's point of view

Without privileging my experience over that of my 'co-researchers', I wish to contend here that phenomenological interpretation of the narratives presented related largely to my lived experience. I grew up in rural Zambia. During the days of my youth, I saw people whom I may identify as social scientists come to our village to ask questions, even though I did know then that they were 'social scientists'. I always wondered why they asked the questions and kept scribbling in their notebooks as my mother spoke. My father often escaped this interrogation since he was usually away at work. When I asked my mother what and why they asked, she said they were interested in understanding why we did what we did so they could find ways of helping us. Since this was soon after the independence of the country, local people were eager to be interviewed in expectation of some form of assistance. Not surprising, the 'few' rural development projects that came to the village were linked to those 'outsiders' who came to ask questions.

⁸³ As well as to other researchers who had spent considerable time in the community such as Rhodes University researchers in the Kat catchment.

By experience, I have learnt that local people's eagerness to share information stem from their expectation for assistance. This experience has created my belief in action research. When undertaking research, I am always moved by the conviction that my work should yield some immediate benefits to the researched. In effect, for most social research work, taking a neutral stand by only focusing on investigation is a myth. It is inevitable that one takes up position for action. Hence when I set out to undertake this research, I was hopeful that my research design would not only generate academic knowledge, but also contribute to the modification of the actors' points of view on the rationale underlying their actions. I strove to move from mere analysis and critique to a position where I could take action to contribute to change by facilitating social learning. In some way, every ethnographical⁸⁴ work changes the people studied (Barley 1983).

When I reflect on my research endeavour, I cannot help but think that the most rewarding portions of the whole research process were times when the two different groups of actors from two different catchments came together to undertake interactive learning through catchment tours as joint fact-finding and knowledge sharing sessions. My role became that of a broker of information and social learning. Participants and myself were able to modify our understanding and also became well networked. A number of participants confessed that the other catchment they had visited during the joint tours was the only other catchment besides their own that they had seen. Upstream and downstream water users met in workshops resulting in convergence of knowledge and possible generation of mutual expectations.

The acts of recording, synthesizing and reporting back to actors their analysed practices for their own reflection and evaluation proved to be sobering tasks for me. Honestly the justification for fieldwork as for all academic endeavours lies not only in ones contribution to science but rather in some selfish development too (Barley 1983). Like a monastic life, academic research is also about the perfection of one's own soul isn't it?

When time came to write my thesis came, I was still not convinced that my fieldwork had come to an end. I still lived in my research area and MSP participants had joined my circle of friends. We discussed their activities and I ran errands for them. It is difficult to know when one may end one's research. Finishing fieldwork then becomes a matter of definition, not fact. It is possible to just go on and on, maybe one does not need to end one's work in a written thesis. In any case, researchers know from the beginning that they cannot be involved forever.

Talking about writing, I battled with my writing haunted by the thought that I was expected to write a piece of 'science'. Whenever I read other people's work, I was intimidated by the scientific language and style, many of them with sophisticated figures, tables and texts of theory which sometimes resisted meaning so powerfully. However, by my own work and contact with fellow researchers and supervisors, I came to convince myself that the scientific view of being too pragmatic to an extent that the public fails to comprehend one's work was an ancient paradigm. It is the conduct of

⁸⁴ Most true for anthropological research

work and writing that can be important. In my writing, I committed myself to being simple in language and style. I also tried to escape some of the accusations levelled against scientific reports that they are too thick and difficult to understand, with full of conclusions that require further research.

Finally, I was asked how, being a Zambian by birth, and undertaking research in South Africa, had influenced my work. An incident that occurred in Mthatha would provide an explanation. During the eve of the second joint workshop in Mthatha, there was a partial eclipse of the moon. I was standing outside with a group of workshop participants from Rhodes University, marvelling at the wonder in the sky. Then a comment was made by someone in the group, which, rather than crossing my mind, settled in my mind. The comment was “ *we would not appreciate and enjoy the beauty of the eclipse if we were standing on the moon as we do now when standing far from it?*”

This comment struck me because I realised that probably I had a better and appreciable view of the situation I was studying because even though I had lived in the area for more than eight years, I still held an outsider’s lens. As a Zambian by birth, I carried with me in South Africa a wide-angled view of issues, which allowed me to look at the situations from several cultural perspectives including those from Zambia. The narratives that I heard from the local people were not only stories of local incidents. Rather they were also those that aroused my own experiences gathered from several other social settings, and consequently allowed me to create a holistic view of the local situation that outsiders strive to get for others on behalf of those they have worked with.

BIBLIOGRAPHY

- Abernethy, C.L. 2001. Intersectoral Management of River Basins. Conference proceedings of an International Workshop on "Integrated Water Management in Water Stressed River Basins in Developing Countries: Strategies for Poverty Alleviation and Agricultural Growth" held at Loskop Dam. South Africa 16 – 21 October 2000.
- Abrams, L. and Warner, J. 1997. Rural Demand Management: Local Needs, Local Potential. Waterlines. 15 (4)
- Ahmed, S. 1994. The Rhetoric of Participation Re-examined: The State, NGOs and Water Users at Varanasi, Uttar Pradesh, India. The Environmentalist. Vol. 14. No. 1. p 3 – 16.
- Anderson, A. 2005. Engaging Disadvantaged Communities: Lessons from the Inkomati CMA Establishment Process. Paper presented at the International Workshop on 'Africa Water Laws: Plural Legislative Frameworks for Rural Water Management in Africa', 26 – 28 January 2005. Johannesburg. South Africa.
- Anderson, A. 2000. Empowering Communities and Individuals for Catchment Management: An Investigation into the Process of Implementing the Inkomati Catchment Management Agency. Paper submitted to the African Water Issues Research Unit. South Africa University of Cape Town. South Africa.
- Allen, K. (forthcoming). Community-Based Disaster Preparedness and Climate Adaptation: Reflections from the Philippines on Local Capacity-Building Initiatives. Disasters Journal. Rural Development Sociology Group. Wageningen University. Netherlands.
- ARDRI (Agricultural and Rural development Research Institute) 1996. ARDRINEWS, June. University of Fort Hare. South Africa
- Arnstein, S.R. 1969. A Ladder of Citizen Participation. American Institute of Planners Journal 35, p 216-224.
- Aylward, B. and Gonzalez, A. 1998. Institutional Arrangements for Watershed Management: A Case study of Arenal, Costa Rica. Working Paper No. 21. Collaborative Research in Economics of Environment and Development (CREED).
- Bandaragoda, D.J. 2000. A Framework for Institutional Analysis for Water Resources Management in a River Basin Context. Working Paper 5. International Water Management Institute. Colombo. Sri Lanka.
- Bandyopadhyay, J. 2004. Adoption of New and Holistic Paradigm is a Precondition for Integrated Water Management of Water Resources in India. In: Saha, G. (ed). *Water Security and Management of Water Resources*. Kolkata. National Atlas and Thematic Mapping Organisation. Government of India.
- Bankoff, G. Frerks, G. and Hilhorst, D. (eds.). 2005. *Vulnerability. Disaster. Development. People*. Earthscan. London.
- Barley, N. 1983. *The Innocent Anthropologist. Notes From A Mud Hut*. Penguin Books. London.
- Barrow, C.I. 1998. River Basin Development Planning and Management: A Critical Review. World Development. Vol. 26, p 171-186.

