Community-Based Governance of Freshwater Resources in Southern Africa

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Water Research Commission

TOWARDS INTEGRATING COMMUNITY-BASED GOVERNANCE OF WATER RESOURCES WITH THE STATUTORY FRAMEWORKS FOR IWRM:

A review of community-based governance of freshwater resources in southern Africa to inform governance arrangements of communal wetlands

Report to the
Water Research Commission

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Executive Summary

This research, funded through the Water Research Commission, seeks to address issues regarding natural resource governance arising from field work in communal wetlands in the Sand River Catchment of the north-eastern region of South Africa. Here the emerging confusion over changing roles and responsibilities for natural resources echoes wider concerns over land and natural resource tenure in communal areas. Despite the best intentions of policy reforms and democratization, there appeared to be a 'muddying of the policy waters', with various actors claiming authority over the control and management of natural resources. These actors derive their authority either from statutory legislation or from locally-derived rules and norms – a situation referred to as legal pluralism. In the case of ecosystems such as wetlands, which represent an intersection between land and water - each governed by different legislation - the confusion is exacerbated. Furthermore, these systems occur in communal lands where, in South Africa, a range of controversial statutory reforms are underway.

As in many African rural areas, work in the Sand River Catchment has highlighted that natural resources are generally managed according to locally-derived rules and norms, or a blend of local[1] and statutory systems. However, whilst this has been well-recognised and documented in terrestrial systems, the discourse on freshwater systems (such as wetlands, lakes and estuaries) is surprisingly inadequate. Fortunately this is changing and yet even with some sophisticated analysis of legal pluralism – such as in the Zambian context – many studies examining resource degradation fail to even mention governance as an important factor. This is true even of the international, high profile studies that are designed to influence policy. Given the indications that these local systems are enduring, often surviving political regime shifts, this lack of attention is wholly unsatisfactory. Research has shown that these systems are, by their nature, inherently dynamic and resilient, adapting to change. Moreover, they more often gain and retain legitimacy because they are locally appropriate and meaningful or because they are locally administered.

Legal pluralism raises a number of ambiguities in South Africa. At a national level, massive statutory reforms are intended to bring about the ideals of equity and sustainability through transformation. On the other hand, our ability to implement and monitor this transformation, at least in any meaningful way, has come under scrutiny. At a local scale all indications are that in communal areas, common-property regimes have been and continue to be, the norm – regardless of statutory legislation. Even so, these are transforming. Such ambiguities pose challenges for developing a viable, effective and wise governance system for natural resources, particularly if one system is not deemed superior to another. In South Africa, the democratic principles that underscore the constitution recognise diversity, and require inclusivity and public participation.

Turning to freshwater systems specifically, one issue that we sought to explore was whether or not local-level governance systems are the norm particularly in communal

[1] See discussion on terminology in Chapter 1

areas. If this is indeed the case, and knowing that government needs to partner with civil society to achieve transformation, it can be argued that such systems should be embraced rather than rejected as 'illegal' or 'informal'. This of course raises much deeper and more fundamental questions regarding the ethics of law: whose law? which is the 'right' law, particularly given the genesis of today's statutory law and its imposition in colonial times?

With this background in mind, we sought to look at ways to engage this discourse at both a practical level and from a policy perspective. What was lacking however, was an overview of the status of community-based governance of water resources and, for our purposes, within the southern African context. Thus the project aimed to contribute to the growing discourse on legal pluralism in water management through examining local, or customary, laws in practice. Importantly, the focus was not on water supply (community management of water supply which has received significant attention) but rather on the wider arena of water resources management[2].

To this end we reviewed the status of community governance of water resources in four SADC countries (South Africa, Mozambique, Zimbabwe and Zambia), and documented the complementarities and tensions between statutory and customary systems (Chapters 3-6). The review was based on an analytical framework which was developed for the purposes of the project (Chapter 2). The discourse and learnings then supported the discussions of a specialist workshop held toward the end of the project to address the integration of customary management of water resources and statutory institutional arrangements. Given the issues emerging from our field site – known as the Craigieburn wetlands – the possibilities for such integration within the South African context received particular attention (Chapter 7).

As stated, Chapter 2 provides a framework for analyzing case studies as well as a discussion of key concepts. The framework considers (a) the context, including the history, the nature of the resource and the users, as well as key drivers and (b) property regimes and institutional arrangements, and (c) their interactions. Some of the more important concepts and terms that are discussed are synthesized in Table a.

Table a: Summary of important terms and concepts for this work. Note that none of these definitions imply fairness, sustainability or legitimacy which is a descriptor of these terms

Term	Description
Customary systems	These include layered and shared rights of land access and use, institutional nestedness of family, clan, tribe and normative values that inform the basis of resource entitlement. The principles governing land access, rights and use are well understood by a local community, but may not conform to the country's legal procedures.
Governance	Governance is a socio-political process to manage affairs; it

[2] This is not to say that water supply is not a key issue – it is, but rather that the local management of a freshwater resource as a whole, such as a lake or wetland, encompasses much broader issues and gets to the heart of water resource management.

	thus describes the relationships between people and the rules and norms that are set up to guide these interactions. It may include collaboration.
Government	Government, on the other hand is a political authority. A government is a body that has the power to make, and the authority to enforce, rules and laws within various groups (civil, religious, academic).
Management	Management refers to the implementation of actions aimed at achieving a particular agenda. Management is not the same as governance although the same body could be involved.
Property rights	Property rights refer to the "rights and obligations of individuals or groups to use the resource base; a bundle of entitlements defining owner's rights, duties, and responsibilities for the use of the resource, or "a claim to a benefit (or income) stream".
Institutions	Institutions are the sets of rules actually used by people to organize repetitive activities (e.g. marriage). They are socially constructed. They can include both statutory and local instruments (the law, courts) and organisations (catchment councils, chieftaincies). Institutions regulate the way an individual, or a group, interacts with another or a resource
Resource tenure	Resource tenure refers to all the ways in which people gain access to natural resources. (Lavigne-Deville, 2004) defines tenure regulation as "a set of practical decisions regarding rights including governance, management and operation".

The country reviews (Chapters 3 to 6) indicated that issues of legal pluralism are evident in all four countries. This pluralism is evident (a) within the statutory system, where the jurisdiction of multiple laws intersect and overlap, and (b) between the statutory and the customary governance regimes. In all countries, the *de jure* situation contrasts with the *de facto* where people are either unaware or unsupportive of state legislation, preferring to use locally-derived rules. In Zimbabwe, the discourse on legal pluralism is well-developed through the CAMPFIRE initiatives. However in terms of water, the focus has been on water supply rather than on water resources management. A key lesson from Zimbabwe is that in the face of political instability, the formal systems weaken (Catchment Councils are mainly dysfunctional in many areas) and people fall back on customary arrangements. In Zambia, the imposition of statutory legislation has met with resistance in a number of cases, whilst in areas too remote for state intervention people rely on local-level common property arrangements. Zambia is undergoing a process of water reform currently but it is not clear if legal pluralism will receive the attention it deserves. Likewise in Mozambique, work on common-property resources suggest that local-level governance arrangements persist in the face of statutory reforms and again, the issue of legal pluralism appears to have received inadequate attention.

In South Africa legal pluralism in the water sector has received almost no attention. Historically the opportunities for community management of freshwater ecosystems were confined to the former Bantustans, and in a modified and contrived form in any event. Today, residents of communal lands are represented by both local councilors and tribal authorities, but the legacy of apartheid, together with the uncertainties of transformation has meant that community-based systems are weakening or contested. Moreover, the contemporary landscape is set to change with the introduction of two new laws concerning communal areas. Notably, these laws[3] are silent on natural resources (other than the land itself). Some argue that sustainable and equitable land management is provided through this new legislation, whilst others contest that these statutes are problematic because of their definition of community, their bureaucratisation of community-rules, and the overwhelming lack of capacity to provide meaningful and sustained support for implementation.

The other piece of legislation that pertains is that of the National Water Act (1998) which does not give consideration to community-based management of freshwater resources *per se*. Nonetheless we suggest that opportunities are available for embedding local common-property regimes within the statutory frameworks. The management of some aspects of water resources management is being decentralized and devolved to Catchment Management Agencies and these can, in turn, devolve some functions to civil society through Catchment Fora or Water User Associations. This is an important aspect to consider because despite the clear theoretical boundaries, in reality, property regimes are rarely distinctive. Overlapping regimes are seen when, for example, the state may act as custodian over water (public asset) whilst at a local level common-property regimes (and at times private claims) are operative. The case of wetlands for example illustrates overlapping private and common property regimes. We conclude the chapter by drawing a distinction between participation and governance, and caution against the interpretation of the former as governance. The latter places the locus of power in the hands of a community, although it must be remembered that common property regimes may include enforcement backup by government controls.

The report concludes that locally-based systems are part of our institutional landscape. We have been warned that the 'neglect of customary laws may cause IWRM implementation to fail, or will have negative consequences for individuals and groups who were better served by customary-based systems – especially the poor" (UDSM, et al., undated).

Legal pluralism is a reality, at least in the foreseeable future, and thus a more constructive approach to the apparent dilemma of legal pluralism is needed. Rather as urged by Bruns (2005), let us not be constrained by a few idealized models of centrally managed water. Preferably let us seek innovative ways to integrate, or embed, common-property regimes with the formal, statutory system.

[3] Communal Land Rights Act and the Traditional Leadership and Governance Framework Act

Chapter 1

Introduction:

Recognising community-based governance of water resources in communal areas

1.1 Introduction

This document presents the final report of the Water Research Commission project entitled 'A review of cases of community (local)–based governance of freshwater resources in southern Africa to inform potential governance arrangements of communal wetlands' (Project no. K8/ 614). This research project, which was conceptualised in late 2003/ 2004 and funded through the Commission in 2005, was catalyzed by the need to address concerns that arose from field work in communal wetlands in the north-eastern region of South Africa.

At a local-level wetland users and village residents expressed concerns over the emerging confusion regarding tenure and access to resources, echoing wider concerns over land and natural resource access in communal areas. Despite the best intentions of policy reforms and democratization, there appeared to be a 'muddying of the policy waters', with various actors claiming to have the rights to control and manage natural resources. Exacerbating the confusion was the fact that these discussions pertained to wetlands – an interesting nexus of water and land – that challenges the western approach to managing these two resources independently. Other work being undertaken by the team on national policies pertaining to natural resource management within the context of land and water reform, highlighted a gap that had not been addressed in statutory water reform in South Africa. The gap was this: the failure to recognise that some water-based systems (such as wetlands, lakes and estuaries) fall in communal areas and, due to a number of factors (not least of which is lack of government's regulatory capacity), are managed locally, according to community derived rules and norms.

In terms of the national position, South Africa is at a stage where it seeks to achieve the sustainability of its natural resources through a number of instruments, guided by the policy and legal framework. This is equally true for neighbouring countries that have, or are, undergoing water policy reform. A key aspect is in the devolution of decision-making and governance to a local level and the inclusion of stakeholders directly using, affected by, or with interests in the natural resources in question. In South Africa for example, water resource management therefore is being devolved to Catchment Management Agency's (at the scale of the 19 Water Management Areas) and to catchment forums and/or committees, and water user associations at a sub-catchment or smaller spatial scale. In Zimbabwe, catchment and sub-catchment councils are being established as participatory institutions. Nonetheless, as both the above situation case illustrates, and the literature on local natural resource management demonstrates, the day-to-day management of natural resources more often happens at the scale of the resource itself (i.e. the woodlot or wetland for example). This is particularly true in communal areas. Therefore, to honour the commitment of stakeholder involvement, southern Africa and South Africa must find ways to integrate this scale of resource management into other platforms such as the catchment forums. Likewise, in terms of other natural resources, like woodlands and forests, the National Action Plan of

the Department of Environmental Affairs spells out the importance of community-based natural resource management (CBNRM), although it has yet to support this in practice.

Nonetheless, three key issues prevail currently in South Africa to undermine this intention.

- Firstly, and very surprisingly, despite the legal and framework support very few examples of local level-level management exist in South Africa. Indeed, there is not a single CBNRM initiative in the Lowveld for example, despite dwindling natural resources, a governance vacuum, and the intense debates and substantial literature that is available.
- Secondly, whilst there is a substantial literature base, it pertains almost exclusively to terrestrial resources.
- Thirdly, recent research in a number of wetlands (such as the Sand River and Mbolangwane) indicate that whilst natural resource management in communal land used to fall under the administration of the chief and his indunas, this system is changing and contested. In some cases these communal resources are now moving towards open access. This has been accompanied by a wide spread increase in uncontrolled harvesting and in turn threatens the sustainability of the resource and the livelihoods of local people, often the poorest.

Trying to find ways to support the local governance of natural resources within communal lands of catchments is severely confounded by the lack of understanding of what used to be in place, or still is. Much of the literature is anecdotal and limited to internal reports or to professional narratives, but nonetheless requires analysis within new sustainability frameworks. A much wider (albeit still limited) literature appears to exist regarding water resource governance in other countries in southern Africa but it is generally incorporated within wider management discussions. So as to offer lessons for South Africa, this aspect of the work sought to synthesise what is known about customary approaches to water resources management, and if – and how – these arrangements are being embraced by formal institutional and statutory mechanisms.

1.2 Rationale for the research

The extensive range of institutions that govern natural resources – from international law to local rules – are rarely uniquely present. Rather a range of overlapping, and evolving rules gives rise to a nuanced and context-specific natural resource management regime (see for example Meinzen-Dick and Pradhan, 2002). This situation of overlapping 'laws' is referred to as *legal pluralism* in some of the literature (see Chapter 2 for a definition), and indeed was the subject of a conference held in 2005 (see www.nri.org). Whilst the state can set the broad rules based on sound principles, their execution relies on the interaction of a variety of role-players. In countries like South Africa where, despite the phenomenal transition to policies based on equity and sustainability, the capacity to implement them is sorely lacking, local-level support and ownership become a key component of their success or failure. Indeed it could be suggested that under these circumstances, *de facto* natural resources management happens at the local level – lying in the hands of the people living with the resources. As posited by Murphree (1991), many states and privatised concerns have taken on far more resource management authority than they can carry out effectively. Given this it would seem appropriate that the local users and managers – often marginalized – should therefore play a key role. This situation is characteristic of the water sector in South Africa, currently constrained by capacity. Thus we suggest that accepting and embracing this legal pluralism at a strategic level must receive deserved attention if we are to effectively manage natural resource management.

Nonetheless, these issues are complex, often hidden behind layers of seemingly self-evident myths. An oft-quoted common wisdom in South Africa for example, is that erosion, so prevalent in former Bantustan areas, is due to 'poor natural resource management'. This is often accompanied by the seemingly natural progression of logic that states that privatizing these assets will be accompanied by improved management regimes (a highly contested view in South Africa; see for example Claasens 2000; Cousins 2002; Cousins et al., 2005). These one-liners often negate the realities and underlying drivers that tell quite a different story.

It seems obvious that a key aspect of embedding local-level, customary or 'traditional' management regimes is first to understand them, but this understanding – in South Africa at least – is scanty. In some countries such as Zimbabwe and Namibia where CBNRM as an approach (especially for wildlife protection) has received concerted attention, the literature is fairly rich. In other areas, the reports tend to reflect project specific interests such as the rift-valley lakes of Malawi and Tanzania, the Kafue flats of Zambia (a focus of international support) and the like. In Mozambique, only a decade out of a debilitating war, the accounts tend to emerge out of land tenure reform projects.

Nonetheless, much of the work is almost exclusively dedicated to land management regimes and water is mentioned often only by association. This project aims to provide the first steps in that direction through a broad review and collation of customary regimes in SADC countries. The focus is on water and one may indeed question why. The reasons are multiple. Firstly, South Africa's water resource management institutions (along with others in the region) are moving into new realms with the establishment of various bodies. It is thus opportune given the reasons above, to engage in how local-level management regimes can be supported and embedded into this matrix of institutional approaches. Secondly, the focus on customary approaches to water and water tenure is lagging behind that of land tenure reform (as is the case in many countries according to Meinzen-Dick and Nkoya, 2005). A number of reasons seem apparent in this regard and these are discussed later in the text. Thirdly, water by its nature is different to land in that it is a natural resource that is often moving (as in rivers), crossing land held under various tenure regimes, and is a resource that is philosophically and legislatively regarded as a common-property resource under the custodianship of the state.

Nonetheless, aspects of freshwater resources have been – and will continue to be – managed at a local-level and it is at this scale that the linkages between land-tenure and water rights become so important. In this paper we focus specifically on freshwater resources that occur within communal lands. In South Africa this refers specifically to state land on which people are resident and to land that comprised the former Bantustans of South Africa. These Bantustans, or so-called 'homelands', constituted some 13% of the country but accommodated 85% of the population, following extensive forced removals under the apartheid regime between 1948 and 1994 (see Figure 5).

1.3 Purpose of the work

The overall objective of the project was to conduct a review of the legislation pertaining to, and case studies of, community–based governance of freshwater resources in South Africa, and in southern Africa, so as to inform potential governance arrangements of communal wetlands.