- Basson, M.S., Van Niekerk, P.H. and Van Rooyen, J.A. 1997. Overview of Water Resources Availability and Utilisation in South Africa. DWAF Report No. P RSA/00/0197. Cape Town.
- Bembridge, T.J. 1984. *A Systems Approach to the Study of Agricultural Development*. PhD Thesis. University of Stellenbosch. Cape Town. South Africa.
- Berger, P.C. and Godsell, B. 1998. *A future South Africa. Visions, Strategies and Relations*. Human and Rousseau (Pty) Ltd. Cape Town.
- Beckerberg, G.R. 1997. Water Institutions, Markets and Decentralized Resources Management: Prospects for Innovative Policy Reforms in Irrigated Agriculture. *Agrekon*. (36) pp 350 – 380.
- Bishop, V. and Prosser, R. 2001. *Water Process and Management*. Second Edition. Collins Landmark Geography. London.
- Bladeren, D. Van. 1996. Historical Flood Documentation in South Africa: 1652-1996. Water Research Commission Publications. Pretoria.
- Blaikie, P., Cannon, T., Davis, L. and Wisner, B. 1994. *At Risk: Natural Hazards, People's Vulnerability, and Disasters*. First Edition. Routledge. London.
- Blommaert, J. *Discourse*. 2005. Cambridge University Press. United Kingdom.
- Blomqvist, A. 1996. *Collective Action Among Irrigation Farmers and Textile Industrialists in India*. PhD Thesis. Stockholm, Sweden.
- Bolding, A. 2004. *In Hot Water: A Study on Sociotechnical Intervention Models and Practices of Water use in Smallholder Agriculture, Nyanyadzi Catchment, Zimbabwe*. PhD Thesis. Wageningen University. The Netherlands.
- Bond, P. 2004. Water Commodification and Decommodification Narratives: Pricing and Policy debates from Johannesburg to Kyoto to Cancun and Back. *Capitalism Nature Socialism*. Vol. 15. No. 1.
- Bond, P. 2006. Global Governance Campaigning and MDGs: From To-down to Bottom-up Anti-poverty Work. *Third World Quarterly*, Vol. 27. No. 2. pp 339 – 354.
- Borrini-Feyerabend, G. 1997. *Beyond Fences: Seeking Social Sustainability in Conservation*. Volumes 1 & 2. IUCN. Gland. Switzerland.
- Brooks-Harris, J. and Stock-Wood, S. 1999. *Designing and Facilitating Experiential Learning*. Sage Publication. London.
- Bruce, C. 2001. Unpacking Participatory NRM; Distinguishing Resource Capture from Democratic Governance. International Development Research Centre. Ontario.
- Burt, J. McAlister, A and Simpungwe, E. 2003. Report on the Regional Workshop on the Functioning of Catchment Management Forums in the Eastern Cape Province of South Africa. 28th and 29th January 2003. Chair Group Irrigation and Water Engineering. Department of Environmental Sciences. Wageningen University. Netherlands.
- Caplan, K., Heap, S., Nicol, A., Plummer, J., Simpson, S. and John W. 2001. *Flexibility by Design: Lessons from Multi-Sector Partnerships in Water and Sanitation Projects*. BPD Water and Sanitation Cluster. London.
- Chambers, R. 1993. *Challenging the Professionals. Frontiers for Rural Development*. Intermediate Technology Publications. London.
- Chambers, R. 1997. *Whose Reality Counts: Putting the First Last*. Intermediate Technology Publications. London.

- Chambers, R. 1983. *Rural Development: Putting the Last First*. Longman. London.
- Chandhuri, M. and Chandhuri, A. 2003. *The Great Indian Dream: Restoring Pride to A Nation Betrayed*. India.
- Chidenga, E. 2003. *Leveraging Water Delivery: Irrigation Technology Choices and Operations and Maintenance in Smallholder Systems in Zimbabwe*. PhD Thesis. Wageningen University. The Netherlands.
- Chidenga, E. and L. Vincent (2004) Technology Choices, Institutional Change and Technology Care in Irrigation Management in Zimbabwe, p. 77-108; In: Moll et. al (eds) op. cit.
- Chorley, R. H. (ed) 1969. *Introduction to Geographical Hydrology: Spatial Aspects of the Interactions Between Water Occurrence and Human Activity*. Methuen. London.
- Cleaver, F. 1999. Paradoxes of Participation; Questioning Participatory Approaches to Development. *Journal of International Development*. Vol 11.
- Cohen, A. 1976. *Two Dimensional Man: An Essay on the Anthropology of Power and Symbolism in Complex Society*. University of California Press. Berkeley. USA.
- Cohen, J. and Uphoff, N. 1980. Participation's Place in Rural Development: Seeking Clarity through Specificity. *World Development*. Vol 8. Issue 3. p 213-35.
- Conklin, J. 2003. Dialog Mapping: An Approach for Wicked Problems. CogNexus Institute.
- Cooke, B. and Kothari, C. (eds.) 2002. *Participation; The New Tyranny?* Second Edition. Zed Books Ltd. New York.
- Cornwall, A. and Brock, K. 2005. Beyond Buzzwords: "Poverty Reduction", "Participation" and "Empowerment" in Development Policy. United Nations Research Institute for Social Development (UNRISD). Geneva.
- Cousins, B. 1995. *A Role for Common Property Institutions in Land Redistribution Programmes in South Africa*. International Institute for Environment and Development (IIED) Gatekeepers series No. SA53. London.
- Creighton, J. 1998. Report on the Common Sense Initiative Council's Stakeholder Involvement Work Group. EPA.
- Daniels D. and G. Walker (1997) Collaborative Learning: Improving Problem Definition in Ecosystem-Based Management. *Environmental Impact Review* 16 p. 71-102
- Davenport, T.H. 1991. *South Africa: A Modern History*. 4th Edition. Basingstoke: Macmillan.
- Davenport, T.H. 1998. *The Transfer of Power in South Africa*. David Philip. Cape Town.
- De Bruyn, T.D., Goqwana, M.W. and van Averbek, W. 1998. Is Communal Grazing in the Eastern Cape Sustainable? *Veld and Flora* (84) pp 82-83
- Derman, B. and Ferguson, A. 2000. The Value of Water: Political Ecology and Water Reform in Southern Africa. Paper prepared for the Panel on Political Ecology for the Annual Meetings of the American Anthropological Association. San Francisco.
- DiMaggio, P. and Powell, W. 1983. The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organisational Fields. *American Sociological Review* Vol 48.

- Douglas, M. 1987. *How Institutions Think*. Syracuse University Press. Cornwall. Great Britain.
- Draeger, K.J. 2001. *Defining and Evaluating Watershed Organisational Effectiveness*. A Thesis Submitted to the faculty of the Graduate School of the University of Minnesota in Partial Fulfillment of the Requirement of the Degree of Doctor of Philosophy. University of Minnesota. USA.
- Duram, L. and Brown, K. 1999. Assessing Public Participation in the US Watershed Planning Initiatives. *Society and Natural Resources* No.12.
- DWAF. 1986. Management of Water Resources of the Republic of South Africa. Pretoria.
- DWAF. 1997. National Water Policy for South Africa. White Paper. Pretoria.
- DWAF. 1998a. Water Law Implementation Process. A Strategic Plan for the Department of Water Affairs and Forestry to Facilitate the Implementation of Catchment Management in South Africa. Discussion Document. Department of Water Affairs and Water Research Commission. Pretoria.
- DWAF. 1998b. Annual Report 1997/98. Pretoria.
- DWAF. 1999. National Water Act News. Quarterly newsletter about developing the various strategies to implement South Africa's National Water Act. November issue. Pretoria.
- DWAF. 2001a. Mthatha Catchment Management Strategy. Establishment of the Mthatha Catchment Forum. DWAF Directorate of Water Resource Management. Eastern Cape Province.
- DWAF. 2001b. Mthatha River Basin Study Volume 3: Geology and Hydrogeology. Directorate of Water Resource Planning. Report No. PT 200-00-0401. Pretoria.
- DWAF. 2001c. Generic Public Participation Guidelines. Pretoria.
- DWAF. 2002. Mthatha River Catchment Management Strategy: Plan of Action. First Draft. Prepared by Ninham Shand in association with Goba Moahloli & Associates. South Africa.
- DWAF. 2004. National Water Resources Management Strategy. First Edition. Department of Water Affairs. Pretoria. Also online; www.dwaf.gov.za.
- Dynes, R.R. 1998. Coming to Terms with Community Disaster. In: Quarantelli, E.L. (ed.). *What is a Disaster?* Routledge, London.
- ECSECC (Eastern Cape Socio-Economic Consultative Council). 2000. Rural Development Framework. Draft document. South Africa.
- Engel, P. 1997. *The Social Organisation of Innovation: A Focus on Stakeholder Interaction*. Royal Tropical Institute. Amsterdam. Netherlands.
- Ewert, A.W., Baker, D.C. and Bissix, G.C. 2005. *Integrated Resource and Environmental Management*. CABI Publishing.
- Fafchamps, M. 2004. *Market Institutions in Sub-Sahara Africa: Theory and Evidence*. Cambridge University Press.
- Faysse, N. 2002. Case Study in the Nkomazi Area: The Komati and Lomati Irrigation Boards. IWMI. Pretoria.
- Faysse, N. 2004. Challenges for Fruitful Participation of Smallholders in Large-scale and Water Resource Management Organisations: Selected Case Studies in South Africa. *Agrekon*. Vol 43, No. 1.

- Faysse, N. 2006. Troubles on the Way: An Analysis of Challenges faced by Multi-Stakeholder Platforms. *Natural Resources Forum* Vol. 30. pp 219 –229.
- FAO (Food and Agricultural Organisation). 1977. Guidelines for Watershed Management. *Conservation Guide No. 1*. Rome.
- FAO (Food and Agricultural Organisation). 1999. Pluralism and Sustainable Forestry and Rural Development. Proceedings of an International Workshop. 9-12 December 1997. Rome.
- Fisher, R. 1995. Collaborative Management of Forests for Conservation and Development. IUCN and World Wide Fund for Nature. Geneva.
- Fleming, J.A. 1997. New Perspectives on Designing and Implementing Effective Workshops p 1 – 4. In: Fleming, J. (ed.) *New Directions for Adult and Continuing Education*. No. 76. San Francisco. Jossey-Buss.
- Fontana, A. and Frey, J.H. 1994. Interviewing: The Art of Science. In: Norman, K. and Yvonna, S. (eds.) *Handbook of Qualitative Research*; p 361–376. Sage Publications. Thousand Oaks CA.
- Forster, R. 1998. GTZ's Experience with Mainstreaming Primary Stakeholder Participation. German Technical Cooperation. Contribution to the International Conference on "Mainstreaming and Up-Scaling of Primary Stakeholder Participation – Lessons Learned and Ways Forward". Washington.
- Freeman, R.E. 1984. *Strategic Management: A stakeholder Approach*. Pitman Publishers. Boston.
- Frerks, G.E. 1991. *Participation in Development activities at the local level: Case Studies from a Sri Lankan Village*. PhD Thesis. Wageningen University.
- Frerks, G., Hilhorst, D. and Moreyra, A. 1999. Natural Disasters: A Framework for Analysis and Action. Report for MSF-Holland. Disaster Studies. Wageningen.
- Freund, B. 1998. *The Making of Contemporary Africa: The Development of African Society Since 1800*. 2nd Edition. Macmillan. London.
- Frost, P. 1999. Reflections on Integrated Land and Water Management. University of Zimbabwe. Paper presented at the Workshop for sustainability of Freshwater Resources in Africa. Nairobi.
- Frost, P., Moore, L.F. Louis, R. Lundberg, C. and Martin, J. (eds.) 1985. *Organisational Culture*. Sage Publications. Beverly Hills.
- Gakp, E., Du Plessi L.A. and Viljoen, M.F. 2000. Towards Institutional Arrangements to ensure Optimal Allocation and Security of South African Water Resources. *Agrekon*. Volume 2. Pretoria.
- Galjart, B. 1976. *Peasant Mobilisation and Solidarity*. Wageningen Centre for Agriculture Publication. Netherlands.
- Gittel, M. 1980. Limits to Citizen Participation: A Decline of Community Organisations. *Sage Library of Social Research*. Vol. 109.
- Goddard, P. and Cotter, J. 1987. AID's Experience with Community Participation. In: Bamberger, M. (ed.) *Readings in Community Participation*. World Bank. Washington.
- Goqwana, M.W. 1998. A Comparison of Veld Conditions Between Two Management Systems in Eastern Cape Communal Rangelands. In: de Bruyn, T.D. and Scogings, P.F. (ed). *Communal Rangelands in Southern Africa: A Synthesis of*

- Knowledge. pp 211-221. Department of Livestock and Pasture Science. University of Fort Hare. Alice.
- Görgens, A., Pegram, G., Uys, M., Grobicki, A., Loots, L., Tanner, A. and Bengu, R. 1997. Guidelines for Catchment Management to Achieve Integrated Water Resources Management in South Africa. *WRC Report* No KV 108/98. Pretoria.
- Green Paper on Disaster Management. 1998. Green Paper Secretariat for Disaster Management. Pretoria. Also online; www.local.gov.za
- Greenstein, R. 2003. State, Civil Society and the Reconfiguration of Power in Post-Apartheid South Africa. Centre for Civil Society Research Paper 8. University of Witwatersrand. South Africa.
- Grimble, R. and Wellard, K. 1996. Stakeholder Methodologies in Natural Resource Management: A Review of Principles, Contexts, Experiences and Opportunities. Paper presented at the ODA NRSP Socio-economic methodologies workshop, 29 – 30 April. London.
- Grimble, R., Chan, M.K., Aglionby, J and Quan, J. 1995. *Trees and Trade-offs: A Stakeholder Approach to Natural Resource Management*. International Institute for Environment and Development (IIED). Gatekeepers Series 52. London.
- Hammersley, M. And Atkinson, P. 1995. *Ethnography. Principles in Practice*. Routledge. UK.
- Handmer, J.W. and Ord, K.D. 1986. Flood Warning and Response. In: Smith, D. and Handmer, J.W. (eds.). *Flood Warning in Australia*. Centre for Resource and Environmental Studies p 235-257. Canberra.
- Hardin, G. 1982. *Collective Action*. Johns Hopkins University Press. Baltimore.
- Hardin, G. 1968. *The Tragedy of the Commons*. Science 162. American Association for the Advancement of Science.
- Hazell, P. and Haddad, L. 2001. Agricultural Research and Poverty Reduction. International Food Policy Research Institute (IFPRI).
- Heath, A. 1976. *Rational Choice and Social Exchange*. Cambridge University Press. Cambridge.
- Heathcote, I.W. 1998. *Integrated Watershed Management*. John Wiley and Sons Publications. Canada.
- Hebinck, P. and L. Smith. 2001. Livelihoods and Rural Transformations in the Central Eastern Cape: From Production to Consumption? A Case Study of the two Rural Villages Guquka and Koloni. In: Development Studies Association Annual Conference: 'Different Poverties, Different Policies'. Institute for Development Policy and Management, University of Manchester.
- Helmer, M. and Hilhorst, D. 2006. Disaster Risk Reduction: Shifting the Perspective. Paper submitted for the Yearbook on Netherlands Development Policy. Netherlands.
- Hewitt, K. 1983. *Interpretations of Calamity from the Viewpoint of Human Ecology*. Allen & Unwin, London. Sydney.
- Hilhorst, D. 2000. *Records and Reputations. Everyday Politics of a Philippine Development NGO*. PhD thesis. Wageningen University. Netherlands.
- Hilhorst, D. 2005. Complexity and Diversity: Unlocking Social Domains of Disaster Response. In: Bankoff, G. Frerks, G. and Hilhorst, D. (eds.). *Vulnerability. Disaster. Development. People*. Earthscan. London.