The sub-objectives of the project were as follows:

- To explore the concept, through case studies (or lack thereof) of community-based governance (past and current) of freshwater systems in South Africa.

- To review and synthesize examples of community-based governance in southern Africa (Mozambique, Zimbabwe, Botswana, and Namibia) pertaining specifically to freshwater systems.
- To research, understand and document lessons and guidelines for governance options for communal freshwater resources from these case studies, in order to achieve both wetland health and livelihood security.
- To explore and synthesise the legislative options for natural resource governance (with an emphasis on water) in communal areas of South Africa.
- To develop a position paper for South Africa on CBNRM of freshwater resources, including the identification of vulnerable areas in terms of freshwater governance in communal lands in South Africa.

The underlying questions of the research focused on gaining an understanding of where local-level water resource regimes occur and on what information exists on past and present governance/ management of these resources. In particular we sought to examine what lessons could be gained and applied in the common-property systems in which we work. Additionally, in South Africa two new statutes are set to bring about change in communal land and with this foremost, we also wished to explore the intersection between land and water reform as well as the implications of these for common-property regimes of freshwater resources. Finally, given the emerging catchment management agencies we sought to examine practical ways in which local-level governance regimes can be integrated into catchment management.

1.4 Overall approach and structure of the report

The overall approach was to develop an overarching analytical framework for analysis of common-property regimes, including a review of important concepts and terminology (Chapter 2). This framework was used as the basis for the analysis of case studies from four southern African countries for which literature was available: South Africa (Chapter 3), Mozambique (Chapter 4), Zimbabwe (Chapter 5) and Zambia (Chapter 6). In some cases the analysis was supported by case study visits. Although the focus of the report is on the so-called 'informal' governance arrangements, mention is made of the statutory frameworks. In the case of South Africa however, a more detailed review was undertaken of the new land tenure legislation that has bearing on communal areas as well as the legislative options for the governance of freshwater resources within communal lands of South Africa (Chapter 7). This is because a focus of the work was to explore ways in which the community-based management of water resources can be considered both in statutory frameworks for water and land in South Africa. All of the above work was discussed and debated at a workshop held in May 2007 and attended by specialists from each of the countries reviewed (see Pollard and de Wolf, workshop report).

It is hoped that the report is presented in such a way that the reader, possibly not familiar with governance theory (and jargon), gains insight into this field. Thus for example, we attempt to introduce some understanding of tenure, tenure regimes, collective action and community-based natural resource management. To this end we provide a brief review in Chapter 2 of important concepts such as 'governance', 'government', 'property' and 'institutions' that may not be immediately apparent or clear to the reader.

Chapter 2

Development of an overall framework for analysis

2.1 Introduction and overall approach

A wide range of literature was reviewed for the purposes of this project. In order to examine each document for governance-related information, an overall analytical framework was developed, the purpose of which was to support the country reviews and analysis based on a sound conceptual basis.

The analytical framework was developed from a review of the literature regarding key concepts, existing frameworks and major areas of focus or concern. A draft analytical framework was then reviewed at an expert workshop that was held as part of the project. It is interesting to observe that noticeable differences in emphasis and discourse were evident between the corpus of literature pertaining to the field of community-based natural resources management (CBNRM), that related to common-property governance regimes and that pertaining to land tenure reform (which is very topical currently in all four countries reviewed). Nonetheless, sufficient convergence and overlap exists to allow for the development of a sensible and cohesive framework, as well as potential for synergies and co-learning between these fields.

2.2 Overview of key concepts and definitions

We start by asking the question: what do we mean by the terms '***community***', '***common***' and '***communal***'? Barrow and Murphree (2001) offer a useful definition of a community (in terms of natural resource management) as "(a) social grouping with the actual or potential cohesion, incentive, demarcation, legitimacy and resilience to organise (its) self for effective common pool natural resource management at levels below and beyond the reach of state bureaucratic management."

Associated with the notion of community are the terms '*common*' and '*communal*'. Indeed, these terms are often used interchangeably (e.g. common property institutions (dealing with communal resources), or communal land (referring to a common property resource)) although legally there are differences[4].

As people experience it in African tenure systems, **communal land** refers to the land and the natural resources on that land that are used by a more-or-less fixed and identifiable group of people according to the tacit (unspoken) and explicit (named openly) rules of that group (Cousins, 2007).

Also linked to the notion of 'community' on communal land is the issue of boundaries. A key characteristic of African tenurial systems, and one that a number of authors contest has been overlooked in the land reform process in South Africa, is that communal tenure systems are nested and have multiple and flexible **boundaries** (Cousins, 2007). Rights are held at different scales depending on the resource, the user and the season. An example of this is illustrated by wetlands, where each resource, with different boundaries is accessed by different users at different times.

[4] From a legal perspective there is a difference between *common property* and *communal property* based on a very subtle difference in who owns the property and what the ownership means. Common property means property that is ***undivided*** between ***co-owners***. Communal property means property in which the joint owners are a ***community***, and the property is ***equally owned*** by all the members of that community.

Moreover rights can be re-negotiated, they are inclusive, flexible and adaptive. These properties are discussed at length by Cousins and Claasens (2004).

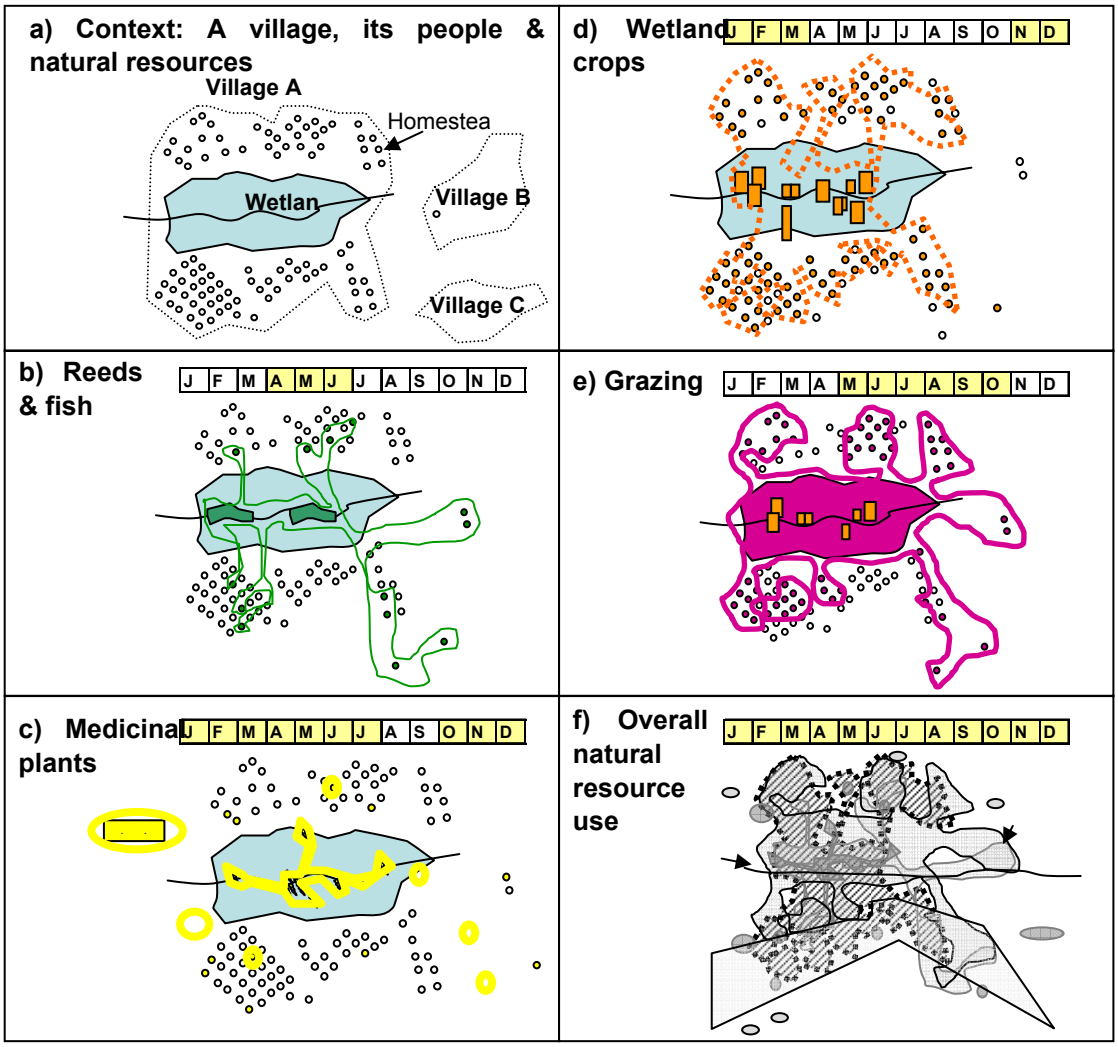

Figure 1: Flexible boundaries of common property resources

A schematic illustration of the flexible boundaries of a common-property regime for a freshwater resource such as a wetland. Different resource boundaries – spatially and seasonally – are overlaid with different user boundaries thereby displaying qualities that are quite different to those under private property regimes.

In the Communal Land Rights Act of 2006 (South Africa), communal land is defined as 'land which is, or is to be, occupied or used by members of a community subject to the rules or customs of that community'. Community is 'a group of persons whose rights in land are derived from shared rules determining access to land held in common by such group'. In this report, '**communal**' – as in communal system, tenure or land – is used to reflect the broadest possible interpretation of community land settlement arrangements, where land access and allocation is based on membership of a particular group or community in contrast to market-based private land transactions. The communal system refers to multiple levels of community decision making around local land issues (i.e. land rights and access, spatial arrangements, land use management and governance practices).

An associated term is that of '**customary'** which is also interchanged with the terms 'indigenous', 'informal', 'traditional' or 'local'. None of these terms are entirely satisfactory. In the term 'customary' there is an implied quality of historical continuity, mitigated by adaptability to change over time as systems respond to new external challenges. The concept is similar to 'traditional' only the latter can be misinterpreted to imply a naïve acceptance of obdurate adherence to unchanging values, which these systems do not necessarily display. The term 'traditional' has also somewhat controversially become co-opted into formally recognised state structures. The term 'informal' is highly pejorative in that it implies a quality that is 'less than' the formal system which carries more status and implied legality purely through codification. This is only a matter of perspective since so-called 'informal' systems are the *de facto* legal system that people adhere to. Equally, a 'local' system has subtle implications of being 'less than' the 'bigger system' and implies a disconnectedness from other systems – also not entirely true or satisfactory. For this report we have chosen to use the term 'local' or 'customary' bearing in mind the above concerns.

'**Local**' or '**customary**' – as in a customary system, tenure or principles – is used in a fairly loose sense to reflect local governance practices in relation to land access, rights and use that are well understood by a local community and that are regulated by customary principles.

Customary systems include layered and shared rights of land access and use, institutional nestedness of family, clan, tribe and normative values that inform the basis of resource entitlement. The principles governing land access, rights and use are well understood by a local community, but may not conform to the country's legal procedures.

Another important issue captured in the title of this report is that of **governance** and what this means. Conventionally, governance has been understood as government systems (structure, power, effectiveness, efficiency, rights and representation). Indeed, English-speakers sometimes erroneously confuse the term *governance* with the term *government*. More recently, definitions of governance have expanded from a preoccupation with law, coercion and formal political structures of government (bureaucracies, party systems) to incorporate a broader range of practices and management strategies. In her opening address at a conference on the governance of natural resources in 2000, Pauline Peters (2000) expressed an often-held observation that governance goes *beyond* management when she noted that "governance implies a much more independent form of legitimate[5] authority, even ownership that subsumes but goes beyond the idea of management". She went on to say that "possibly more significantly, governance is not located at any particular level. Hence the proper[6] governance of natural resources might reside at communities of users (village) ...or in partnership between communities and an arm of local government or in a structure that incorporates the latter partnership with a regional or water catchment body responsible for monitoring and regulating inter-sector interactions". Thus authority can be located at any number of levels, the term can embody notions of power and authority in a way that management does not.

[5] Note that the notion of 'legitimate' requires examination as a system may be 'legitimate' in the legal sense but may not hold at its core principles such as equity and social justice and sustainability which may constitute elements of good governance.

[6] Thus introducing the notion of **good governance** – the elements of which are currently widely debated.

Governance
A simpler way of thinking about this may be that ***governance*** is a socio-political process to manage affairs; it thus describes the relationships between people and the rules and norms that are set up to guide these interactions. It may include collaboration. ***Government***, on the other hand is a political authority. A government is a body that has the power to make, and the authority to enforce rules and laws within various groups (civil, religious, academic). ***Management*** refers to the implementation of actions aimed at achieving a particular agenda. Management is not the same as governance although the same body could be involved. Note that none of these definitions imply fairness, sustainability or legitimacy which would refer to *types* of governance, government or management.

An important, although not central, concept for this review is that of **community-based natural resource management** – or CBNRM. Although a detailed review of this field is beyond the scope of this report, an examination of the CBNRM literature indicates that its meaning varies widely from one that is more closely linked with ***governance*** (where the locus of power to set rules and norms resides) to one more closely linked with implementation (i.e. ***management***). This distinction is important since any discussion of customary arrangements needs to be clear on whether the focus is on governance or management (or both). Many 'project-based' arrangements (where the rules have been developed with external assistance) represent a focus on management (co-management, collaborative management) or a blend of these (see for example Western et al., 1994; Jones, 1998; Maveneke, 1998; Shackleton et al., 2002; Turner et al., 2002; Jones and Murphree, 2004). Jones and Murphree (2004) make a strong case for not only delegating responsibility but also authority and entitlements or full proprietorship.

Together with this shift in interpretation and understanding within the discourse of natural resources management (NRM) has been the increased deliberations on so-called **informal systems** of governance – the role of norms, rules and expectations as bounding behaviour for the collective good (http://dfidweb.difd.gov.uk). Thus at the heart of governance is the collective attempt to manage and regulate *social relations* rather than the role of formal institutions (see later definition; Meinzen-Dick and Nkonya, 2005). This re-orientation that places social interactions at centre stage has seen an increasing commitment to the notion that effective management and regulation involves governments co-operating with, or devolving government functions to NGOs and the private sector.

Property rights
The "rights and obligations of individuals or groups to use the resource base; a bundle of entitlements defining owner's rights, duties, and responsibilities for the use of the resource" or "a claim to a benefit (or income) stream".

Underlying the discourse on governance and natural resources is the issue of property and **property rights**. Although the western notion of property tends to be restricted to fixed assets, paper and stamps, this definition is not very useful when trying to understand how natural resources have been managed by communities using them (Meinzen-Dick and Nkoya, 2005).

A more appropriate and embracing definition of **property** is given in the box. A property right is a claim to a benefit stream that some higher body – usually the state – will agree to protect through the assignment of duty to others (Bromley, 1992). More simply, a property right is "the claims, entitlements and related obligations among people regarding the use and disposition of a scarce resource" (Furubotn and Pejovich, 1972, cited in Meinzen-Dick and Nkonya, 2005). The use of the term '*scarce*' is telling in that it points to a widely supported theory that as long as a resource is abundant, there is little incentive – or need – to define

rights over it. However increasing scarcity and demand is essentially the catalyst for defining rights (Alchian and Demsetz, 1973, cited in Meinzen-Dick and Nkonya, 2005).

Another important term in this discussion is that of **institutions** which like property, conjures up images of formal bodies and buildings. Again this represents a very narrow interpretation of what are defined as 'humanly devised constraints that structure human interaction'. It is important to note that they are made up of:

- formal constraints (rules, laws, constitutions),
- informal constraints (norms of behaviour, conventions, and self-imposed codes of conduct), and
- their enforcement characteristics.

Institutions
The sets of rules actually used by people to organize repetitive activities (e.g. marriage). They are socially constructed. They can include both statutory and local **instruments** (the law, courts) and **organisations** (catchment councils; chieftaincies). Institutions regulate the way an individual, or a group, interacts with another or a resource.

Ostrom (2000) recognises institutions as "*the set of rules* actually used (the working rules or rules-in-use) by a set of individuals to organize repetitive activities that produce outcomes affecting those individuals and potentially affecting others" (emphasis added). Importantly, institutions are socially constructed; they have normative and cognitive, as well as regulative, dimensions (Jentoft et al., 1998) and hence are about the relationship between people. As pointed out by Latham (2002), a colloquial definition would be to say that institutions are what define 'the rules of the game'. They are the formal, political and **legal instruments** of governments (parliaments, the courts, second and third tier local governments (councils or municipalities) water management organisations (catchment councils and their lower tier structures) and so on). There are also 'traditional' or 'indigenous' institutions of governance (chieftaincy; jurisdiction over natural resources; rules governing the distribution of water; or the procedures for initiating development programmes). Institutions include the **rules governing social relationships** (a kinship system; marriage). Institutional arrangements regulate the way one approaches the supernatural. These are termed **religious institutions** (the church, customary procedures for interventions with the shades of the departed, harvest ceremonies and the like). Together all these institutions comprise a **social system.** Nemarundwe (2003) categorises various forms of institutions involved in NRM under three broad areas as formal, informal (or customary) and civil society (see opening discussion on these terms).