- Homans, G. 1961. *Social Behaviour: Its Elementary Forms*. Routledge and Kegan Paul. London.
- Horgan, K. 2003. The Rational Method in Intermediate sized Catchments. Paper presented at the 11th South African National Hydrological Symposium. Port Elizabeth.
- Hospes, O. 2000. Secrets of Institutional Transformation of Member-based Financial Self Help Organisations in Post-Colonial Africa. *In: Institutional Transformation and Stability, Reader*. Law and Governance Group. Wageningen University. Netherlands.
- Hubbard, M. 1997. The New Institutional Economics in Agricultural Development: Insights and Challenges. *Journal of Agricultural Economics*. Vol. 2. p 239 – 249.
- Huntington, S.P. 1965. The Political Development and Political Decay. *World Politics* Vol. 17.
- Huntington, S.P. 1968. *Political Order in Changing Societies*. Yale University Press. New Haven.
- IFRCS (International Federation of Red Cross and Red Crescent Societies) 1999. World Disaster Report 1999. Edigroup. Switzerland.
- IFRCS (International Federation of Red Cross and Red Crescent Societies) 2002. World Disaster Report 2002. IFRCS. Geneva. Switzerland.
- ICRA (International Centre For Development Oriented Research in Agriculture). 2000. Notes for Development Oriented Research in Agriculture. Wageningen International Conference Center. Wageningen. Netherlands.
- IDP (Integrated Development Plan). 2005/06. Draft Report for Chris Hani Municipality. Queenstown. South Africa.
- James, A.L. 2003. Institutional Challenges for Water Resource Management: India and South Africa. Water, Households and Rural Livelihoods (WHIRL) Working Paper 7. Also online <http://www.nri.org/whirl>.
- Jinapala, K., Brewer, J. and Sakthivadivel, R. 1996. *Multilevel Participatory Planning Ifor Water Resource Development in Sri Lanka*. Gatekeeper Series 62. IIED. London.
- Khali, E.L. 1995. Organisations versus Institutions. *Journal of Institutional Theoretical Economics*. 151.
- Khanal, P. 2003. *Engineering Participation: The Processes and Outcomes of Irrigation Management Transfer in the Terai of Nepal*. PhD Thesis. Wageningen University. Water Series 2. Orient Longman. Hyderabad. India.
- Kihato, C. and Schmitz, T. 2002. Exploring South African Water Policy and its Implementation: The Cases of Privatisation, Free Basic Water and Catchment Management. Unpublished paper. Centre for Policy Studies. Pretoria.
- Kloezen, W. 2002 *Accounting for Water: Institutional Viability and Impacts of Market-Oriented Irrigation Interventions in Central Mexico*. PhD Thesis, Wageningen University, The Netherlands.
- Koch, E. 1996. Parting the Farmers and their Water. Mail & Guardian Newspaper. 29 November to 5 December 1996. South Africa.
- Kotze, A. and Holloway, A. 1996. *Reducing Risk: Participatory Learning Activities for Disaster Mitigation in Southern Africa*. International Federation of Red Cross and

- Red Crescent Societies and Department of Adult and Community Education. University of Natal. South Africa.
- Koudouri, P. 2003. *The Economics of Water Management in Developing Countries: Problems, Principles and Policies*. Edward Elgar.
- Kvale, S. 1996. *Interviews. An Introduction to Qualitative Research Interviewing*. Sage. London.
- Lahiff, E. 2003. Land Reform and Sustainability Livelihoods in South Africa's Eastern Cape Province. Sustainable Livelihoods in Africa Research Paper 9. Institute of Development Studies. Brighton.
- Lal, R. 1999. *Integrated Watershed Management in the Global Ecosystem*. CRC Press.
- Lane, J.E. and Ersson, S. 1999. *The New Institutional Politics: Performance and Outcomes*. Routledge. London.
- Lange, M. de (2004) Water Policy and Law Review Review in South Africa with a Focus on the Agricultural Sector, p.11-56; In: Mollinga, P. and A. Bolding (eds) op. cit.
- LeCompte, M.D. 1993. A Framework for Hearing Silence: What Does Telling Stories Mean When We Are Supposed to be Doing Science? In: McLaughlin, D. And Tierney, W. (eds.). *Naming Silenced Lives: Personal Narratives and the Process of Educational Change*. Routledge. New York.
- Leeuwis, C. (2004) Rethinking Innovation and Agricultural Extension. In: Moll, H. Leeuwis, C. Manzungu, E. And Vincent, L. (eds). *Agricultural Institutions between Policies and Local Action*. Harare. Weaver Press.
- Lent, P.C., Scogings, P.F. and van Averbek, W. 2000. (eds) Sustainability Indicators for Natural Resource Management and Policy: Natural Resource Management and Policy in Eastern Cape Province, South Africa: Overview Paper. Working Paper 4. Agricultural and Rural Development Research Institute. University of Fort Hare. Alice. South Africa.
- Leynseele, Y. 2004. The Land You Bought, The Land We Never Sold: The Makhoba Land Restitution Case. Master of Science Thesis. Wageningen University. Netherlands.
- Liebenberg, B.J. and Spies S.B. (eds.) 1993. *South Africa in the 20th Century*. Van Schaik Publishers. Pretoria.
- Long, N. (ed) 1989. Encounters at the Interface: A Perspective on Social Discontinuities in Rural Development. Wageningen Studies in Sociology 27. Wageningen University. Netherlands.
- Long, N. 1977. *An Introduction to the Sociology of Rural Development*. Tavistock. London.
- Magni, P. 1999. Physical Description of the Kat River Valley. Kat River Project. Geography Department. Rhodes University. Grahamstown. South Africa.
- Majchrzak, A. 1984. *Methods for Policy Analysis*. Sage Publication Inc.
- Manzungu, M. (1999) *Strategies of Smallholder Irrigation Management in Zimbabwe*. PhD Thesis, Wageningen University, The Netherlands.
- Manzungu, E. 2001. The Emergence of Multi-stakeholder Platforms in Integrated Water Resource Development and Management in the Southern African Region. Paper presented at the Multi-stakeholder Platforms for Integrated Water Resource Management Workshop held at Wageningen International Conference Center

- from 2nd – 5th October 2001. Irrigation and Water Engineering Group. Wageningen University. Netherlands.
- Manzungu, E. (2004) Public Institutions in Smallholder Irrigation in Zimbabwe, p. 27-56. In: Moll et al (eds). op.cit.
- March, J.G. and Olsen, J.P. 1989. *Rediscovering Institutions*. Free Press. New York.
- May, T. 1997. *Social Research: Issues, Methods and Process*. 2nd Edition. Open University Press. Buckingham.
- Mayntz, R. 1993. Governing Failures and the Problem of Governability: Some Comments on a Theoretical Paradigms. In: Kooiman, J. (ed). *Modern Governance; New Government Society Interactions*. Sage. London, pp. 10 - 20
- Mbeki, G. 1997. *The Struggle for Liberation in South Africa: A Short History*. David Philip. Cape Town.
- McConnel, L. 1975. Some Problems in Estimating the Demand for Outdoor recreation. *American Journal of Agricultural Economics*. Vol. 57. pp. 330 – 334.
- McDonald, D.M. and Young, M. 2000. Institutional Arrangements in the Murray-Darling River Basin. Proceedings of the Workshop “Intersectoral Management of River Basins”. 16-21 October. Loskop Dam. South Africa.
- McMaster, A. 2002. GIS in Participatory Catchment Management: A Case Study in the Kat River Valley, Eastern Cape Province, South Africa. MSc. Thesis. Rhodes University. Grahamstown. South Africa.
- McMaster, A., Rowntree, K. and Motteux, N. 2001. GIS for Participatory Catchment Management: A Case Study from the Kat Valley. Eastern Cape. Paper presented at the Southern African Society of Aquatic Scientists Annual Conference. Northern Province. July 2001.
- Mills, S. 2004. *Discourse*. Routledge. United Kingdom.
- Mitchell, B. 1990. (ed.). *Integrated Water Management. International Experiences and Perspectives*. Belhaven Press. London.
- Mlazbender, D. Goldin J., Turton, A. and Earle, A. 2005. Traditional Water Governance and South Africa’s “National Water Act” – Tension or Cooperation? Paper presented at the International Workshop on “African Water Law: Plural Legislative Frameworks for Rural Water Management in Africa’ 26-28 January 2005, Johannesburg, South Africa.
- Moench, M., Caspari, E. and Dixit, A. 1999. *Rethinking the Mosaic. Investigations into Local Water Management*. Published by Nepal Water Conservation Foundation. Kathmandu, and Institute for Social and Environmental Transition, Boulder. Colorado. USA.
- Mohan, G. and Stokke, K. 2000. Participatory Development and Empowerment: The Dangers of Location. *Third World Quarterly*. No. 21 (Vol. 2) p 247 – 268.
- Mohr, P. and Fourie, L. 2000. *Economics for South African Students*. Second Edition. Van Schaik Publishers. Pretoria.
- Molden, D. Amarasinghe, U. and Hussain, I. 2001. Water For Rural Development. Background paper on water for rural development prepared for the World Bank. Working Paper 32. Colombo. Sri Lanka. International Water Management Institute.
- Moll, H., Leeuwis, C., Manzungu, E. and Vincent, L. (eds) (2004) *Agrarian Institutions between Policies and Local Action*. Harare: Weaver Press.

- Mollinga, P. and Bolding, A. (eds) (2004) *The Politics of Irrigation Reform: Contested Policy Formation in Asia, Africa and Latin America*. Aldershot, England, Ashgate.
- Mollinga, P. with Narain, V. 2001. From Participation to Self-governance. Changing Approaches to Water Users Associations in Canal Irrigation. Irrigation and Water Engineering Group. Lecture notes. Wageningen University. Netherlands.
- Motteux, N. 2001. The Development and Coordination of Catchment Fora Through the Empowerment of Rural Communities. Water Research Commission Report No. 1014/1/01. Pretoria.
- Motteux, N. 2002. *Evaluating People Environment Relationships: Developing Appropriate Research Methodologies for Sustainable Management and Rehabilitation of Riparian Zones in the Kat River Valley Communities. Eastern Cape Province. South Africa*. PhD Thesis. Rhodes University. Grahamstown. South Africa.
- Motteux, N. and Rowntree, K. 1998. The Importance of Innovative Communication and Negotiation Processes for the Sustainable Management of Riverine Resources within Rural Communities. Proceedings. South African Institute of Civil Engineers Conference. East London. South Africa.
- Motteux, N., Binns, T., Nel, E. and Rowntree, K. 1999a. Exploring Community Environment Knowledge through Participatory Methods in the Kat River Valley. South Africa. *Community Development Journal*. Vol. 34 No. 3. Oxford University Press.
- Motteux, N., Nel, E., Rowntree, K. and Binns, T. 1999b. Empowerment for Development: Talking Participatory Appraisal Further in Rural South Africa. *Development in Practice*. Vol. 9. No. 3. pp 261 – 273.
- Moyo, M. 2004. Participation Dynamics in Integrated Water Management in the Mazowe Watershed. pp 109 – 126. In: Moll, H., Leeuwis, C., Manzungu, E. and Vincent, L. (eds) *Agrarian Institutions Between Policies and Local Action: Experiences from Zimbabwe*. Harare: Weaver Press.
- Mudge, N.N. 2005. *An Ethnography of Knowledge. Knowledge Production and Dissemination in Land Resettlement areas in Zimbabwe. The Case of Mupfurudzi*. PhD Thesis. Wageningen University. Netherlands.
- Mukherjee, N. 1996. Water and Land in South Africa. Economy-wide Impacts of Reforms. A Case Study from the Olifants River. International Food Policy Research Institute. Discussion Paper No. 12. Washington DC.
- Murty, J. 1995. *Watershed Management*. New Age International Publication. New Delhi.
- Myers, N. and Kent, J. 1995. *Environment Exodus. An Emergent Crisis in Global Arena*. Climate Institute. Washington DC.
- Napier, M. and Rubin, M. 2002. Managing Environmental and Disaster Risks Affecting Informal Settlements: Lessons in Innovative Practice From South African Local Authorities. Council for Scientific and Industrial Research (CSIR). Pretoria. Paper submitted to the International Conference and meeting of the CIB Task Group 40 on informal settlements: 10 –13 October 2002. Surabaya. Indonesia.

- Nauta, W. 2001. *The Implications of Freedom. The Changing Role of Land Sector NGOs in a Transforming South Africa*. PhD Thesis. University of Amsterdam. Netherlands.
- Neubert, S. 2000. *Social Impact Analysis of Poverty Alleviation Programmes and Projects. A Contribution to the Debate on the Methodology of Evolution in Development Cooperation*. Routledge. UK.
- North, D.C. 1990. *Institutions, Institutional Change, and Economic Performance*. Cambridge University Press. Cambridge.
- Ntsebeza, L. 1999. Land Tenure Reform, Traditional Authorities and Rural Local Government in Post-Apartheid South Africa: Case Studies from the Eastern Cape. Research Report 3. PLAAS, University of the Western Cape, Cape Town.
- Oakerson, R J. 1992. Analyzing the Commons: A Framework. In: Bromley *et al.* (eds.) *Making the Commons Work: Theory, Practice and Policy*. San Francisco. ICS Press.
- O'Brien, G., O'Keefe, P., Rose, J. and Wisner, B. (forthcoming) Climate Change and Disaster Management. *Disasters Journal*. Rural Development Sociology Group. Wageningen University. Netherlands.
- ODA (Oversees Development Administration). 1995. Guidance Notes on how to do Stakeholder Analysis of Aid Projects and Programmes. ODA. London.
- Olson, M. 1965. *The Logic of Collective Action: Public Goods and the Theory of Groups*. Cambridge Mass. Harvard University Press.
- O'Meara, D. 1996. *Forty Lost Years: The Apartheid State and the Politics of the National Party*. Ravan Press. Johannesburg.
- Ostrom, E. 1990. *Governing of the Commons. The Evolution of Institutions for Collective Action*. Cambridge University Press.
- Ostrom, E. 1992. *Crafting Institutions for Self-Governing Irrigation Systems*. Institute for Contemporary Studies. San Francisco. California.
- Ostrom, E., Gardner, R. and Walker, J. 1994. *Rules, Games and Common-Pool Resources*. The University of Michigan Press. Michigan.
- Ostrom, E., Gibson, C., Shivakumar, N. and Anderson, K. 2002. Aid, Incentives and Sustainability. An Institutional Analysis of Development Cooperation. Main Report. Workshop in Political Theory and Policy Analysis. Indiana University. SIDA Studies in Evaluation 02/01.
- PANAFCON (PanAfrican Conference). 2003. Outcomes and Recommendations of the Pan-African Implementation and Partnership Conference on Water. December 8-13. UN-Water/Africa Secretariat. Addis Ababa.
- Pauw, J. 2006. The Water Barons. Water Industry Methodology Team. The Centre for Public Integrity. Australia.
- Peters, B.G. 1999. *Institutional Theory: The New Institutionalism*. Political Science. Cassells. London.
- Peters, B.G. 2000. Institutional Theory: Problems and Prospects. *Political Science Series* 69. Department of Political Science, Institute for Advanced Studies (IHS).
- Perry, C., Rock, M., and Seckler, D. 1997. Water as an Economic Good: A Solution, or Problem? International Irrigation Management Institute (IIMI). Research Report 14. Colombo. Sri Lanka.