Legal pluralism recognises that only rarely is a resource subject to one institution. For example, in theory natural resources may be governed by the formal laws of the land, but in practice their day-to-day use and management is subject to local 'rules of the game'.

As pointed out by Meinzen-Dick and Nkonya (2005), property rights are only effective, or legitimized, if there is some kind of institution to support them. The breadth of these institutions spans international law, state and local laws to which one may add religious and project specific legal orders (Meinzen-Dick and Pradhan, 2002). Rarely is a resource subjected to one institution, rather it is their overlapping effects that give rise to a nuanced and case-specific reality. This **legal pluralism** is then an almost ubiquitous characteristic of natural resource governance systems. This does not elevate or romanticize local systems of governance – it simply requires us to recognise and work with them. Indeed, some case studies have shown that recognition of the 'local' has been used as a means to codify inequality through elevating so-called 'native law'. Research on the history of a native reserve in Sabah (Malaysia), for example, showed how codifying unequal power relations during the colonial period through 'native law', provided privileges to the ruling elite such as participation in lucrative land markets, while barring natives from enjoying these privileges

(IDRC reader www.idrc.org). Nonetheless, given that customary laws are dynamic (i.e. they can embrace new situations and principles) and that the costs of creating 'statutory' institutions and enforcing rules are high, local management must be given explicit recognition in NRM including that of Integrated Water Resources Management.

Resource tenure lies at the heart of the following discussions. It is defined as "all the ways by which people gain legitimate access to natural resources for the purpose of management, extraction, use, and disposal" (IDRC www.idrc.org). Importantly, this includes unwritten, so-called 'informal' practices through which people gain access to resources. Resource tenure regimes are generally complex and overlapping where for example, one resource (a field) can be many different resources all at once, that are accessed by different people in different ways at different times of the year. The term 'legitimacy' places power at centre stage, recognizing that it can be based in both control of material resources such as land or trees, and in the more subtle ability to shape legitimacy through social norms and interactions. In discussing natural resources tenure regulation, Lavigne-Deville (2004) defines tenure regulation as "– set of practical decisions regarding rights". This includes elements of:

Resource tenure refers to all the ways in which people gain access to natural resources. Lavigne-Deville (2004) defines tenure regulation as "– set of practical decisions regarding rights including governance, management and operation".

- governance (power and capacity to define rules),
- management (organisation of rule implementation),
- operating (concrete implementation through adjudication, citations, surveys, contracts, etc.).

At a very broad level, institutions deal with **two issues:**

1. The issue of access and exclusion: How to control access to the resource, given that it is difficult or costly to exclude potential users from gaining access to the resource ('the exclusion issue');
2. The issue of subtractability: How to institute rules among users to solve the potential divergence between individual and collective rationality. In other words how to deal with the problem that each person's use of the resource subtracts from the welfare of the others ('the subtractability issue').

Bundles of rights

Resource tenure can be considered as '**bundles of rights**'. These are described differently by different authors, dependent mainly on the resource at hand. Cousins and Claasens (2004) working in the land reform sector in South Africa for example, talk of the right to occupy, use, bequeath, transact, mortgage, exclude and accrue benefits from land. Murphree (1991), focusing in the field of community-based natural resource management, notes the importance of sanctioned user rights, the right to decide, to determine the extent and mode of use and to benefit from exploitation. Schlager and Ostrom (1992) talk of the right to access, withdrawal, management, exclusion, and alienation and conceptualise these in terms of 'levels'. Nonetheless, as noted by Meinzen-Dick and Nkonya (2005), they can be grouped into two broad categories:

1. Use rights of access and withdrawal;
2. Decision-making rights to regulate and control (water) use and users, including the rights to exclude others, manage the resource, or alienate it by transferring it to others (Schlager and Ostrom, 1992), and to appropriate (Agrawal, 2001).

To these they add:

3. Usufruct rights or the right to earn an income from a resource.

Access is the most basic right, and can be inherently inequitable. For example, access to different kinds of resources can be gendered, and can change over time. In some cases, a regime that appears to have no rules – and categorized as open-access (implying a free-for-all) is actually not so, a situation symptomatic of complex and inequitable rights of access. For example, villagers in Java appear to have difficulties in restricting access to local fishery resources. What seems to have emerged are 'informal practices' which redistribute the catch taken by larger operations, through what looks to outsiders like a free-for-all as the fish are transferred from boats to the shore (Kendrick, 1993).

Ownership in terms of land, as reflected in the Deeds Registry, is the highest legally protected real right. The title deed provides a very secure form of tenure because it is evidence of the boundaries of the land and shows details of the owner. The owner has the ability to use, control, transfer or otherwise enjoy the resources on that land as long as national or local law allows those activities. The owner may limit these rights by leasing the land or a particular resource on it, by agreeing to servitude, or by ceding land as collateral. Ownership may legally be taken away only by expropriation or as settlement of a debt.

Types of resources and property rights regimes

When discussing tenure regimes, an influential piece of work is that of Hardin, known as the 'tragedy of the commons'. His essay (summarised in Box 1), written in 1968, was a catalytic paper for scholars of common property theory. Catalytic because it mobilized scholars and practitioners to think more clearly about what conclusions they were drawing with regard to resource use, rights and sustainability and under what circumstances certain patterns may emerge.

Box 1: Tragedy of the commons

The 'tragedy' that Hardin (1968) wrote of within resource use is the outcome of economically rational, individualistic decision-making that mounts with increasing populations (Berkes et al., 2001). As a metaphor, he used grazing of cattle on open pastures. He asserted that each cattle owner will want to maximize gains by keeping as many cattle as possible. However, once the carrying capacity of the land is reached each herder is confronted with the decision of adding one more animal to his herd. If he does so, he alone gains the benefits whilst the effects of overgrazing will be shared by all. Thus, argues Hardin, the herder's rational decision, and that of all herders using the pasture, is to increase their herd size. This leads to eventual collapse of the very resource on which they depend and therein lies the tragedy.

The dominant legacy of his famous essay, however, has been in the area of natural resource management and the drive to privatize the commons. The phrase, 'tragedy of the commons' has stuck, even though many scholars have noted that commons have operated successfully in many places. Hardin's 'tragedy' has been criticized from two main perspectives. Firstly, the argument is that he conflates a common property resource with that of open access. As pointed out by the resource economists (Ciriacy-Wantrup and Bishop, 1975), 'common property' is not the same as 'everybody's property' (see below). Secondly, Hardin's analysis, in common with that of many neoclassical economists, suggests that resource users act only in self-interest, maximizing their individual benefits and unfettered by community and social relations. Thus he is accused of ignoring the social relations that exist between people and that influence behaviour. Feeny et al. (1998) undertake a detailed examination of evidence since Hardin's publication.

Today, four types of resources and associated property rights regimes are recognised in the literature:

1. **Public/state property** with sole government jurisdiction and centralized regulatory controls. In this case ownership is held by the state (as in South Africa). In the case of land it can be held in trust for the community. In the case of land and water, the government allocates rights of use to the user.
2. **Communal property**, in which the resource is controlled by an identifiable community of users, and regulations are made and enforced locally. Common-property resources are defined as a class of resources for which exclusion is difficult and joint use involves subtractability (see also Feeny et al., 1998). In most customary law in Africa water is considered as a community asset with no private ownership. However, areas like wetlands are an example of where private and commonage may overlap.
3. **Private property** and the privatization of rights through the establishment of individual or company-held resource harvesting quotas. Here rights are held by natural or legal individuals. In the case of water, generally only use rights are recognised, normally through a permit or licencing system. Furthermore, in most SADC countries, domestic use does not require permitting.
4. **Open access**.[7] This is not strictly a property-rights regime as it describes a condition where resources are the property of no one and are available to everyone (Murphree, 1991). Here people use the resources opportunistically but do not manage them. In general, 'open-access' is regarded as a negative situation and represents the collapse of a management regime which has degraded to one of open access. As pointed out by Meinzen-Dick and Nkonya (2005), open access can have positive connotations in the African setting since in situations where people have unconstrained access to rivers, streams and lakes, the notion of 'water for all' or water as a human right is given full effect. Nevertheless they also note that this is less likely to function in areas of high population densities and increasing resource scarcity.

All three regimes – communal property, private property and state property – involve defined property rights, whereas open-access is the absence of property-rights.

Despite the clear theoretical boundaries, in reality, property regimes are rarely distinctive. Overlapping regimes are seen when, for example, the state may act as custodian over water (public asset) whilst at a local level common-property regimes (and at times private claims) are operative. Common property regimes may include enforcement backup by government controls. The case of wetlands given above illustrates overlapping private and common property regimes. The point however is if these are working, there is little rationale to try to manipulate them into officially recognised institutions. In South Africa, recent research in the former Bantustan areas points to the disintegration of common-property regimes into open access systems with negative consequences for both sustainability and peoples' livelihoods (Shackleton et al., 2002; Pollard et al., 2005).

An important implication is many resource tenure rights are possible without having to obtain full **ownership** of the resource (see also discussions in Cousins et al., 2005) on land tenure in South Africa). The key is security of tenure and regimes that provide this safety. Additionally, as pointed out by Vandergeest (1997), property is not only about rules and laws, but also about practices. Indeed, in developing the analytical framework (see later), the implication is that research on resource tenure might usefully begin with observations of what people do, rather than questions about rules and laws. Berkes et al. (2000) discuss a range of practices

[7] It is open-access that results in the 'tragedy of the commons'. As stated by Agrawal (2001) there is nothing inherent in the commons that leads to a 'tragedy'.

that are based on ecological knowledge and the social mechanisms that lie behind these and point out that they may not be recognised for their functional value by the untrained eye. The focus is thus on the blend of regimes and their complexity rather than trying to reduce all property relations into one of the above categories.

The nature of the resource

Two distinctive bodies of work are fairly evident in the common-property literature. By far the most abundant is the focus on the property regimes themselves, with a strong social and institutional slant. Here there is little discussion on the nature of the resource itself or on how the management regime has responded to the nature of the resource. A somewhat different (although linked) set of works deals with so-called traditional knowledge and has more recently included a focus on the nature of the resource(s) and the implications for management regimes. Berkes et al. (2000, 2003) have attempted to view the system rather as a whole, that is as a linked socio-ecological system. This can be attributed to the increased interest by ecologists in resilience theory and adaptive management (see Holling, 2001; Gunderson and Holling 2002). In short, this contests conventional resource management approaches which are based on the underlying assumption of ecological stability and predictable yields such as maximum sustainable yields. The ensuing rules and regulations, made by technical experts, have not recognised that systems are dynamic and evolving and have effectively robbed them of their resilience (see for example Berkes and Folke, 1998). In part, research has turned then to locally-based management in an attempt to understand whether local community practices – based on accumulated knowledge and experience over years – is based on learning, flexibility, environmental feedbacks and risk minimization – the cornerstones of adaptive management. This is regarded as a management strategy that builds rather than erodes resilience.

The nature of the resource – its inherent characteristics – has a strong bearing on whether or not it is a common pool resource (Murphree, 1991). A number of issues pertain: global/ local, mobile/static, renewable, specific. A static resource such as trees can remain in commonage or be privatised with no intrinsic difficulty. Wild animals- being mobile or 'fugitive' are more difficult to privatise and need infrastructural management such as fencing. Fish are even more difficult to confine as private property except through aquaculture. Highly mobile species often require collective action (see below). For example, control of a fisheries resource needs group compliance (expanding to international compliance) otherwise the conservation by one fisher may simply be thwarted by another fisher the following day. Other issues that need to be considered are the condition of the resource and perceptions regarding the condition of the resource. Equally, the property of water – its mobility – and the value attached to it as a flowing resource, mean that how rights are defined is different (Meinzen-Dick and Nkonya, 2005). Moreover not only is value attached to the resource but also to the resources found within or associated with water (fish, reeds).

Common-property regimes and collective action

Much work has been done recently by social theorists and others on the issue of collective action – what factors influence collective action and what factors act as constraints. Indeed, a number of lessons have been learned from the very large body of literature on the commons which has accumulated since the 1980s (see also Chapter 7).

Firstly, one of the more fundamental findings is that common property regimes, as collective resource management systems, generally develop when a group of individuals are highly dependent on a resource and when the resource is limiting (Ostrom, 1990; Bromley, 1992). Secondly, common property systems generally do not develop if the resource is superabundant. Thirdly the nature of the resource (see above) is such that individual

responses cannot solve a problem related to that resource (see also above comment on subtractability). For example, a resource that one fisherman conserves today will probably be harvested by others tomorrow. The solution will work only if all fishers agree to adhere to rules that ensure tomorrow's catches.

Poteete and Ostrom (2003) recognise that the characteristics of the group and the 'problem' together with the institutional arrangements and the actions of government can create an enabling environment for collective action. In contrast, they name inadequate information, crowding, conflicting interests, differing beneficiaries and difficulty in exclusion as constraining factors. Murphree (1991) notes that an important principle is the combination of various factors: production + management + authority + benefit. Agrawal (2001; see Table 1) summarises the factors from various studies and lists some thirty-three factors that need to be considered in studies of collective action. Shackleton et al. (1998) provide a summary of factors gleaned from work in Africa (Table 1). Most authors seem to agree on the need to identify boundaries, both of the user group and the resource (even if these are variable).

Table 1: Synthesis of facilitating conditions for collective action

Identified by Wade, Ostrom, Baland and Platteau, as summarised by Agrawal (2000)	**Identified by Shackleton et al. (1998)**
1. Resource system characteristics	
Small size Well-defined boundaries (RW, EO)	▪ Small size ▪ Well-defined boundaries ▪ Low levels of mobility ▪ Possibilities of storage of benefits ▪ Predictability ***Nature of the resource*** Ecological properties Boundaries Resource size Value of the resource (subsistence & economic)
2. Group characteristics	
Small size (RW, B&P) Well-defined boundaries (RW, EO) Shared norms (B&P) Past successful experiences – social capital (RW, B&P) Appropriate leadership – young, familiar with changing external environment, connected to local traditional elite (B&P) Interdependence amongst group members (RW, B&P) Heterogeneity of endowments, homogeneity of identities and interests (B&P)	▪ Small size ▪ Clearly defined boundaries ▪ Shared norms ▪ Past successful experiences ▪ Appropriate leadership ▪ Interdependence amongst group members ▪ Heterogeneity of endowments, homogeneity of endowments & interests ▪ Low levels of poverty ***Nature of the user group*** ▪ Membership and eligibility ▪ Group size ▪ Multiple users ▪ Degree of mutual trust and reciprocity ▪ Prior experience in collective action ▪ Local understanding & knowledge of the resource ▪ Residence

3. Institutional arrangements	
i) Rules are simple and easy to understand (B&P) ii) Locally devised access and management rules (RW, EO, B&P) iii) Ease in enforcement of rules (RW, EO, B&P) iv) Graduated sanctions (RW, EO) v) Availability of low-cost adjudication (EO) vi) Accountability of monitors and other officials to users (RW, EO)	▪ Ownership status ▪ Experience ▪ Nested institutions ▪ Adaptable/ learning institutions ▪ Leadership ▪ Dealing with conflict ▪ Power – where does decision-making lie? ***Nature of rules, regulations and sanctions*** **Making the rules** Source of rules Locally-appropriate & flexible Principles underlying rules Simplicity **Enforcing the rules** Monitoring and enforcement Clear sanctions and punishment Graduated sanctions
1 and 2. Relationship between resource system characteristics and group characteristics	
i) Overlap between user group residential location and resource location (RW, B&P) ii) High levels of dependence by group members on resource system (RW) iii) Fairness in allocation of benefits from common resources (B&P)	
1 and 3. Relationship between resource system and institutional arrangements	
i) Match restriction on harvests to regeneration of resources (RW, EO)	
4. External environment	
i) Technology: Low-cost exclusion technology (RW) ii) State a) Central governments should not undermine local authority (RW, EO) b) Supportive external sanctioning institutions (B&P) c) Appropriate levels of external aid to compensate local users for conservation activities (B&P) d) Nested levels of appropriate provisions, enforcement, governance (EO)	

Principles as cornerstones of common-property regimes

More recently the concept of principles rather than rules has emerged in the common-property literature (Benda-Beckmann et al., 1997). Within the discourse on land and/or water reform as well as CBNRM, more and more attention has turned to starting with what exists rather than trying to create new arrangements. Wolf (2000 cited in Meinzen-Dick and Nkonya, 2005) cites principles such as priority setting and downstream and minority rights as important in Berber communities.

A number of authors stress the importance of flexibility and adaptability in common-property regimes (Claasens, 2000; Cousins and Hornby, 2000; Katerere and Zaag, 2003; Cousins, 2007) and raise concerns that formalizing these will serve to undermine the very characteristics that give them strength. The importance of conflict avoidance rather than

imposing penalties appears to be an important component in some areas (Harries, 1984; Chikozho and Latham, 2005; Cousins and Pollard (AWARD), in prep).

Seeking integration in a way that sensibly recognises the linkages between land and water is also receiving attention (Pollard, 2002). Indeed, various authors (Katerere and Zaag, 2003; Hodgson 2004) raise concerns that land and water are being increasingly separated in a way that is not the norm under customary systems (see also following chapters for country case studies). Hodgson notes that there are few formal mechanisms in law to ensure a co-ordinated approach to the allocation and administration of land tenure and water management.