- Pretty, J. 1993. Alternative Systems of Inquiry for a Sustainable Agriculture. *In*: ICRA. 2000. Notes on Development Oriented Research in Agriculture. Wageningen. Netherlands.
- Pollard, S. and du Toit, D. 2005. Achieving Integrated Water Resource Management: The Mismatch in Boundaries between Water Resources Management and Water Supply. Paper presented at the International Workshop on “African Water Law: Plural Legislative Frameworks for Rural Water Management in Africa’ 26-28 January 2005, Johannesburg, South Africa.
- Polsby, N. 1968. The Institutionalization of the US. House of Representative. American Political Science Review. 62.
- Punch, K. 2005. *Introduction to Social Research. Quantitative and Qualitative Approaches*. Sage Publication.
- Ramirez, R. 1999. Stakeholder Analysis and Conflict Management. *In*: Buckles, D. (ed.). *Cultivating Peace*. World Bank Publications.
- Ramírez, R. 2001. Understanding the Approaches for Accommodating Multiple Stakeholders' Interests. International Journal of Agriculture. Resources, Governance and Ecology. Special Issue on accommodating Multiple Interests in Local Forest Management, Volume 1, No. 3/4, pp. 264-285.
- Reinharz, S. 2002. *On Becoming a Social Scientist*. Transactional Publishers. New Jersey.
- RSA (Republic of South Africa). 1993. Constitutional Act (Act 110 of 1993)
- RSA (Republic of South Africa). 1996. Constitution of the Republic of South Africa (Act No. 108 of 1996)
- RSA (Republic of South Africa). 1997. Water Services Act (Act No. 108 of 1997)
- RSA (Republic of South Africa). 1998. National Water Act. No. 36 of 1998.
- RSA (Republic of South Africa). 1999. Household Surveys. Statistics South Africa. Pretoria.
- Rhoades, R.E. 1998. *Participatory Watershed Research and Management: Where the Shadow Falls*. International Institute for Environment and Development (IIED). Gatekeepers Series No.18.
- Roberts, N. 2005. Coping with Wicked Problems. Naval Postgraduate School. Department of Strategic Management. Monterey. Paper for IPMN in Sydney.
- Robertson, A.F. 1984. *People and the State. An Anthropology of Planned Development*. Cambridge University Press.
- Röling, N. 1994. Platforms for Decision Making on Eco-systems. *In*: Fresco, L.O. (ed) 1994. *The Future of the Land*. John Wiley and Sons. Chicester, pp 385 – 395.
- Röling, N. and Wagemakers, M. (eds.) 1998. *Facilitating Sustainable Agriculture: Participatory Learning and Adaptive Management in times of Environmental Uncertainty*. Cambridge University Press. UK.
- Rowe, N. 1989. *Rules and Institutions*. Philip Allan Publications. Britain.
- Rowntree, K., McMaster, A. and Duma, M. 2000. Building Spatial Concepts for Community Based Catchment Management: Planning for Landcare in the Kat River Valley. Paper presented at the International Symposium on Contested Resources: Challenges to Governance of Natural Resources in Southern Africa. University of the Western Cape. Cape Town. October 17th – 20th.

- Saha, S.K. and Barrow, C J. (eds.) 1981. *River Basin Planning: Theory and Practice*. John Wiley. Chichester.
- Saleth, R.M and Dinar, A. 2004. *The Institutional Economics of Water: A Cross-Country Analysis of Institutions and Performance*. Cheltenham.
- Sandler, T. 1992. *Collective Action*. University of Michigan Press.
- Saunders, C. and Southey, N. 1998. *A Dictionary of South African History*. 2nd Edition. Cape Town.
- Schreiner, B. and Van Koppen, B. 2003. Policy and Law for Addressing Poverty, Race and Gender in the Water sector: The Case of South Africa. *Water Policy*. (5) pp 489 – 501.
- Schreiner, B., Van Koppen, B. and Khumbane, T. 2002. From Bucket to Basin: A New Water Management Paradigm for Poverty Eradication and Gender Equity Pages. In: Turton, A. and Henwood, R. (eds). *Hydropolitics in the Developing World: A Southern African Perspective*. Africa Water Issues research Unit. Centre for International Political studies. University of Pretoria. South Africa.
- Scudder, T. 1989. The African Experience with River Basin Development. *Natural Resource Forum*. 13 (2). Pp 139 - 148
- Selznick, P. 1957. *Leadership in Administration*. Harper and Row. New York.
- Shallcross, T. and Robinson, J. (eds.) 2006. *At the Interface. Global Citizenship and Environmental Justice. Probing the Boundaries*. Rodopi.
- SLIM (Social Learning for Integrated Management). 2004. The Role of Learning Processes in Integrated Catchment Management and the Sustainable Use of Water. Policy Briefing No. 6. SLIM Project. European Commission.
- Smit, T. 2003. Catchment Management Forums in the Eastern Cape Province of South Africa. Master of Science Field Research Report. Chair Group Irrigation and Water Engineering. Department of Environmental Sciences. Wageningen University
- Sokile, C., Mwaruvanda W. and Van Koppen, B. 2005. Integrated Water Resource Management in Tanzania: Interface between Formal and Informal Institutions. Paper presented at International Workshop on 'African water Laws: Plural Legislative Frameworks for Rural Water Management in Africa' 26 – 28 January 2005. Johannesburg. South Africa.
- StatsSA. 2005. Population Statistics. Statistics South Africa. Pretoria.
- Steinmo, S.K., Thelen, and Longstreth, F. 1992. *Structuring Politics: Historical Institutionalism in Comparative Analysis*. Cambridge University Press. Cambridge.
- Stringer, E.T. 1999. *Action Research*. Sage Publication. London.
- Thomson, H., Stimies, C.M., Richters, E. and Perret, S. 2001. Policies, Legislation and Organisations Related to Water in South Africa, with Special Reference to the Olifants River Basin. Working Paper 18 (South Africa Working Paper No. 7). International Water management Institute. Colombo, Sri Lanka.
- Teclaff, L. 1996. Evolution of the River Basin Concept in National and International Water Law. *Natural Resources Journal*. Vol 36. p 359 – 391.
- Turton, A., Nicol, A. and Allan, T. 2003. *Policy Options in Water Stressed States; Emerging Lessons from the Middle East and Southern Africa*. African Water Issues Research Unit. Pretoria. South Africa.

- UN (United Nations). 2003a. *Water for People, Water for Life. 2002/2003 World Water Development Report Executive Summary*. UN. New York.
- UN (United Nations). 2003b. *Guidelines on Participatory Planning and Management for Flood Mitigation and Preparedness*. United Nations Publication. New York.
- UN (United Nations). 2003c. *Capacity Building for Poverty Eradication. Analysis of, and Lessons from, Evaluations of UN System Support Countries' Efforts*. UN Publication.
- UN (United Nations). 2004. *Earth Summit Agenda 21*. UN Department of Economic and Social Affairs. Division for Sustainable Development. New York.
- UNDP (United Nations Development Programme). 1990. *Safe Water 2000*. New York.
- UNDP (United Nations Development Programme). 2003. *Human Development Report 2002/2003*. United Nations Development Report - South Africa.
- Uphoff, N. and Cohen, J. 1977. *Rural Development Participation: Concepts and Measures for Project Design. Implementation and Evaluation. Monograph Series. No. 2*. Cornell University. USA.
- Uphoff, N., Esman, M.J. and Krishna, A. 1998. *Reasons for Success: Learning from Instructive Experiences in Development*. Kumarian Press. West Hartford.
- Uphoff, N. 1995. *Grassroot Organisations and NGOs in Rural Development. Opportunities with Diminishing States and Expanding Markets*. In: Janory, A, de. (ed.). *State, Markets and Civil Organisations*. California University Press. Berkeley.
- Vanderwal, J.H. 1999. *Negotiating Restoration; Integrating Knowledges of the Alouette River*. British Columbia. Master of Science Thesis. University of British Columbia.
- Van Ranst, E., Verplancke, H., Van Averbek, W., Vedrdoodt, A. and Bonroy, J. (eds.) 2000. *Rural Livelihoods in the Eastern Cape, South Africa. Extended Abstracts from International Workshop*. Ghent. Belgium.
- Venter, A. (ed.) 1998. *Government and Politics in the New South Africa*. Van Schaik. Pretoria.
- Vincent, L. 2003. *Participatory Research, Natural Resources Management and Rural Transformation: More Lessons from the Field*, p. 142 – 168. In: Pound, B., Snapp, S., McDougall, C. and Braun, A. (eds) *Managing Natural Resources for Sustainable Livelihoods: Uniting Science and Participation*. London. Earthscan.
- Vincent, L. and Manzungu, E. (2004) *Water Rights and Eater Availability in the Lower Odzi Watershed of the Save Catchment*, p. 127-164; In: Moll et al. (eds) op.cit.
- Warner, J. 2006. *Multi-Stakeholder Platforms: Integrating Society in Water Resource Management*. Ambiente e Sociedade.
- Warner, J., Hilhorst, D., and Waalewijn, P. 2002. *Public Participation in Disaster-Prone Watersheds. Time for Multi-Stakeholder Platforms?* Wageningen Disaster Studies. Disaster Sites No. 6. Rural Development Sociology Group. Wageningen University. Netherlands.
- Warner, J. and Simpungwe, E. 2002. *Stakeholder Participation in Water Resource Management: Power to the People?* Paper presented at the International Symposium on Integrated Water Resource Management. International Association of the Hydrological Sciences. January 21 – 23. 2002. Cape Town.

- Warner, J. and Verhallen, A. 2005. 'Multi-stakeholder Platforms for Integrated Catchment Management: Towards a Comparative Typology'. In: Gössling, T, Jansen, R.J.G. and Oerlemans, L.A.G. (eds.). *Coalitions and Collisions*. Wolf Legal Publishers. Nijmegen.
- Warner, J. and Orè, M. (forthcoming) El Niño Platforms: Participatory Disaster Response in Peru, In: *Disasters Journal* (forthcoming). Rural Development and Sociology Group. Wageningen University. Netherlands.
- Waalewijn, P. 2002. Squeezing the Cow. Perceptions and Strategies of Smallholders, Concerning River Basin management in the Lower Komati River, South Africa. Thesis submitted in Partial fulfillment of the Degree of Master of Science in Tropical Land Use at Wageningen University. Netherlands.
- Waalewijn, P., Wester, P. and Straaten, K. 2005. Transforming River Basin Management in South Africa: Lessons from Lower Komati River. *International Water Journal*. Vol. 30. No. 2 p 184 – 197.
- Watson, N. 2000. Creating Effective Partnerships for Sustainable River Basin Development: An Evaluation of the Fraser Basin Council, British Columbia, Canada. Paper presented at the Workshop on Multi-Stakeholder Platforms in Integrated Water Resource Management. Wageningen International Conference Center. Wageningen.
- Weber, E. W. 2003. Bringing Society Back. In: Weber, E W (ed). *Grassroots, Ecosystem Management, Accountability and Sustainable Communities*. Massachusetts Institute of Technology. Cambridge MA.
- WCC (Welsh Consumer Council) 1992. In *Deep Water: A Study of Consumer Problems in Twny and Kinnell Bay after the 1990 Floods*. Welsh Consumer Council. Cardiff.
- Wengert, N. 1957. The Politics of River Basin Management. *Law and Contemporary Problems*. Vol. 22. p 258 – 275.
- Wester, P., Merrey, D.J. and De Lange, M. 2003. Boundaries of Consent: Stakeholder Representation in River Basin Management in Mexico and South Africa. Wageningen University, Netherlands and International Water Management Institute. Pretoria. South Africa. *World Development Report* Vol. 31. No. 5, pp. 797 – 812.
- Wester, P. and Warner, J. 2002. River Basin Management Reconsidered. In: Turton, A. and Henwood, R, (eds.). *Hydropolitics in the Developing World. A Southern African Perspective*. African Water Issues Research Unit. University of Pretoria. South Africa.
- White, G.F. 1957. A Perspective of River Basin Development. *Law and Contemporary Problems*. Vol. 22. pp. 157 – 184.
- WISA (Water Institute of South Africa). 2000. Catchment Management in South Africa. Turning Policy into Practice. Report on the outcome of a symposium and workshops held on 15 and 16 February 2000. Water Institute of South Africa, Divisions of River Basin Management, and Management and Institutional Affairs. Pretoria.
- Wolcott, F. 1994. *Transforming Qualitative Data: Description, Analysis and Interpretation*. Sage Publication. London.

- Wood, D. 1997. State Without Citizens; The problem of the Franchise State. *In*: Hulme, D. and Edwards, M. (eds.). *NGOs, States and Donors; Too close for Comfort?* McMillan Press. London.
- Woodhill, J. (forthcoming). Dialogue and Transboundary Water Resources Management; Towards a framework for Facilitating Social Learning. *In*: Timmerman, J. and Langaas, S. (eds.) (forthcoming) *The Role and Use of Environmental Information in European Transboundary River Basin Management*. Chapter Four.
- Woodhill, J. 2004. Facilitating Complex Multi-Stakeholder Processes: A Social Learning Perspective. Working Document. International Agriculture Centre. Netherlands.
- Yin, R. 2003. *Case Study Research Design and Methods. Applied Social Research Methods*. Vol. 5. Third Edition. Sage. London.
- Zawe, C. (forthcoming) *Reforms in Turbulent Times: A Study of the Theory and Practice of Three Irrigation Policy Reform Models in Mashonaland, Zimbabwe*. PhD Thesis, Wageningen University. The Netherlands.
- Zey, M. 1998. *Rational Choice Theory and Organisational Theory: A Critique*. Sage Publication. California.
- Zwarteveen, M. 2006. *Wedlock or Deadlock: Feminists Attempts to engage Irrigation Engineers*. PhD. Thesis. Wageningen University. Netherlands.

SUMMARY

There is a growing global concern about future water supplies. Growing demands from agriculture, industry and urban growth are stretching available water supplies while pollution is undermining the quality of the resource base. Physical data available indicate that in South Africa, full utilisation of water resources has been reached and even exceeded in many parts of the country. Now looming is the complete depletion of the overall conventional water resources of the country, which is likely to occur in about 30 years should the efficiencies of water utilisation by different water user sectors not be dramatically improved.

Even if a state may have expertise and resources to tackle the looming water problems, a contemporary debate rooted in the neo-liberal democratic thinking argues that the state, because of the inherent shortcomings of its traditional instruments, is not able (any more) to solely solve the economic and social problems it may identify. In order to prevent unwanted developments, it is either necessary to look for alternative instruments or to lower the aspirations of central-state control. This has resulted in trying a flexible repertoire of policy responses including democratisation of resource management. It is anticipated that democratisation of resource management would increase the range of possible solutions and consequently increase social resilience by diversifying governing capabilities. In this instance, stakeholder participation has emerged as an alternative and desirable approach to natural resource management since including civil society in the process of governance logically entails the acceptance of diversity.

South Africa, like many other countries, has embraced stakeholder participation in the processes of natural resource management. The new participatory approaches however, contrast the historically simple processes of collective initiatives among more homogenous groups who shared common concerns within a familiar geographical zone. In the new resource management approaches, 'participation' has come to include complex interaction of layers of diverse actors, who make decisions over a large variety of complex ecosystems. Stakeholders participation has brought with it varying models of institutional forms and terminologies which include Participatory Natural Resource Management (NMRM), Co-Management and (Multi)Stakeholder Platforms (MSPs) and other variants - (Multi)Stakeholder Processes, (Multi)Stakeholder Partnerships, (Multi)Stakeholder Dialogues. These new institutional forms promise a considerable shift in the manner in participatory natural resources management is undertaken.

Notwithstanding, Multi-Stakeholder participatory approaches are still an unknown theoretical and management territory. Little is known about the potential of establishing institutional designs based on participatory approaches at levels as high as catchments. Furthermore, water itself presents stakeholders with diverse and extreme challenges, ranging from multiple uses, seasonal and spatial variability, to drought and flood disaster situations. For this reason, this study was undertaken to examine the benefits and the challenges of pursuing Multi-Stakeholder Participatory approach in the management of water resources at catchment level.

Catchment Management Forums (CMFs), in South Africa's water resource management arena, represented a form of MSPs that constituted the unit of analysis for this study. This research has taken a critical examination of the central issues relating to the emergence and operations of this version of South Africa's MSPs. The study targeted two CMFs in the historically marginalised areas of the Eastern Cape Province - the Mthatha Catchment Management Forum (Mthatha CMF) and the Kat Catchment Management Forum (Kat CMF). Using a combination of research methods and an institutional analysis approach, the study findings unearthed insights, dilemmas and possibilities of considerable relevance to the wider context of developing economies.