Within the discourse of CBNRM and wildlife (Jones and Murphree, 2004) point to four key elements that are contained in 'CBNRM policy': sustainable use, economic instrumentalism (i.e. incentives to manage wisely), devolutionism and collective proprietorship. They suggest that in the future the core issues that need to be addressed are devolution, community and diversity. The term community here is central because in defining community, rights are also defined (see earlier discussion).

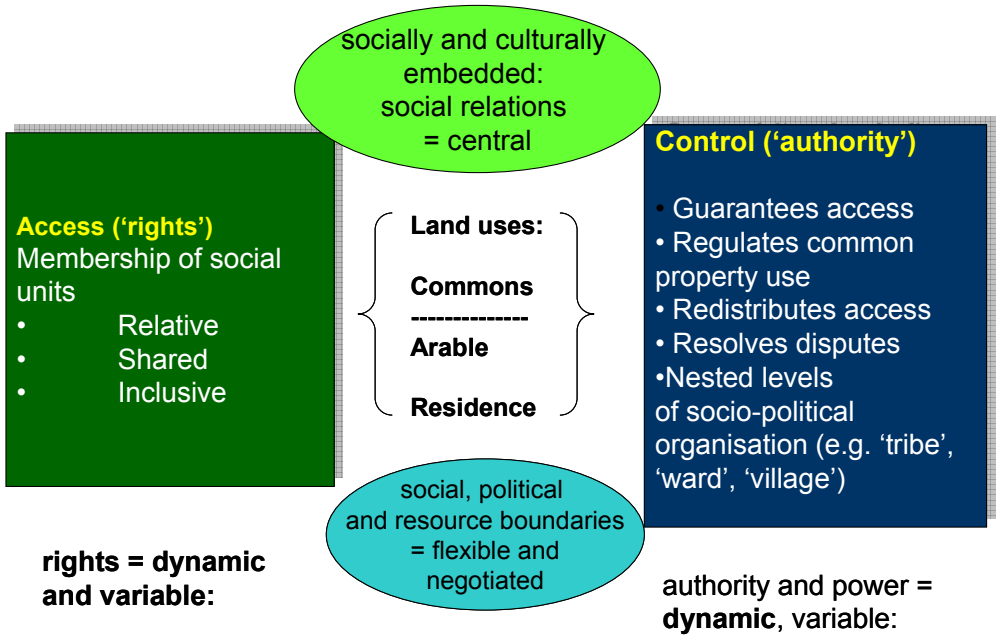

Figure 2: Key features of an African tenure system
(source: Prof. B. Cousins, PLAAS, University of the Western Cape)

Importantly, and as was mentioned earlier, common-property regimes for natural resources are fundamentally different to that of western notions of property ownership. These differences are summarised in Figure 2 and readers are referred to Cousins and Claassens (2004); Cousins (2007) and Chapter 7 for further information. In discussions around a similar theme, Katerere and Zaag (2003) assert that a major source of conflict stems from the (legal) attitude during the colonial period that viewed natural resources as *res nullis* – they had not been captured and were available for acquisition. This contrasted sharply with the local belief that natural resources belong to a people and cannot be owned in the western sense. They also make the point that the impact of law – how it is lived and experienced – is predicated on

the strengths other value and rule systems (social, cultural, economic and the implementation systems) and their relationship to other institutions. This lies at the very heart of legal pluralism and is why we contend that customary or local systems must be considered within Integrated Water Resources Management.

2.3 The analytical framework

Based on the above overview, an analytical framework (Figure 2) was developed in order to examine the literature at hand. As mentioned, each piece of work was written for different objectives – and in most cases not with an explicit objective of describing governance regimes. Moreover, as discussed above, it is the principles rather than precise rules that are important, especially in reducing conflict.

Thus to explore whether or not any picture emerged on governance or locally-based water resources management, each case was examined with a number of broad areas – or themes – in mind.

- Has the work contextualized the study in terms of the historical context of the area?
- A second broad theme examined the nature of the resource itself, the resource users and the wider context in which they co-exist. Did the case study address these and moreover their dynamic nature (are they changing)?
- Was mention made of associated property regimes and the institutional arrangements that support this? For example: Who makes the rules? How is exclusion dealt with? What do these look like? What sanctions exist? How are transgressions dealt with?
- Over and above these is a focus on the linkages between the nature of the resource and users on the one hand and the property regime on the other. The broad questions here (which in themselves include a subset of questions) may include: How does the property regime respond to and accommodate the characteristics (seasonality, growth etc.) of the resource in question? Are the needs and the characteristics of the users accommodated (e.g. women, the poor)? What is the relationship with the wider environment – such as for example, the national policies? Are these supportive or conflictory?
- Did the case study explore or comment on issues related to equity, social justice and/or sustainability?

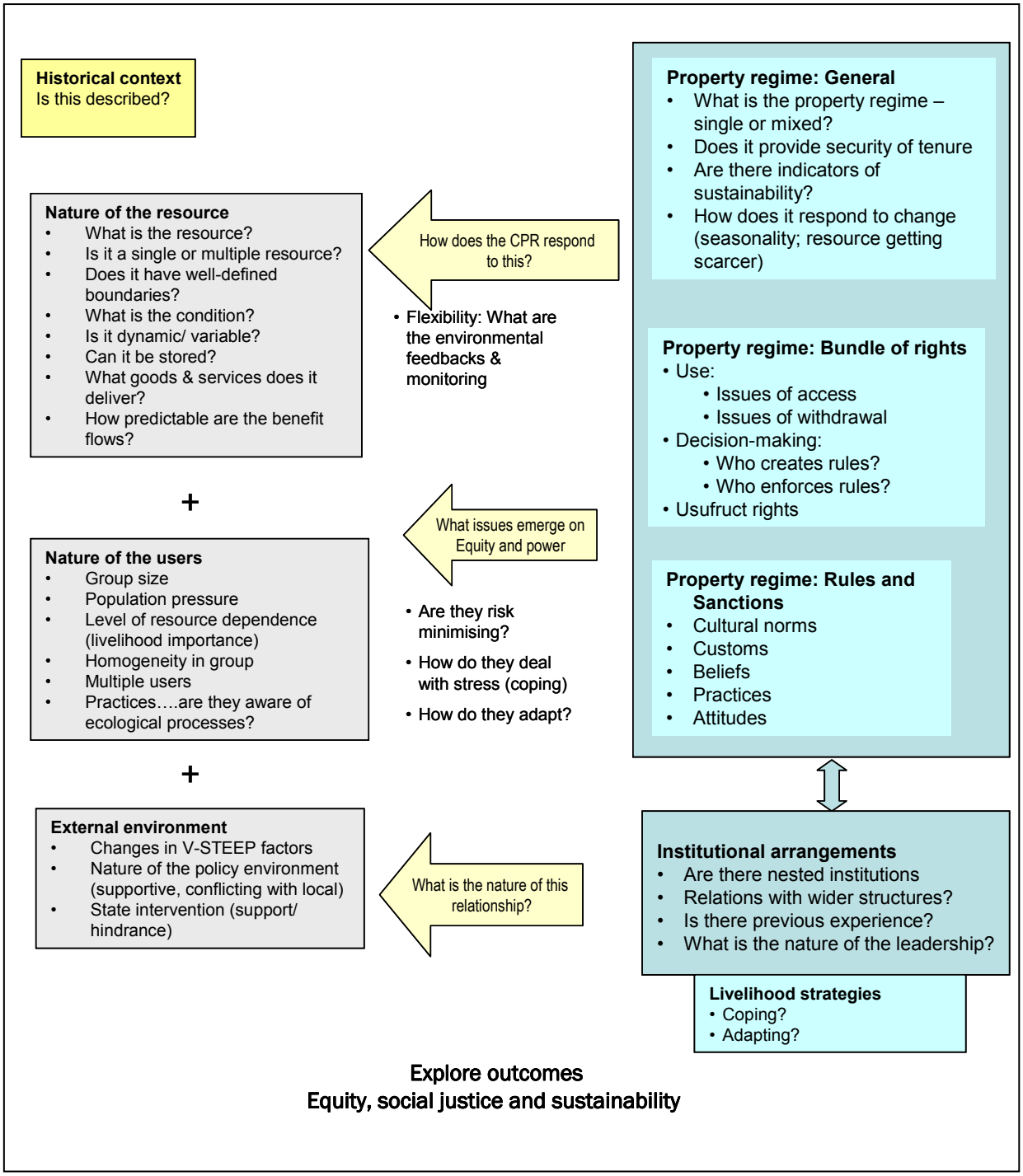

Figure 3: The analytical framework used for the examination of country case studies.

The framework considers (a) the context, including the history, the nature of the resource and the users, as well as key drivers and (b) the property regimes (including the 'bundles of rights', the rules and sanctions) and institutional arrangements and (c) asks how the latter responds to the former. V-STEEP = Social, Technical, Environmental, Economic and Political (including institutional) drivers.

Chapter 3

South Africa:

Review of literature pertaining to community-based governance of freshwater systems

Until 1995, 'tribal' institutions comprising tribal authorities, presiding over tribal districts, were the principal form of local government in the former homeland areas – now known as 'communal lands' of South Africa. Each district had a chief, village headman, appointed councilors and officials. These contemporary tribal institutions found in the former homelands are derived, in part, from the incorporation of pre-colonial forms of African government into first the colonial, and later the apartheid system of administration. Prior to the arrival of European settlers, the most important socio-political unit of southern African society was the tribe, composed of people loyal to a single chief and believed to share a common ancestry. The chief was the leader and most powerful member of the tribe, combining important political and religious functions (Letsoalo,1987). The power of chiefs was severely diminished under colonial rule and, in many cases, later co-opted for political gain by the ensuing apartheid regime. The powers of chiefs today reflect a poorly-defined mix of customary practice and apartheid-era legislation (Bennett, 1995), together with newly introduced statutory reforms to their powers. Thus, attempts to explore locally-evolved systems for natural resources management (NRM) are severely constrained by this socio-political landscape of the 20th century. It must be concluded that the understanding of local-level governance systems for freshwater systems of communal lands of South Africa is poor. Added to this is the added layer of complexity that is being introduced by land restitution and land tenure reform in general.

3.1 Introduction

South Africa includes a diversity of freshwater resources: rivers, estuaries, wetlands and lakes, although freshwater lakes are limited (Fundudzi, Kosi Bay, Sibaya and St Lucia). Nonetheless, with a rainfall of 500 mm, placing it well below the global average of 800 mm, it is a water-stressed country. Issues of governance and rights of access are therefore key in managing for sustainability and equity.

Although a detailed description of the political history of South Africa is beyond the scope of this paper, it is important to understand how the 20th century history has shaped the governance arrangements of natural resources and what we see – or appear to see – today. Democratisation in 1994 set the stage for change and yet, with the legacy of apartheid planning still pervasive, South Africa continues to be a deeply divided country (see May 2000; May and Rogerson 2000). It is widely appreciated that with the institutionalisation of racial segregation after 1948, many of the imposed divides that separated people on the basis of race were then officially entrenched through statutory means. The access and management of natural resources was placed squarely in the hands of the minority whites and further secured through the formalisation of native reserves (created in the early 20th century) as Bantustans in 1956. Resettlement, coupled with betterment planning and villagisation fundamentally changed peoples' relationship with natural resources (see Harries, 1984, 1989; De Wet, 1995; Fischer 1996; Cocks 2000; Niehaus 2001; Pollard et al., 2003). Only 13% of the country was

delineated as land for occupation by black people but was expected to accommodate some 85% of the population. Much of this land was designated as tribal land, held in trust by the state for the sole occupation by blacks. This did not mean that control was transferred- this remained firmly in the hands of the Pretoria regime, whether overtly or covertly. Yet, it was almost only in these 'tribal areas' where local communities were able to exert any influence over the management and use of localised water (and other) resources[8]. Thus the past and prevailing tenure regimes must be considered within the context of geographical locality. Moreover, so omnipresent was the effects of apartheid doctrine that it is difficult to uncover what might be regarded as a locally-evolved management regime (Bennett, 1995). For example, whilst the role of chiefs and their indunas in natural resource management and land allocation is often acknowledged, in many cases this system was heavily transformed as individuals 'friendly' to the regime were co-opted to replace existing traditional leaders. Thus as stated by the chairperson of the Community Development Forum from a village in Mpumalanga: *"it was not the traditional system that we objected to – no, that had deep and longstanding support, it was the **individuals**"*.

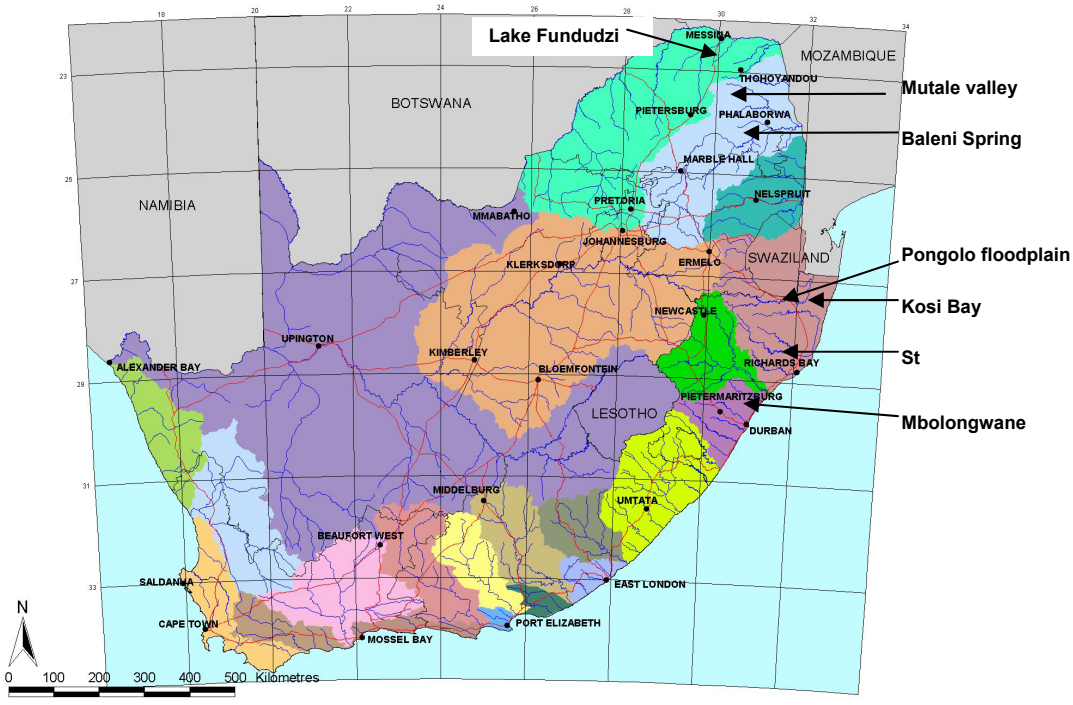

Figure 4: Map of South Africa indicating the case study localities

Niehaus (2001) suggests that as agriculture assumed a less prominent role in peoples' livelihoods with apartheid planning, cultural beliefs in the powers of nature also declined. As pointed out by Pollard et al. (2003), with the forced influx of people coupled with the legislative relocation of power to tribal authorities, the management of natural resources was effected through chiefs who instituted fines against transgressors. In 1994 – as part of the popular challenge to apartheid – this tribal control, which had afforded some degree of protection, albeit autocratic, collapsed (Shackleton et al., 1995). The institutional vacuum that has persisted since 1994 has been exacerbated by the inability of government to implement the wide array of new laws and policies, which are little understood at a local-level in any

[8] Bernard (2001) makes the point that indigenous systems are fundamentally different to recent community-based natural resource management (CBNRM) approaches to NRM.

event. Moreover roles and responsibilities for NRM are often inadequately addressed from communal areas (Pollard and du Toit, 2005). Now in many cases people view the resource as a public asset that can be commandeered for personal gain, often through threat (see for example Cocks, 2000; Pollard et al., 2003; Dovie et al., 2004; Lawes et al., 2004; Twine, 2005).

Consequently when examining local-level natural resource governance in South Africa, the enquiry is restricted to the 13% of former Bantustan land for the most part (Figure 2), bearing in mind that this was heavily dictated to. In terms of water resources specifically, the control over rivers and estuaries was almost exclusively the domain of the whites, mainly supported by the riparian principle of the former Water Act. Only where rivers flowed through a Bantustan was access to resources possible. This cannot be considered to be locally-based governance in any of the sense described in Chapter 2. Somewhat surprisingly – considering the strategic acquisition of land by the apartheid regime – some of the major lake systems were located in former homelands (e.g. Kosi Bay and Fundudzi), and these are discussed in the following case studies. Some of the larger wetlands – and especially the threatened peatlands (see Grundling et al., 1998) – also fell within communal land. It could be argued then that small-scale freshwater systems which offered a key resource for poverty-stricken Bantustan residents and also which, by their nature did not attract much attention from the authorities, is where governance of some sort is likely to be seen.