Evidence examined in this thesis has shown that while the rationale behind MSP approach to water resource management is appealing, several factors create barriers between the ideology and grounded reality especially in developing countries. First, achieving a '*common ground*' that facilitates internal collaboration and coherence among participants is highly elusive. This is attributed to the contrast that exists between the general nature of the lifeworlds of two contrasted groups of stakeholders - Organisational Stakeholders (representatives of organisations) and Community Stakeholders (representatives from community groups and villages) who are the fundamental constituents of an MSPs. The absence of a '*common ground*', vividly demonstrated in one study area - Mthatha catchment, led to the absence of a shared vision, resulting in varying interpretations of the purpose of the MSP among participants. Second, the examination of the institutionalisation processes revealed that the 'institutional arrangements' as exhibited by CMFs were not appropriate for the anticipated task of these institutions. The study revealed that non-statutory MSPs were hampered by their archaic institutional arrangements, including unstructured administration, lack of mandate and absence of financial support, which rendered the management of complex water regimes that obtained at catchment level a far-fetched objective.

Based on the exploration of MSPs that emerge and function as the two studied CMFs, the multi-stakeholder participatory approach is faced with daunting challenges in developing countries. Major argument being that policy formulation regarding stakeholder participation at catchment level, did not match legal and administrative requirements to support these institutions. Based on experiences from Kat catchment, which was fundamentally a community-based MSP, this thesis argues that the success for MSP approaches might lie in enabling grassroot participants to build their own institutions that handle issues according to their own priorities. These can then be further integrated horizontally and vertically into larger associations that transcend individual villages or common customs neighbourhoods to create a web-like institutional framework. The Mthatha case revealed that when confronted with multiple local stakeholders with sanctioned right to press for their needs, actors need not only a platform for dialogue, but also the mandate to act on their voices. Actors need specified property rights, sufficient funds to effect the decisions and government support to produce results.

SAMENVATTING IN HET NEDERLANDS

De watervoorziening voor de toekomst wordt steeds zorgelijker. Toenemende vraag vanuit de landbouw, industrie en stad zetten de beschikbaarheid en kwaliteit van water onder druk. Als het water in Zuid-Afrika niet doelmatiger wordt benut, zo blijkt uit de cijfers, zal de conventionele watervoorraad over 30 jaar (meer dan) uitgeput raken als de verschillende gebruikersgroepen het water niet efficiënter gaan gebruiken..

Volgens door het neoliberalisme geïnspireerd debat is de staat niet in staat de dreigende waterproblemen alléén het hoofd te bieden, gezien de inherente tekortkomingen van de haar ter beschikking staande sturingsinstrumenten. Tot het flexibele repertoire aan beleidsrichtingen waarmee men dit probleem het hoofd tracht te bieden behoort democratisering van bronnenbeheer, waarmee het scala aan oplossingsmogelijkheden en diensgevolge maatschappelijke slagkracht wordt vergroot, omdat het aantal bij sturing betrokken actoren wordt vergroot. Stakeholderparticipatie bij het beheer van natuurlijke hulpbronnen komt daarmee in beeld als wenselijk alternatief.

Zoals zoveel andere landen heeft Zuid-Afrika stakeholderparticipatie bij bronnenbeheer aanvaard. MSPs, waarop deze studie zich richt, zijn institutionele kaders waarbinnen belanghebbenden bij waterbeheer in een bepaald stroomgebied zich realiseren dat ze zich in het zelfde schuitje bevinden, en van elkaars medewerking afhankelijk zijn en daarom gezamenlijk actie ondernemen om hun water te behouden. Catchment Management Fora (CMFs) vertegenwoordigen in Zuid-Afrika het meest voor de hand liggende type MSP. Deze studie werpt een kritisch licht op de belangrijkste thema's rondom opkomst en functioneren van deze fora. In het bijzonder concentreerde het onderzoek zich op twee CMFs in de al heel lang verwaarloosde Oostkaap: de Catchment Management Fora in de rivieren Mthatha en Kat. Met een combinatie van onderzoeksmethoden en institutionele analyse beschouwt het de voordelen en problemen met een participatieve Multi-Stakeholder-benadering ter hervorming van stroomgebiedsbeheer.

Uit de in deze dissertatie aangedragen bewijsvoering komt naar voren dat de gedachte achter MSP in waterbeheer weliswaar interessant is, maar dat verschillende factoren in ontwikkelingslanden barrières opwerpen tussen ideologie en werkelijkheid. Ten eerste is het een illusie punten van overeenstemming te vinden tussen de bij het platform betrokken actoren, die nodig is voor interne samenhang en samenwerking. Er is een sterke tegenstelling tussen de leefwereld van twee verschillende groepen belanghebbenden - Organisational Stakeholders (vertegenwoordigers van organisaties) en Community Stakeholders (vertegenwoordigers van de lokale gemeenschap) die samen het fundament voor een MSP vormen. Het gebrek aan overeenstemming, dat met name scherp naar voren komt in de Mthatha, had tot gevolg dat een gezamenlijke visie ontbrak, wat weer tot een verschil van opvatting tussen de belanghebbenden leidde over het doel van de MSP. Ten tweede bleek uit nadere beschouwing van het

institutionaliseringsproces van de CMF's dat de 'institutionele arrangementen' die zij te zien geven ongeschikt zijn voor de taak waarvoor ze waren ingesteld. Uit de studie blijkt dat het gebrek aan wettelijke inbedding MSPs danig parten speelt: zij hebben verouderde institutionele arrangementen, zoals ongestructureerd bestuur, gebrek aan mandaat en financiële ondersteuning, waardoor het erg vergezocht lijkt dat op deze manier het complexe waterregime op stroomgebiedsniveau adequaat beheerd kan worden.

Op basis van de ervaringen met de MSP in de Kat, die in feite uit de gemeenschap zelf is voortgekomen, betoogt dit proefschrift dat het succes MSP's wellicht gelegen kan zijn in hun vermogen belanghebbenden aan de basis in staat stellen hun eigen instituties tot stand te brengen waarmee ze de problemen het hoofd kunnen bieden in overeenstemming met hun eigen prioriteiten. Deze instituties kunnen dan verder horizontaal of verticaal tot grotere verbanden worden uitgebouwd die aparte dorpen en gewoonten overstijgen, tot een institutioneel netwerk. Uit het onderzoek blijkt dat belanghebbenden, wanneer ze begerechtigd worden hun behoeften na te streven, niet slechts een platform nodig hebben, maar ook dialoog en het mandaat om hun inspraak ook gevolg te geven, specifieke eigendomsrechten, voldoende financiële middelen en overheidssteun om de besluiten ook tot uitvoer te kunnen brengen.

CURRICULUM VITAE

Eliab Simpungwe was born on 25th April 1960, on the Copperbelt in Zambia where his father worked as a medical officer in a mine hospital. However, mining and medicine had little allure on him as choice careers and in due course, he followed a career in Agriculture in which he eventually obtained his Master of Science degree in Agricultural Economics and Planning from the University of Reading in England in 1992.

In his working career, Eliab's passion has mainly been in rural development programmes and his engagements have included supervision of Agricultural Extension, Adaptive Research Planning and as a freelance rural development researcher with international NGOs, which include Norwegian Development Organisation (SNV) and the Finnish Development Agency (FINNIDA). His pursuance for greater challenges led him to South Africa, where he is now settled with his family of five. In South Africa, Eliab continued expanding his skills and knowledge horizon. In 1998, he acquired a University qualification in Education and Training while he taught Agricultural Economics at Fort Cox College in King William's Town and added Computer Technology to his skills list, which he also taught at tertiary level. It was his quest for knowledge that earned him this PhD study with the University of Wageningen in the Netherlands, which resulted into this thesis. His involvement with water issues during his PhD study resulted in the development of a new passion in water and sanitation for rural development. Subsequently, in his current position as Senior Manager at the National Community Water and Sanitation Training Institute (NCWSTI) in South Africa, Eliab is now involved in applied research within the field of Water and Sanitation and the management of a BSc. Degree programme in Community Water Services and Sanitation, which is offered jointly by the NCWSTI and the University of Limpopo.

Eliab values greatly his international exposure that his career has provided him. He has participated in research projects, workshops and conferences in several far-flung countries including Ethiopia, Japan, India, Indonesia and considers the Southern African region as his home, having lived and traversed the region several times over. His motto; even the sky is no limit, the universe is infinite.

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