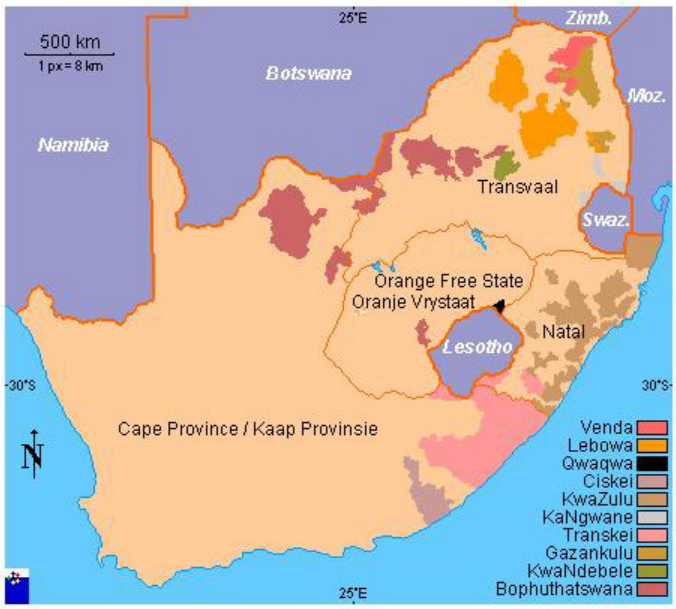

Figure 5: Map of former Bantustans in South Africa

This map shows the locality of former homelands or Bantustans as delineated by the apartheid regime. In South Africa examining local-level governance regimes is restricted – for the most part – to these areas as explained in the text

Nonetheless, despite the global interest in community-based natural resources management (CBNRM), and the call to understand local-scale governance systems, the coverage of these issues for freshwater systems in South Africa is negligible. This may reflect the lack of acknowledgement of local-level governance systems in general until recently, as well as the fact that globally, the focus of CBNRM studies has tended to be on terrestrial resources.

Equally it must be acknowledged that the deep distrust bred over the past century makes exploring any of these issues extremely difficult and the findings tenuous.
This is the case for the Kosi Bay system for example, for which – despite its beauty and importance for local livelihoods – a comprehensive treatment of local-level governance is non-existent, and regarded by some as intractable (Jaffat Ngubane, pers. comm. University of KwaZulu-Natal). The area today is beset by simmering conflict – between communities and the government authority for the area, the KwaZulu-Natal Parks, between communities themselves and between traditional and the recently-established local government structures. Indeed a notable change is the recent entry into the institutional landscape in South Africa of the councilors, who are democratic in the sense of having been elected to represent the political party in power in the district.

The legal framework for water resources management and land tenure is dealt with in depth in Chapter 7 so, unlike the other case studies into is not dealt with in the country review.

Box 2: Land under 'communal tenure' in South Africa

South Africa is today still dealing with the legacy of apartheid – a key component of which was the homelands or Bantustans – small parcels of land on which blacks were 'legally' allowed to reside. Land in these former Bantustans was almost entirely held under the system of so-called communal tenure, the majority of which is nominally owned by the state, either directly or through the statutory South Africa Development Trust (Budlender and Latsky, 1991). In the early 20th C, these 'native reserves' took on added importance as reservoirs of cheap labour for the mines, factories and farms of 'white' South Africa. Denied rights to adequate resources, black families were left to supplement their meagre wages from the over-crowded lands of rural reserves. Under the apartheid regime, from 1948 to 1994, an estimated 3.5 million black people were forcibly removed to ten 'homelands'.

Practically the administration and control of this land relied heavily on the involvement of Tribal Authorities, under tribal chiefs and village headmen. These so-called 'traditional' leaders were individuals co-opted by the apartheid regime to secure the operation of the homeland system.

In April 1994, all ten homeland areas were reincorporated into South Africa, and their administrations were absorbed into the new provincial structures. The enduring legacy of apartheid means that even today much of the worst poverty is concentrated in the former Bantustans (May and Rogerson, 2001). General standards of living were far below those in the rest of South Africa. A number of authors caution against interpreting natural resource use regimes as local or customary in the true sense of the word. As Bennett (1995) points out chiefs enjoyed wide ranging powers, based on a poorly-defined mix of customary practices and apartheid-era legislation (see also Fischer, 1987).

3.2 Case studies

This section presents the case studies synthesized from the literature. The reports on which these are based were written for different reasons and not surprisingly, the treatment of governance issues varies.

3.2.1 Mbongolwane wetland

Nature of the resource and the users

Mbongolwane wetland, approximately 395 ha in extent and 12 km long, lies in the headwaters of the Amatikulu catchment, west of Eshowe in KwaZulu-Natal. The principal land cover in the wetland's catchment is sugar cane, natural vegetation and crops, mainly maize (Kotze et al., 2002). Over the past 50 years, the population has nearly doubled from an estimated 2100 in

1937 to 4000 people in 1991 (based on figures from Kotze et al., 2002). Increases are particularly evident in the area around the wetland. Nearly all households (88%) currently use the wetland for a variety of purposes although cropping is the primary use. Additional uses include the harvesting of wetland plants for crafts, construction and medicinal purposes, water for domestic purposes and livestock watering, soil for domestic use, tourism, cultural/religious practices and hunting and fishing.

Source: D. Kotze

Some 10% of the wetland is used for cultivation and this has increased steadily since the 1930s although from the mid-1990s the extent of cultivation has declined[9]. Cultivation occurs in both community gardens where plots are held individually by members who work collectively to obtain seedlings, fencing and advice and in isolated individual plots which are not part of any organizational structure. At least 80% of the cultivators in the wetland are women.

Historical context and external environment

No information was found on the historical context of the Mbongolwane wetland per se, although as noted above, the wetland has been in use at least since the 1930s. Like all areas in South Africa, this area was likely to have been affected by the pervasive influences of the apartheid regime particularly between 1948 and the early 1990s. Mention is made of the Department of Agriculture starting the community gardens in the 1970s as part of a food security initiative. Commercial sugar cane agriculture also exists.

Property regimes and institutional arrangements

The wetland lies within communal land of the KwaNtuli Tribal Ward, with 9 of the 22 sub-wards including portions of the wetland. Their key functions included culture, dispute resolution, administration of customary law and, very importantly, allocation of land (IPS 1996, quoted in Kotze, 2002) although these functions have subsequently changed (see Chapter 7). The tribal Authorities remain the primary organisations for government at the local scale although service delivery is largely the remit of Local Government Councillors and Municipalities. How this has changed over time is not documented but it must be assumed that the influences of apartheid structures in co-opting headmen and chiefs were evident here. The responsibility for the allocation of land within Mbongolwane wetland for cultivation is somewhat confusing. According to Kotze (1999) it varies as follows.

- Allocation of land for community gardens takes place at the ward and sub-ward level and involves several structures. These include the Tribal Authority, garden committees and the Department of Agriculture for community gardens. Allocation of plots to individuals within each community garden is controlled by the group itself and membership is open to all households in the ward but restricted largely to women, ostensibly because of the difficulties in working with men.
- The degree of control over allocation of land for cultivation within small individual isolated patches outside of the community gardens varies according to sub-ward (IPS, 1996). Although in some sub-wards permission is obtained from the headman before cultivating, in most cases none is obtained. Consequently, over much of the wetland there is a very low level of control over individual parcel cultivation.

[9] Possibly due to 6 years of above average rainfall and the impact of HIV/Aids.

- Rules of use for reeds and grazing are noted but who controls this and how, is not stated.

The contemporary institutional landscape is complex. As noted by Kotze et al. (2002), today an extraordinary number of organisations are involved in the wetland use and management, ranging from the tribal leaders (the chief together with his headmen), ward councillors, the users themselves, various government departments (Department of Agriculture, Environmental affairs, Health, KwaZulu-Natal Wildlife, a university, at least four NGOs and a craft group). Considerable conflict exists regarding the general development in the wetland. This includes conflict between political parties, between the Traditional Authority and newer municipal structures and between sub-wards over the equitable distribution of resources.

Outcomes
Currently, a great deal of conflict is reported to exist around wetland management and development. This is thought to reflect the wide range of institutions involved.

3.2.2 Kosi Bay system

Kosi Bay is well-known for its extensive network of wooden fish traps, set up in a fence-like fashion across the lake. They are built by the AmaThonga fishermen who pass their fish kraals from father to son. They are placed in the shallows between the estuary and lakes mainly to catch marine fish that migrate up past the traps as juveniles and are caught as adults as they migrate back to the sea. The Kosi system is part of the Tembe Traditional Authority, the largest communal area in South Africa (Jones, 2006), and of the 11,000 ha Kosi Bay Nature Reserve proclaimed in 1987. Indeed, Kosi Bay's recent history was strongly dictated to by the proclamation and expansion of various reserves.[10] These periods were characterized by zoning that did not take into account local needs and relationships have been marked by conflict ever since (Guyot, 2005). The political conflict was highlighted by the assassination of well-known anthropologist and activist David Webster by the apartheid government who was working in the area.

Nature of the resource and the users
Kosi Bay is actually an estuarine system composed of a series of lakes joined by channels and emptying into the Indian Ocean. Salinity declines with decreasing tidal influence such that the northern lake is characterized by mangroves whilst the southern lakes are surrounded by *Phragmites* reed beds.

The area is inhabited mainly by the AmaThonga although this is changing (see for example, Kloppers, 2005). With the construction of a tar road and the opening-up of southern Mozambique with the end of the harrowing civil war, tourism opportunities have attracted a range of entrepreneurs and associated support skills.

A wide range of natural resources is used by the AmaThonga including fish, crabs (some 500,000 annually), shrimps, sedges and reeds, wood, medicinal plants, wild fruits, wild honey

[10] Kosi Bay Nature Reserve by Natal Parks Board (1950); Indigenous Forest Reserve (DWAF 1950); extension of Kosi Bay Nature Reserve border in 1989; World Heritage Site, now called iSimangaliso Wetland Park. See also Jones (2006).

and small wildlife. The lakes are also used for cultural and religious purposes. In 1980 the 'Kosi Bay resource utilisation, monitoring and management programme' was initiated and this continues today. Their comprehensive data indicates that with the exception of introduced methods (such as gill-netting and jigging), all resource utilisation is sustainable and hence regarded as wise use (Kyle, 1995).

The population of the Kosi system is unclear although Kyle notes that there are about 350 homesteads within walking distance of the northern shore. The design of the traps for which Kosi is so well-known is such that most of the fish are over 300g. About 40,000 fish are caught annually and eaten by local people. In terms of other resources, Kyle notes that the demand for *Juncus* sedge (or incema) is increasing and that as the cash value increased, entrepreneurs arrived from as far away as Johannesburg. In contrast to traditional hand-picking methods, sickles were used and exploitation increased markedly. The authorities, later with the support of the local users, advocated the ban of sickles in 1992. Aside from this restriction, today there are no limits on the areas of collection, numbers of collectors or season.

Historical context and external environment

Historical accounts of the area are available in various texts (see for example Webster, 1986; Webster, 1991; McGregor, 1997; Klopper,s 2005). Felgate (1982) noted that people have lived along its shores in considerable densities for hundreds of years. Kyle (1995) notes that the dramatic increase in people harvesting in the system in recent years is likely to continue.

Property regimes and institutional arrangements

Formally, the Kosi Bay Nature Reserve was managed by the KwaZulu Governments Bureau of Natural Resources, disbanded in 1994. The area now falls under the KwaZulu Wildlife Services. Positions on local participation contrast wildly from a view that suggests that stakeholder participation was central (e.g. Kyle, 1995) to one that suggests that all moves by the state were duplicitous, hiding real political intentions (see Guyot, 2005).

Documentation pertaining to traditional property-regimes in the Kosi system is almost non-existent, although there does appear to be research starting in this field in the Kosi Bay area (B. James, pers. comm. iSimangaliso Wetland Park). Any discussion of management tends to focus on statutory instruments and institutions but sheds little light on common property arrangements used by the residents themselves. Indeed, very little information appears to be available on the common property regimes that prevailed and continue to prevail (albeit transformed). Despite noting that some 'traditional controls and constraints' exist, details are scant (see Kyle, 1995). Kyle notes that the fish trap system is well-controlled but no further details are given as to how people gain rights of access. Working for Wetlands report (2004) states that fish traps are handed down from father to son but how rights are transferred if there is no son for example or how new fishermen acquire rights of access appears to be poorly documented. Kyle suggests that anyone can negotiate with the owners of neighbouring traps and the community authority to build a fish trap. Very recently some work has been undertaken regarding wise use of wetlands and it would appear that this goes some way to discussing community-based resource use (Sibiya et al., 2007).

Interestingly Kyle notes the increasing importance of women in resource utilisation which has risen form 57% in 1987 to 72% by 1991. Historically fish traps were the exclusive domain of men but in 1995 many trap operators were women. Kyle notes that the reasons for this are unclear but this trend raises additional questions for the aforementioned suggestion that traps are handed down to sons since this appears to have changed.

3.2.3 Baleni Spring – *Ntumbukulu*

Baleni Spring lies banks of the Klein Letaba or Ritave River in the Northern Lowveld of Limpopo Province. *Ntumbukulu* is the Tsonga concept which refers to Baleni as a supernatural place (Petra Terreblanche; principal scientist and curator, Tsonga Kraal Museum, pers. comm.). The Tsonga have been exploiting the mineral spring for salt for a century and a half, and before them the BoLobedu, Lemba and Kalanga. It is a gendered site in that salt-making is the exclusive domain of women.

Nature of the resource and users

Baleni Spring is an intermittently hot spring and wetland that lies near the Letaba River under the authority of Chief Muhaumani. The 'Baleni Spring' site actually consists of two components: the hot spring which lies in a wetland, and the salt making activities next to the Klein Letaba River.

Salt is produced by filtering soil that has bathed in the spring overflow. Fresh river water is used to filter out the salt, then evaporated over a fire to produce salt in compacted lumps. Extraction is seasonal, occurring in winter only, since the soil is too wet for collection of salts in the rainy season.

Baleni is a sacred place that is used in pursuit of the affirmation of cultural identity, as an inspirational point for healing, creativity and religious worship. It has been used for a long time, apparently its use can be traced back to 300 AD (promotional museum material). Only Tsonga women can produce the salt, who use it for barter and trading. It is highly sought after by traditional healers.

No reference is made to other uses, or users of the resource (the hot water, the wetland and wetland resources).

External environment

It seems that until recently, Baleni was isolated and subject to little outside influence. However, in 1998 it was identified as a site for one of the African Ivory Route campsites. This is seen to be a source of revenue for the local community, although this has been contentious and is bound to bring change. Theoretically, protection also afforded by its being proclaimed a national heritage site.

Property regime

As stated, salt production is gendered – for the exclusive use of women. Highly ritualised religious and spiritual practices surround the resource, and the extraction and production of salt. Myths and legends take shape as traditions, which limit access to and use of the resources. The place is seen to belong to feminine energies. This limits and protects who may produce and trade in the salt, and who knows the technology, to certain Tsonga women (which women is unclear).

Outcomes

The spring is seen as having supernatural significance, so is approached with respect. References to beliefs, rituals and the unspoilt nature of the resource indicate that there is a high level of protection of the water and wetland resource. However, some gaps in information do exist. For example,

- Who and how did women gain access to the site?
- Who is part of the group of women who have the access and knowledge – how this happens. Whether there are structures within the group of women.

- Practices beyond (of wetland, of hot water, of fish) or surrounding salt production – spiritual/ religious – what decision making surround these, and by whom.
- What structures support the protection of the resource and the users – presumably some by traditional and spiritual institutions (authorities, practitioners and practices)?
- What role government plays in the protection and/or the monitoring. How local and government institutions interact and if there are any conflicting interests?

3.2.4 Other cases

A number of other cases are mentioned in the literature of community management of freshwater resources and are summarised below. These include the Mutale Valley, Craigieburn wetlands and the Pongolo floodplain. In other areas mention is made of natural resource use but little else. For example, in Lake St. Lucia, Kyle (1995) notes that daily tickets are sold for *Juncus* collection and that on the first day of one season over 1000 women arrived. Very little else is mentioned regarding common-property tenure – even historical regimes – given the changed management of the area. Another area that has received considerable attention recently is that of peatlands. Their degradation is of growing concern because of the biodiversity they support, their hydrological function and their limited extent. The majority of peatlands occur in Maputoland near the Mozambique border (Grundling, Mazus et al., 1998). Nonetheless, given the dearth of literature, it appears that their governance is poorly understood.

Craigieburn – Sand River Catchment Mpumalanga

The wetlands of the upper Sand River that lie in communal areas play an important role in terms of both catchment water security and local livelihoods. Following requests by local farmers, work was undertaken to address wetland degradation. The work has since focused on the wetlands used by Craigieburn village in the north-western region of the catchment where the wetlands are used mainly for small-scale agriculture and to a lesser extent, for reed harvesting. Initial research indicated a strong link between certain land use practices, erosion and desiccation. This in turn has impacts for wetland health, reduced yields and hence users' livelihoods and welfare (Pollard et al., 2005). The work also highlighted the need to examine issues regarding community-based governance of these wetland areas

Following democratization after 1994, the tribal authority control over land and natural resources all but collapsed. This system, albeit one that was associated with the apartheid regime, was nonetheless one that residents understood. With a breakdown in the power of **tribal authorities** various bodies such as local government, ward councilors and provincial departmental staff all lay claim to the administration of norms and standards regarding natural resources and their use (Pollard and du Toit, 2005). The insecurity created by ambiguity, confusion and uncertainty creates an environment ripe for opportunism by some. Today, a decade on, land tenure in South Africa is regarded by many to be in disarray. Since land tenure is intimately linked to natural resource use and management, this situation has consequences for peoples' livelihoods and sustainability.

Work currently underway in the Craigieburn area seeks to support and secure local, effective and appropriate institutional arrangements for the governance of natural resources. The work is funded by the IDRC and continues until 2008.

Mutale Valley

This report by Lahiff (1997) examines rural livelihoods and natural resources of people living in the Mutale Valley. The main focus of the work is on the processes by which users gain

access to key resources of land and water, although his focus is on access to water for irrigation purposes.

The Mutale River rises in the Soutpansberg range, close to Lake Fundudzi, and flows into the Luvuvhu River just inside the Kruger National Park. The Mutale River valley lies almost entirely within the former 'homeland' of Venda. Some 8600 people live in the area examined by Lahiff. The principle natural resource use that he reports is irrigated agriculture and livestock grazing. The most recent change has been the intensification of irrigated agriculture with water sourced from the Mutale River.

In terms of institutional arrangements and like most of the communal areas, the main function of the tribal leaders with regard to resource management is to decide how resources, particularly land, are divided between members of the community, so that they may obtain the means of subsistence. However Lahiff (1997) notes that in reality these functions are largely symbolic in the case of water since they have little practical power to regulate water use. He notes that overall, there would appear to be no 'traditional' practices or institutions concerned with the regulation or conservation of water resources, and no institutionalised forms of co-operation between different tribal areas sharing the same resource. He also notes that the democratically elected, local councils in Venda were at loggerheads with tribal leaders and struggling to establish themselves.

Pongolo Floodplain

A broad alluvial plain, known as the Pongolo Floodplain, extends downstream from the Pongolo Dam[11] to the confluence of the Pongolo and Usutu Rivers, close to the border with Mozambique (McCartney et al., 2004). Heeg et al. (1980) estimated that at that time approximately 40,000 people are resident in the area around the floodplain and have close links to it. The Pongola floodplain supports an important fishery for the AmaThonga. The seasonal fishing is undertaken in the pans and basin on the floodplain adjacent to the river (Felgate, 1982) using a variety of traditional methods (Heeg et al., 1980). Very little of the fishing is carried out in the river itself. Two decades ago, some 400 t were caught annually and used mainly for local consumption.

Like Kosi it appears that fish drives, once the exclusive domain of men, are nowadays almost exclusively carried out by women (Mountain, 1990, cited in Kyle, 1995). Some preliminary work has been completed on the multiple uses of the river (Breen et al., 2006).

Some literature is available on the traditional structures of the Tembe-Thonga people which comprise a number of clans or chieftainships (see also Kosi Bay case study). Falling under the clan chief are the district chiefs (i.e. *Izinduna*) and sub-district headmen. Until recently, the sub-district headmen controlled access to all natural resources, including land and fish, in the areas under their jurisdiction. However, according to (Breen et al., 1998) this arrangement has been undermined in recent years by growing population pressures, commercialization of floodplain activities, and uncertainty over the role of tribal authority. Nonetheless, there is a dearth of information on the common property regimes that prevailed and continue to prevail in this important floodplain.

[11] The Pongolopoort dam, which impounds the water of the Pongolo River in KwaZulu Natal was built in 1970s to provide water for irrigation. The dam is located where the river flows through a narrow gorge between the Lebombo and Ubombo mountain ranges, close to the border with Swaziland.

3.3 Traditional cosmologies and their role in water resources management

This section draws heavily on the body of work carried out by Penny Barnard from Rhodes University, who explores the notion that traditional leadership, had and in some cases continues to have a powerful role to play in ecological management and wide stewardship of natural resources (Bernard, 2001; Bernard and Kumalo, 2004). Sanctions are strongly embedded in the spirit world which brings with it a regulatory layer unappreciated in the field of water resources management. Her work is valuable in terms of this report for a number of reasons: First, it draws on cases from all over South Africa (Mvoti, N.E. Cape, Venda), Lesotho and Zimbabwe, underscoring that spiritual mechanisms for water resources protection are ubiquitous, even today, despite the impacts of South Africa's colonial past (see above). Secondly it raises issues important for the debate on legal pluralism at an opportune time; one when South Africa is trying to embrace, meaningfully, the principles of sustainability and equity. She makes clear that despite these commitments there are few mechanisms by which communities can appeal for and secure protection of sacred water sites.[12]

Nature of the resource and their uses

Bernhard examines the role of a wide range of water resources such as rivers, springs and wetlands as sacred sites. These play an important role for the training of healers, for purification and fertility ceremonies, but also in the wider community as a means of securing ecological sustainability. Through spiritual sanction and respect, people are able to address droughts, floods, agricultural production and so on. She asserts that these rituals ensure harmony and respect between people and the environment and affirms the role of cultural values in securing the collective good. She gives graphic examples such as the *Juliana movement* in Zimbabwe.[13] In the Moviti valley in KwaZulu-Natal, 'days of rest' – to allow the river to recuperate – have been re-instated following calls made by an isangoma.

External environment

A central focus of this work underscores that many sites are threatened by environmental degradation (see also Biggs et al., 2004; Fox, 2005). The impacts of development projects, mining, modern agricultural practices and privatisation of land, and invasion of riparian zones by alien vegetation have all meant that many people have lost significant water sites through the exclusion and/or degradation of the resource. At Lake Fundudzi mining, chemical and industrial development and hillslope cultivation are threatening Lake Fundudzi whilst in other areas such as KZN – forestry and sugar cane has reduced stream flow in rivers.

Property regimes and institutional arrangements

Bernard explores less of the mechanisms of control but rather focuses on the role of spiritual belief systems in NRM. The thrust of the paper by Bernard and Kumalo (2004) is that indigenous beliefs and practices can play an important role in water resources management. She notes that a principle function of traditional leadership was in regulating access to natural resources (although this has changed under new laws and is less clear, see Chapter 7), and thus participating in water rituals through the guidance of traditional leadership reinforces the powerful role that they play in ecological management and wide stewardship of natural resources, particularly when sanctioned through the spirit world. Moreover traditional values

[12] One is through the Reserve but only if the intentions to honour these needs are explicit.

[13] The Julianna movement swept through southern Zimbabwe in the 1990s in response to the catastrophic drought and rodent plagues. A prophetess, Julianna attributed these to the collapse of environmental respect and social harmony, and the construction of dams and boreholes. The support she received and adherence to taboos she imposed provides ample evidence for the respect that people have for water spirits.

and practices care for collective needs, as opposed to strongly emerging western and capitalist values which focus on the accrual of individual wealth.

In this regard, indigenous healers are the repository of knowledge, and regarded as custodians of ancient traditional wisdom. Symbols such as that of the sacred pool, the python and mermaid all have great influence over resource management as they act as powerful constraints to the misuse of resources. Through traditional controls, activities that affect the resource – such as damming or blocking flows prohibited and living too close to the water – are restricted. Additionally, the harvesting of plants is regulated and days of rest are instituted. Such manifestations of respect and the resources and spirits associated with these, all mitigate against drought and environmental disaster. In many cases these are exclusionary: until recently the tribal authorities at Lake Fundudzi[14] imposed an outright ban on access by 'foreigners' (such as those wanting to do research).

Ultimately Bernard notes that there are scarcely any mechanisms by which healers can appeal for protection of sacred waters and ensure access to them. Under South African statutory law, three possibilities exist:

- They can claim 'cultural significance' (but this does not go far enough in ensuring rights of access, particularly on private land).
- Under the National Heritage Act, wetlands can be nominated as a RAMSAR site, but as she notes this is not inclusive. For example, in Lake Fundudzi this does not protect the surrounds that impact on the lake itself.
- Through the Ecological Reserve (under the NWA), sufficient water can be requested for spiritual and religious purposes. Again the problems noted with the foregoing options still hold here.

Outcomes and insights

Bernard advocates for drawing on indigenous spiritual beliefs and practices which, although under threat and change, continue to have a significant role in many peoples' lives, and in environmental management. From her work she also provides the following insights that are useful to bear in mind when discussing 'traditional' management systems:

- Mediums and diviners draw upon a world view that is based on a fundamentally different paradigm than that of sustainable development.

There is a fundamental difference between indigenous systems and formal CBNRM systems of today: in paradigm, orientation and principles.

- Indigenous systems are more enduring and often have a greater continuity with the past than CBNRM systems.

Finally she also contests that the (recent) assertion of spiritual practices can be seen as an idiomatic expression of protest: objecting to the forces of modernism, capitalism, monotheism, land invasion and the loss of control over resources – by people who have experienced negative ecological and social consequences of development.

[14] See Kriger et al (1954) for a historical account of the Lovedhu, and Warmelo (1947) on Venda Law

3.4 Conclusions

It must be concluded that the understanding of local-level governance systems (as described in the framework) for freshwater systems of communal lands of South Africa is poor. Despite their size, beauty, importance to local livelihoods, uniqueness and their position (or potential) to generate revenue, a comprehensive assessment of local-level governance arrangements for systems such as Kosi Bay, St. Lucia, the Pongola floodplain and Lake Fundudzi are almost totally non-existent. The implications are that such systems have not received due consideration despite their importance in the overall management and sustainability of these systems. This is equally true of the smaller, less high profile systems where almost all work – with some exceptions such as Baleni Spring – fails to recognise that local management systems are part of the fabric that contributes to or detract from long-term sustainability.

As stated in Chapter 1, locally managed systems are a reality. Even if local governance systems are to be viewed with some caution, as suggested by Campbell et al. (2002), understanding these as part of an overall management approach – and in keeping with stakeholder involvement as espoused in South Africa's constitution.

Chapter 4

Mozambique:

Review of literature pertaining to community-based governance of freshwater systems

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The Mozambican review is somewhat constrained to more recent research that has only been possible since the end of the civil war in 1992. Like all of the country reviews, much of the work focuses on terrestrial rather than on freshwater resources. What is distinctive about Mozambique's system however (which perhaps reflects the different colonization approaches of Britain and Portugal) is the fact that there were no communal or tribal lands, inasmuch as there were no native reserves (Negrão, 1998). Thus, despite allocation through the traditional leadership, communities used the available resources for subsistence purposes without any clear ownership rights. Some authors have suggested that a situation prevailed – and continues to do so – in which no one has clear rights, hence no one has rights to exclude others and no potential user can be excluded. Others have suggested that this is an oversimplification of common property regimes which, for the most part, do not derive their authority from the statutory framework in any event. Recent changes including policy reforms, the recognition of traditional leadership and the decentralization and devolution of management have theoretically created mechanisms for local-level involvement, and possibly for communities to manage common-property resources as well as for the inclusion of these into formal systems. In reality, this process is still new and many challenges lie ahead.

4.1 Introduction

Ten rivers traverse Mozambique and flow into the Indian Ocean. As a downstream country, it receives its water from its neighbouring countries of Zambia, Malawi, Swaziland and South Africa. It also shares a river with Tanzania in the north. Due to its downstream location, only 46% of the mean annual run-off is actually generated in Mozambique. Consequently, Mozambique faces both floods and droughts not only due to natural variability but also due to anthropogenic causes upstream. Mozambique has extensive river systems, wetlands and mangroves. Particularly prominent are the *machongos* – swampy valleys located between the coastal and interior dunes.

The water legislation (see following section) consists mainly of the 1990 Constitution Act and the Water Law (1991), as well as the National Water Policy of 1995, which identifies the need for training, decentralisation, community participation, inter-sectoral coordination and sustainable development of the natural resources. Water resources management will be delegated to autonomous basin-level entities and water supply and sanitation to provincial level programme management (Ibraimo, 1999).

It is suggested by Lopes (2006) that the Structural Adjustment Programme (led by the World Bank and IMF) which was adopted by Mozambique in the late 80's held as an imperative, the need for decentralization and devolution, as well as participation by communities. An evaluation of the fishing sector concluded that participation by the traditional authorities and

communities was low and needed to be addressed. Pilot projects of the late 90's resulted in the establishment of community management councils in almost all coastal provinces.

Transforming common property regimes in Mozambique

Like all other countries reviewed for this work, Mozambique has a dual system and customary law is more prominent at a local level. Also, it is widely recognised that local authority remains practically the only functioning institution at the local level. As pointed out by a number of authors (Ibraimo, 1999; Chilundo and Cau, 2000), customary rights (including those to water) have changed considerably under colonialism, followed by attempts to dismantle traditional powers soon after independence (as they were seen to be supportive of colonial powers) and then displacement with the crippling civil war. Lopez (2006) points to three distinct 'development' eras: Pre-colonial, ending in the 16th C; Colonial era under Portuguese control and economic interests (up to 1975); and post-colonial after independence. The last is characterized by two economic systems – that of a socialist economy between 1975 and 1989, followed by an open market system. Superimposed on this were four socio-political phases all of which had a bearing on natural resources management (Gervasio and Poisse cited in Lopes, 2006):

1. The pre-colonial era when rural families were represented by elders from a dominant lineage.
2. The colonial era when traditional structures, although still influential in rural areas, were co-opted and manipulated to serve colonial interests. New political and administrative concepts such as administrators and *'regulos'* were established.
3. The period between 1975 and 1992 marked a time under the Frelimo government, where the discourse was to reduce the role of traditional powers as a way of unifying the different communities under one flag through the collectivisation policy.[15] This coincided with the civil war which lead to massive migration and disruption of the traditional system.
4. The period post-1994 has been marked by the end of the war and the beginning of the political and administrative decentralisation and devolution. The creation of municipalities, district consultative commissions and natural resources management commissions are all part of this process. Accompanying this has been a tentative move to re-empower the traditional authorities. The government published the decree 15/2000 (2000), formalising the role of local leaders and enabling them to participate in several decision making processes.

The above events resulted in the clear transformation of traditional authorities and, Lopes argues, the emergence of a new genre of leaders that were not only kinship leaders, but could also be economic, political or spiritual leaders (see also Virtanen's (2001) discussion of cross border influences). The central issue currently is that this has sometimes lead to conflict between the 'new' and traditional community leaders, who are increasingly sceptical of democratization (Norfolk et al., 2003).

A important factor for community involvement in natural resource management is that whilst communities have the right to use natural resources for subsistence purposes, ***they do not have the right to act legally***, either individually or collectively (Lopes, 2006 working in coastal fisheries).[16] This is viewed as a major constraint to sustainable natural resources

[15] Collectivization took place, but was not as prominent as one might believe. In the North, the *aldeias communais* (communes) preceded independence and where fairly well received. In the south, and centre, the situation is different. But the number of people actually collectivised was not that large. According to a study by Isaacman and Isaacman by 1982, only 20% of the farm population lived in the newly created villages (Kyle, 1991, cited in O'Laughlin 1992).

[16] Although in terms of freshwater and land since Brito et al (2003) state that the new Land Bill of 1997 recognises security of land ownership in two ways: recognition of occupation based on oral testimony and demarcation of community land (Chenje 2000, cited in Brito et al 2003).

management. However recent policy developments that require that communities are entitled to 20% of the revenues (such as for timber concessions, if they organize themselves adequately) have led some to conclude that this situation may be changing for the better – in theory.

The intimate links between common property regimes and land tenure have been mentioned a number of times. In Mozambique the recent land legislation (Land Law of 1997) aims to give more land tenure security to Mozambican citizens and investors (see Box 3). However, this has been questioned by a number of authors (Nhantumbo, 2000; Anstey and Sousa, 2001; Nhantumbo et al., 2003; Norfolk et al., 2003).

Figure 6 Map of Mozambique (source United Nations)

All cases studies are located in the southern coastal region between Maputo and Inhambane

The last decade in Mozambique has seen a sharp increase in community-based natural resource management (CBNRM) initiatives (Nhantumbo et al., 2003). Currently there are an estimated 41 CBNRM project in Mozambique initiated by government, projects and NGOs.

These projects are implemented as conflict resolution and benefit-sharing mechanisms for the different users of the resources, or simply as a way to promote sustainable utilization of resources as envisaged in the government strategy for achieving the social objective of the 1997 Forestry and Wildlife Act. Examples include CBNRM in Tchuma Tchatu, and in pilot areas in Maputo and Nampula provinces aiming at development of methodologies for CBNRM.

4.2 Summary of statutory laws pertaining to water and land

As noted in Chapter 1, a detailed review of statutory laws pertaining to water and land is beyond the scope of this project. The following summary is offered as background to the review on customary water resources management.

4.2.1 Water

A law dating back to 1991 and a policy document from 1995 regulate water use, although both are currently under revision. At their core is the change from a supply-driven to a demand-driven approach. The 1991 Water Law clearly states that water (surface and ground) is state property and part of the public domain. It is based on the principles of unified and coherent management, coordination and participation, as well as the integration of water policy with national physical planning and environmental policies. It distinguishes two kinds of use: common and private. Common uses are those which do not require specific infrastructure and satisfy the immediate needs of the users without significantly changing the quality and flow of the water. This water is free. Private uses have a commercial character and require the payment of a tax.

The 1995 Water Policy seeks to change the role of the central government from service provider to the regulator. Decentralisation to authorities at the watershed level and to local service providers, preferentially private, is also a focus. The central body responsible for water management is the National Water Directorate (DNA[17]). Inter-sectoral coordination is guaranteed through the National Water Council (CNA[18]), which is an advisory body to the Council of Ministers.

Five regional bodies, the Regional Water Authorities (ARA[19]), are responsible for Integrated Water Resource Management of five regions: South, Centre, Zambezi Valley, Centre-North and North[20] (see www.pwa-web.org/data/PDF/Mozambique.pdf). The ARAs have the powers to:

- Plan, construct and approve hydrological development of the watersheds under their jurisdiction;
- To raise taxes over the use of water;
- To issue and withdraw licenses for the use, the introduction of waste control and servitudes;
- Assist other state bodies with technical advise;
- Collect hydrological data;
- Resolve usage conflicts;

[17] Direcção Nacional das Águas.

[18] Conselho Nacional das Águas.

[19] Autoridades Regionais de Água.

[20] The ARA for the southern region (ARA-Sul) has been operating for about a decade. ARA-Centro and ARA-Zambeze have been created only relatively recently and the remaining two still exist only on paper.

- Regulate and apply sanctions to abusers and to effect the closure of sources of pollution.

Participation by stakeholders
The different line ministries with vested interest in water resource management coordinate their actions at the national level through the National Water Council, local government bodies and user associations. Farmers can create users' or irrigators associations.

ARA-Sul is divided into four basin management units, which work directly with stakeholder committees to plan water supplies and to address the monitoring of water use, quality control and management, and fees. Committees are regarded as important bodies for the reduction in conflict between user groups (e.g. upstream versus downstream). The committees are also involved in international negotiations.

Thus although the current legislation offers ample opportunities for stakeholder participation, this does not explicitly address opportunities for communities to govern their own freshwater resources.

4.2.2 Land tenure

Mozambique has a different history from other SADC countries of SADC. Colonial legislation dating back to 1892, which distinguished 'white' and 'indigenous' territories was abolished upon independence in 1975. The 1976 Land Law clearly states that all land belongs to the state. This principle was maintained in the new law approved in 1997. According to this law, access to land is achieved through three routes (Box 3):

Box 3: Changing tenure legislation (Source: Ibraimo, 1999)

Land-use rights by local communities is regarded as one of the significant changes introduced in the law. They are acquired through:

1. occupation by individuals and local communities according to customary norms and practices that are not contrary to the Constitution. This means that those who occupy land have the land-use right;
2. occupation by national individuals who use, in good faith, the land for at least ten years;
3. granting of request for a title.

The state may issue a renewable fifty-year usufruct rights title (known as a DUAT) to any citizen, and is contingent on the approval of a land use plan. Lack of execution of this plan within five years may result in the withdrawal of the right.

The 1997 Land Law recognizes that land may belong to somebody although this person does not have a legal title. Contrary to the previous legislation, it also recognizes that land may belong to a community. Communities may formalize their rights by requesting a title. After the granting of a title, community members are looked upon as co-titulars. Individual community members may request the partition of their share from the communal area.

According to the law, local communities 'participate' in the natural resource management of their land on the basis of, among others, customary norms and practices (Art. 24), thereby endorsing the use of tradition in the regulation of access and use.

Smallholders and communities are not subject to the time limit normally applied to land use titles and are also exempt from the payment of the associated taxes.

Restrictions on communal rights are dependent on (a) the status of the land and (b) the constitution. In protected areas a DUAT may not be issued, although special exploitation rights may be issued if this use does not endanger the status of the land. With regard to the latter, customary norms and practices that are unconstitutional are not acceptable.

The protection of natural resources in communal lands gained prominence with the recognition of community rights in 1997 (Brouwer n.d.). Today it is recognised that in parallel to the developments regarding statutory law, customs and tradition regulate many practices regarding the access to a resource. People interested in exploiting *Hyphaena coreacea* for palm wine in southern Mozambique are expected to pay tribute to the local *induna* by bringing him their first wine; cattle holders can be requested to move if their animals ravage the crops of their neighbours too frequently and sacred bushes, burial sites and homes of the spirits are left unexploited.

Finally, in a departure from previous policy, the Government moved towards the recognition of traditional chiefs alongside other local leaders in 2000. The chiefs are now equipped with a uniform and a national flag, and are receiving a small stipend. They are officially incorporated in local administration. The environment is one of their focal areas around which they must interact with the state administration. Specific responsibilities include the mobilization of the population for the maintenance of wells, dams, irrigation and drainage canals and education in the sustainable management of natural resources.

4.3 Case studies

This section presents the case studies synthesized from the literature. Firstly, it should be noted that this is still somewhat limited to work that started only after the end of the civil-war (post 1992). Secondly, and in common with most of the countries examined, the focus of this limited body of work on common-property regimes in Mozambique is mainly on terrestrial resources and coastal fisheries (see for example Brito, 1998; Boyd et al., 2000; Chilundo and Cau, 2000; Tique, 2000; Anstey and Sousa, 2001; Virtanen, 2001; Schafer and Bell, 2002; Durang and Tanner, 2004). Tique (2000) for example, discusses changes in natural resource use and tenure security in Gondola, near Beira. The focus here is on charcoal production, deforestation and agricultural production. Chilundo and Cau focus on changing common property regimes over land and forests in southern Mozambique but do not make mention of water resources. The focus of work by Brito et al. (2003) is a descriptive one of the wetlands of Mozambique, although they do make mention of lend tenure reform. Lopes focuses on coastal fisheries resources and the imperative to involve coastal communities especially with regard to artisanal fisheries. Schafer and Bell (2002) examine the failure of state support in the protection of the Moribane Forest Reserve (controlled by the Renamo guerrillas during Mozambique's civil war). A number of papers describe wetlands of Mozambique (e.g. Gomes et al., 2002; Brito et al., 2003). As part of the Transfrontier Peace Parks initiative, interest in the Bahnine wetland system has grown. A draft wetland management plan has been developed but to our knowledge, no analysis of community-based management has been undertaken to date. A draft socio-economic report of the Shingwidzi basin touches on some issues of the role of community leaders (Create, 2002).

One case study – that of Machangulo – is extracted for this review in that part of the focus is on freshwater resources. This is followed by a synopsis of cases where mention is made of freshwater resources.

4.3.1 The Machangulo Peninsula

The Machangulo Peninsula lies opposite Inhaca Island, Maputo Province. Brouwer (1998) provides a history of the area in his examination of private and common interests. Relatively obscure until 1995, interest in the Machangulo grew with the proposals for tourism – often considered ludicrous – by an American developer, Blanchard. Since then the area has become increasingly earmarked for tourism by property-developers.

Nature of the resource and the users

Three major groups of resources are evident in Machangulo:

- the sea and adjacent floodplains and mangroves;
- forest and farm land; and
- lakes.

Each area is subject to different laws and to different traditional arrangements. Together with remittances, fishing constitutes the population's main source of cash and dietary protein.

Historical context and External environment

Exploitation of fisheries characterized the area until its decline in the 1960s. Entrepreneurs of Greek origins established companies that exploited permanent extended nets called *gamboas*. Each company would employ about 25 persons, who lived with their families in semi-permanent camps close to the nets. Brouwer suggests that these fishing enterprises were of little significance to local labour, with outside recruitment being more important. Once fishing for prawns was allowed in the south of Maputo Bay, the breeding grounds for prawns, the fishery all but collapsed and only one company survived. Whereas commercial fisheries declined, for the local population, fishing continues to play a part in peoples' livelihoods.

As stated, a suite of laws govern the various resources although they are given little weight. The sea and the adjacent floodplains and mangrove forests are public domain by law. They are protected by specific laws or specific sections in the land and forest legislation and environmental legislation.

- Access to **fish** is regulated by a licence system under the responsibility of maritime authorities.
- The use of the **tidal plains** for fishing with standing nets (*gamboas*) is subject to licensing. Similar to all fishing licenses, a ***gamboa* license** is valid for one year.
- **Forest law** classifies the four mangrove species occurring in the area as third-class timber species, meaning that they may not be used for firewood or charcoal. In practice, mangrove stakes are taken without any licensing.
- **Access to land** is officially regulated by the Land Law. In Machangulo, according to the national land register, only six concessions totalling circa 363 ha were handed out during the colonial period. These concessions seem to have little impact on actual land use. Since Independence, several new claims have been made, including a South African tourism enterprise. The population seems hardly aware of the existence of these titles and requests and they follow their own rules for resource-use rights.

Property regimes and institutional arrangements:

On the tidal plains and mangroves, **a local system exists parallel to the official law.** On tidal plains, locals have mounted smaller *gamboas*, sometimes made only of straw and stakes One individual claimed that he knew that he was acting 'illegally' but stated that he had

occupied that area immediately after returning from the war and would refuse to abandon it. This description shows that although the *gamboas* act as an official licensing system exists which creates (temporary) private ownership rights, these rights are constantly bent, manipulated and infringed upon by the different parties involved.

Despite the mangroves being formally protected areas, the local population **hardly maintains any restrictions** as to their use. The only restriction that actually seems to be in force is that of the user group: apparently, only members of the local community are entitled to collect stakes and firewood from these mangroves. On the continent, **land tenure** is largely organised on locally defined principles rather than statutory law. Basically, all physical space on the Peninsula has an owner. The mix of entitlements varies with the nature of the space and the resource.

The **lakes** are also used by the population, and beach trawling for fish is the most important activity. The catch is used for subsistence. **Access** is restricted to inhabitants of the cell around the lake.

Use of these common property resources is subject to two restrictions: it should serve the satisfaction of immediate consumptive needs (not for trade); and the user should be a member of the community.

Outcomes
Brouwer clearly demonstrates that up until 1998 the local framework of rules regarding lakes, land, mangroves and the tidal areas existed parallel to – and was hardly affected by the state system. He states that "At the margin of political and economic development, and under a regime of indirect rule, neither the colonial nor the post-independence Frelimo regime seems to have significantly modified the organisation of access to resources on the Peninsula". However, given the growing interest in the area, particularly as a tourism destination within easy reach of South Africa, this situation may well change.

4.3.2 Other cases

Marangue Lagoon
The demise of common-property regimes surrounding the Marangue Lagoon, also situated in southern Mozambique, is briefly described by Chilundo and Cao (2000). This lagoon, of marine origin, is situated in the interior of Manjacaze District, Gaza Province. Potential evapotranspiration is quite high and salt formation on the lagoon margins occurs in the dry period. This salt is extracted by community members for domestic consumption or sale. In these areas people are prohibited from taking baths or depositing rubbish.

Local water sources, usually along valley floors or river margins, lakes and lagoons were managed for collective use as common property resources. Apparently all users **were responsible for enforcement and management**. For example, sanctions were applied if someone transgressed the prohibition of bathing or washing of clothes in close proximity to water sources and rivers reserved for drinking and cooking water. A rotation system for the **cleaning of the traditional water sources** existed. Transgressions were seen to be a provocation of the spirits. In addition to spiritual taboos, Chilundo and Cau suggest that these systems were functional because there was strong solidarity among the group members.

In terms of artisanal **fishing**, Chilundo and Cau suggest that there was almost no exclusion of individuals using line, hook or bow and arrow to fish. Nevertheless, **restrictions** did apply

such as limits to the use of fishing nets and traps sizes, as well as the use of traditional drugs that killed all the fish and living organisms.

Machongos and reeds

Machongos are soils comprised almost entirely of organic matter and abundant water occurs immediately below the surface layer. They can be 'pure *machongos*', 'sandy *machongos'* or 'clay *machongos'* (Barradas, 1944, cited in Chilundo and Cau, 2000). *Machongos* occur in many coastal valleys of southern Mozambique and are important areas for livelihood production (Brito et al., 2003).

These authors also make brief mention of the transformation of *machongos* in the Chilundo community, Zavala District. Historically the reeds of *machongos* were maintained by local populations over generations because of their link with surface water and the associated organisms that were used for multiple purposes. However, the introduction of rice cultivation during the colonial era led to wide scale reed removal which in turn, resulted in drying up of *machongos*. Ironically then, continued rice production was impossible and was abandoned. Apparently some of these areas are recovering.

4.4 Opportunities for integrating local-level governance regimes into statutory arrangements

A number of points emerged from discussions held at the joint workshop to discuss this issue, as described below (see Pollard and de Wolf, workshop report). The discussion was prefaced by a focus on the weakening of community structures, and of regional differences.

Urban expansion and 'urban' agriculture

Participants noted that there is a disintegration of various types of community structures, especially in the south where there is a strong urbanisation, but also in other cities. Urbanisation brings changes in the relationship with natural resources. Migrants develop (new) claims in the areas they move to and some will try to maintain their claims in the rural areas even though they are absent. Such changes are anticipated to impact on land and water use.

A case in point is that of charcoal burning since migrant charcoal burners disrupt the existing natural resource regime. Their activities also result in attitudinal changes of the local population who have now started making charcoal. As such their custodianship becomes diluted, they are no longer interested in conserving their resources, but rather exploiting them before others do so.

Regional differences

Regional differences characterise Mozambique – not only between urban and rural areas – but also between the different ethnic groups. This places differential pressure on resources in different urbanising areas, such as through the charcoal industry. Spatial differences are also apparent in fisheries between, for instance, Massingir and Cahora Bassa dams. This high degree of spatial differentiation in Mozambique is also discussed by (Boyd et al., 2000).

Water tenure

It is important to note that in statutory terms, water tenure *per se* does not exist since all water is public property. Consequently there is no basic recognition of any communal right, except for usufruct rights for subsistence.

However, slowly a process of creating local power is emerging with the move towards decentralization and the construction of the local state through representation. This includes the establishment of natural resources management bodies, water councils and committees. Municipalities are being created. In addition, there is the recognition of chiefs and other traditional leaders.

Although still underway, the creation of watershed-based management (ARAs) with committees is a progressive movement and provides opportunity for involvement. For example, ARA-sul is trying to look beyond water supply alone. In the case of the Pequenhos Limbombos Dam for example, water is for the city, but ARA-sul is trying to promote development of other uses such as fisheries, so that the water will gain additional potential and values.

Although still to be tested, the environmental legislation is important because it enables the mapping of rights and entitlements. Also it demands the participation of communities in granting of environmental licenses and prescribes a process for that participation. This can be seen as an empowering step in the environmental impact assessment process.

However a number of major constraints to community involvement were noted.

Law versus practice (community rights can be difficult to exercise)
Power dynamics are an important consideration. This is true not only for communities versus the state, where the communities are on the 'weaker' side, but also for cases of the state versus the state. As an example, theoretically ARA-sul is entitled to sue a sand-mining company for compensation for damages that were caused to a water gauge. But in this case, it was simply not possible because the owner of the company is a former minister.

Moreover, the current revision of law and policies theoretically provides opportunities for all kinds of input. Despite this field staff, including the technicians, are not involved in the revision processes and this will reduce the capacity to link it to the practice.

Separate licensing for different resources
Separate bodies license different resource use: mining, water, fishing, land, and forests. There is no integration so that although the rights are coupled (e.g. water rights are coupled to land use rights), there is no connection when rights are granted. That makes it very difficult to guarantee, for example, the use rights of communities when they granted rights for land, without consideration of water.

In terms of the future, education, together with support for participation in water management commissions, associations and committees, are regarded as essential. Furthermore communities should be involved not only in the management, but also in the strategic planning – actively and with a decisive voice. In Mozambique today peoples' rights are defended in the law and as such awareness of these rights is seen as an important step towards empowerment. The difficulties of enforcement remain a major challenge.

4.5 Conclusions

Most authors recognise that customary authority remains practically the only functioning institution at the local level in Mozambique. Moreover, most authors agree that a range of factors, summarised below, have led to the demise or transformation of certain forms of natural resources common property rights in Mozambique.

- Population growth, deforestation and loss of plant and animal habitats;
- Destabilization caused by civil war;
- Loss of a sense of ownership. It is suggested by a number of authors that it is difficult nowadays to exclude anyone because communities do not have the legal authority to do so;
- Urbanisation and the consequent changes on natural resource management regimes, including claims by the urbanized to rural areas. This has been accompanied by the disintegration of community structures in some areas;
- Monetarization of the economy, state intervention and market forces (see also Murphree and Mazambani, 2002).

With respect to the last point, Lopes (2006) points out that in the case of coastal communities and fishing resources, the added pressures introduced by increasing tourism have also lead to local conflicts and impacts. This is equally the case in many places along the coast, including recent developments in the Machangulo peninsula (see above). Lopes also makes the point that the capacity of various departments is severely constrained making it extremely difficult for officials to positively deal with different issues (see also Schafer and Bell, 2002).

Apparently more recent debate at different levels including government, NGOs, academia, donors and other stakeholders led to a development of what can be considered not a complete, but **more coherent natural resources policy framework**. This includes respect of the **traditional rules**, delimitation of community areas and participation in decision making through local structures. Again, this is strongly focused on wildlife and woodlands without clear reference to water-based resources. However, the advent of 'new' types of community leaders places role of traditional leadership in a more vulnerable position, although in rural areas they are still highly respected (see Norfolk et al., 2003; Lopes, 2006).

Theoretically, mechanisms exist for communities to manage common-property resources and for the inclusion of these into formal systems. In reality, this process is still new and many challenges lie ahead as pointed out above.

Chapter 5

Zimbabwe:

Review of literature pertaining to community-based governance of freshwater systems

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Local-level governance systems are perhaps better documented in Zimbabwe than any other southern African country. This reflects the keen interest shown in community-based natural resource management (CBNRM), and Zimbabwe is well-known for the CAMPFIRE[21] *initiatives. Legal pluralism is a key topic in the literature where formal institutions must be reconciled with those embraced by communities for natural resources management. In general, despite water reform, the de facto situation is that communities continue to manage and use water resources according to their own rules and norms or through a blend of the customary and formal. The exception is seen in recently created water bodies (such as Kariba Dam) where fishermen have followed imposed rules. Moreover, nascent catchment councils are also likely to change the 'rules of the game'. The point is made that until the recent water reform, little attention has been paid to Zimbabwe's water history whereas its land history has received significant attention (Derman, 1998; Derman et al., 2005). Some authors point out that one of the main reasons was that the post-colonial state did not capitalize on indigenous and water management experiences, despite professed indigenous roots of leaders (Manzungu and Machiridza, 2005). This absence is reflected in the policy discourse.*

5.1 Introduction

As with all countries reviewed, the discourse on water tenure and governance in Zimbabwe is underscored by a dual legal system – the formal statutory system and the *de facto* system practiced in most of the communal lands of Zimbabwe which upholds an approach more aligned with customary arrangements. Importantly, the statutory legislation grants residents of communal lands only usufruct rights to natural resources but no ownership status (see Derman, 1998). Moreover, Zimbabwe's customary arrangements are under enormous pressure from the fast-track land reform process as different interest groups vie for power (Chikozho and Latham, 2005).

Zimbabwe has also been going through a process of water reform, much of this in response to the huge inequities that exist in access to water as a legacy of the colonial period. A new Water Act was passed in 1998 and hand-in-hand with this was a process to decentralize water resources management responsibility to catchment and sub-catchment councils, representing water users (Figure 7; and see Sithole, 2000). Despite this, customary law and so-called informal practices still prevail. Indeed, Chikozho and Latham (2005) argue that despite

[21] Communal Areas Management Programme For Indigenous Resources. The Parks and Wildlife Act of 1975 aimed to give private commercial ranchers an economic rationale for conservation by promoting the possibility for investment into productive wildlife utilization. Innovative staff then started the CAMPFIRE initiative to extend this thinking, and the benefits of conservation, to the communal lands. In theory it includes all natural resources, but it is most active in areas where there is a focus on communal wildlife management (Metcalfe 1994).

colonial and post-colonial attempts to subvert customary law into the formal judicial system, traditional systems are still the *de facto* regime for natural resources management in Shona communities (see Section 5.3). They elaborate qualities that distinguish customary law from that of statutes: (a) it is oral not written and therefore more amenable to adaptation in its application and interpretation; (b) it is conciliatory rather than punitive; (c) it is dynamic and flexible; (d) it has nested levels of jurisdiction, and (e) it views the landscape as a whole rather than being divisive along domain lines, such as water. Derman (1998) notes that key to the range of customary practices pertaining to water resources management is the fact that water was and is part of a social and religious system that is at complete odds with the view that individuals could hold exclusive property rights. These attributes distinguish and set apart this system from that of western law. Indeed, the overlapping scales (of user rights and responsibilities, see Figure 2) is what led Jackson (1995) to conclude that planners of the colonial administration found the system confusing and needed to 'tidy it up'.

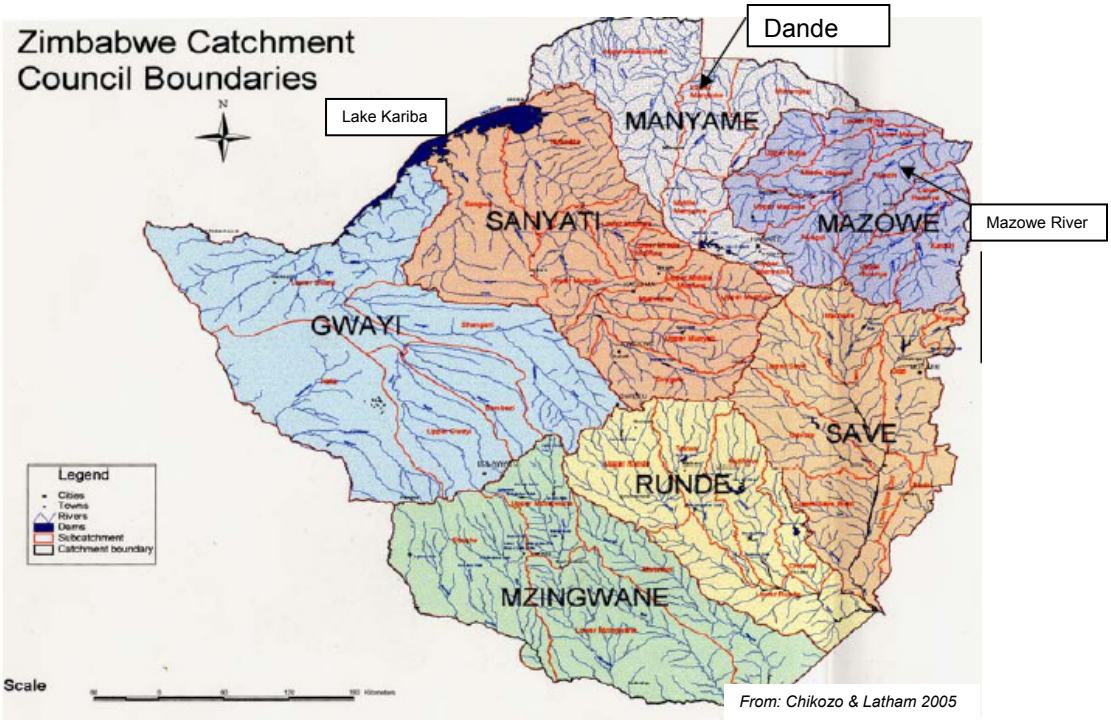

Figure 7: Zimbabwe's catchment boundaries and case study localities

Chikozho and Latham (2005) present a compelling argument that legitimate governance of water lies with the people themselves. The Shona worldview states that water 'belongs to God' and by implication, to them. Thus the only authority that can allocate and manage water is the chief, but the 'chief is the people' so governance lies in the hand of people. In customary systems of the Shona, legal proceedings invariably commence at a village level, and then to the court of the ward headman, and finally to the chief's court. This process is governed under customary law and only then does it enter the State system of district courts.

Murombedzi (1998) provides some important theoretical discussion on common property resources, or CPRs. His main thesis, in support of other work in Zimbabwe (e.g. Murphree, 1991) holds that resource degradation in communal lands has resulted from the state assumption of control over communal lands. This has resulted in the demise of management institutions and clearly defined rules, regulations and obligations (Figure 8). To this he adds the effects of differentiation. Murombedzi points out that these factors alone cannot account for eroding common property regimes; rather cognizance must be taken of the impacts of the

changing village economy (*sensu* Lawry, 1989), which will also create shifts in interests and powers (Murphree and Mazambani, 2002).

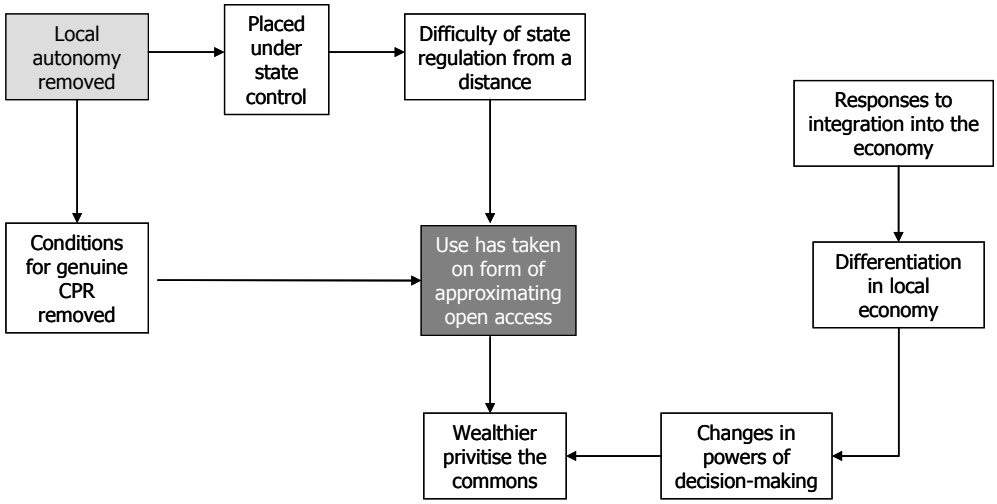

Figure 8: Summary of the drivers and linkages in the demise of genuine common-property regimes (CPR) according to Murombedzi (1991)

The argument is that systems that approximate open access have resulted from the lack of local autonomy, combined with the inability of the state to manage from afar. Effectively, as noted by Murphree (1991) local people now reside on state land with usufructural rights only, and powers of exclusion and access to certain resources (wildlife) are denied to them.

He argues that the colonial legislation was developed from a weak technical basis and was more about ensuring state control over local interests than wise and effective natural resource management. Wetlands were removed from production systems through the Water Act (1927, amended in 1976) and the Natural Resources Act (1942). Nonetheless, 'informal' irrigation on dambos was estimated to amount to 20,000 ha (of an estimated 262,000 ha of dambos[22] in communal lands) in 1994 (Owen et al., 1994).The rationale was based on the need for the protection of these areas based on fears that their use would lead to ecological destruction. Murombedzi contends that, with no supporting data, these concerns were unsubstantiated. In contrast to state perceptions, a number of authors argue that wetlands and dambos were widely recognised for their value by local people and were afforded the necessary protection under customary law. However, once management was moved out of the hands of the users themselves resistance to legislation grew and more importantly, the use of wetlands has continued. Ironically enough, despite state concern, the legalization and reintroduction of dambos into maize production – exclusively in European areas – was effected in the 1960s.

[22] A term used to denote valley bottom wetlands in Zimbabwe.

5.2 Summary of statutory laws pertaining to water and land

5.2.1 Water tenure

Policies and legislation

The Water Act of 1998 reformed the water sector to ensure a more equitable distribution of water and stakeholder involvement in the management of water resources. A strong focus of this reform was on the re-orientation of water from large-scale commercial agricultural needs to the needs of small-scale farmers (see Manzungu et al., 1997; Mazungu, 2001). Almost no discourse is evident on local-level governance experiences (Manzungu and Machiridza, 2005).

Water is no longer privately owned. The 'priority date water right system' has been replaced by water permits of limited duration which will be allocated by Catchment Councils which operate in seven 'mega-catchments' (Figure 7). Theoretically, sub-catchment councils are the lowest tier within this system but these have yet to be established. Water is now treated as an economic good. Pollution of water is an offence and the 'polluter pays' principle applies.

The Zimbabwe National Water Authority Act (1998) led to the establishment of ZINWA, a parastatal agency responsible for water planning and bulk supply. ZINWA plans and manages water resources on a catchment basis and involves all stakeholders. Other responsibilities include the management of the water permit system, operationalization of water pricing, operating and maintaining existing infrastructure and executing development projects. ZINWA works with seven river catchment councils to which it will devolve responsibility for managing river systems and enforcing laws and regulations at the local level.

The Land Acquisition Act (2000) has empowered the government to compulsorily acquire any land for resettlement purposes under the land reform. The land redistribution carried out by the government has resulted in an increase in the land under irrigation in the smallholder sector since commercial irrigated farms have been acquired and split into smaller pieces. This has ushered in two new groups of farmers, namely: A1, who irrigate small areas with shared equipment, and A2, who are the new breed of commercial farmers. In some cases the A2 farmers also share irrigation infrastructure.

The Environmental Management Act (2002) empowers the government to command public and private development institutions to undertake an Environmental Impact Assessment (EIA) before undertaking any activity and to adhere to mitigating activities to protect the environment as recommended in the EIA. Irrigation development is one such prescribed activity requiring an EIA.

Institutions

Several government institutions, parastatal agencies and other non-governmental organizations are involved in irrigation and water management in the country. The major ones are shown in Table 2.

Water management

At the national level the responsibility for the planning, coordination, management of water resources and the delivery of water is vested in ZINWA in conjunction with the Catchment Councils. ZINWA is supervised by its parent ministry MRRID. There are seven Catchment Councils in the country (Figure 7) and each should represent all stakeholders in a given catchment area. Theoretically, this results in increased stakeholder participation in water management through catchment boards, although this has been questioned by some (Sithole, 2001). At the level of farmers in smallholder irrigation schemes, Irrigation Management

Committees (IMCs) have been established to help encourage farmer management. The government's policy since 1980 has been to promote farmer-managed schemes where possible. The IMCs have no legal standing and their effectiveness varies from scheme to scheme.

Table 2: Summary of institutions involved in irrigation and water management in Zimbabwe

The Ministry of Agriculture and Rural Development (MARD)	Responsible for the overall development and implementation of the government's policy on agriculture and irrigation. The Ministry is directly involved through its departments and parastatal agencies as set out below
The Department of Research and Extension Services (AREX)	Provides extension services to all irrigators and its research section is responsible for soil surveys and testing for irrigation development.
Agricultural and Rural Development Authority (ARDA)	Parastatal agency responsible, on behalf of the government, for the operation of government-owned irrigated estates and farms. It works closely with the Department of Irrigation.
Department of Irrigation (DOI)	New department which was initially in the Ministry of the then Rural Resources and Water Development (MRRWD) and was recently moved over to MARD. The Department is mandated with all the irrigation activities in the country which include planning, identification of schemes, designing, construction, operation and management of existing irrigation schemes.
Ministry of Rural Resources and Infrastructural Development (MRRID)	Custodian of water rights and develops policies on water development. Three departments and one parastatal agency under this ministry are involved in irrigation and water:
The Department of Water Development (DWD)	In charge of the overall formulation of national policies and standards for the planning, management and development of the nation's water resources. It acts as a policy and regulatory unit on water within the Ministry.
The Zimbabwe National Water Authority (ZINWA)	A water planning and bulk supply parastatal agency which works with Catchment Councils to which it is expected to devolve responsibility for managing river systems and enforcing laws and regulations at the local level. The organization plays an important role in the management of the water permit system and the operationalization of water pricing.
The District Development Fund (DDF)	Provides tillage services to irrigators and offers a nationwide public works facility for maintaining public infrastructure including boreholes and small dams. It also plans and constructs small irrigation schemes, but under the supervision of the DOI.
Ministry of Local Government, Public Works and National Housing	Lead ministry working through the Rural District Councils to mobilize the local community, farmer selection and irrigation plot allocation in smallholder irrigation development.
Ministry of Finance and Economic Development	Key role in defining priorities and in determining the availability of resources for development activities such as irrigation. It also coordinates externally sourced development finance for irrigation and relations with donors.

5.2.2 Land tenure in the communal areas

Land resources in Zimbabwe today are governed by three overarching tenure systems: state, communal and private. Prior to colonialism in the late 1800s, all land was communal but today both the communal and private sectors are subject to statutory governance and regulation. In the case of communal land, the state legally 'owns' the land and manages it through line ministries, supported by local government structures and plans.

In the communal areas in Zimbabwe there is a clearly recognised institutional framework within which land is administered. Nonetheless, two 'parallel' administrative systems exist. In the early 80's, the Communal Land Act of 1982 transferred all powers for the allocation of land to the Rural District Councils (RDCs). Public participation, provided by means of representation, is theoretically secured through elected councillors and development committees, which oversee between one and six 'traditional villages' (Anderson, 1999). Then, in recognition of the importance of traditional powers and functions, the Traditional

Leadership Act of 1998 placed (some say 'returned') land administration powers to a traditional system of chiefs and headman overseeing 'traditional' villages. The boundaries between these two systems do not correspond.

Despite the legislation, Latham (pers. comm.) stresses that essentially, communal land is viewed as being owned by the community – 'the people' (there is a strong connection between the land and the people and the people included the spirits). Given that this belief is reinforced by spiritual sanctions, the land is actually owned by the spirits (Chikozho and Latham, 2005). Although Chikozho and Latham acknowledge that there are significant differences within the country, they also assert that the role that spiritual sanctions fulfil is the same. Indeed, Andersson points out that when the headman rules on a land dispute case, judgment is not based on reference to legal principles, and claimants tend to call on 'informal' rights.

5.3 Case studies

This section presents the case studies synthesized from the literature. The Zambezi Valley is well documented from a number of perspectives by various authors particularly given the removal of the Tonga people with the construction of Lake Kariba (1958) and the impacts that this has had on their livelihoods. Two other case studies – the Mazowe and Manyame – are also reviewed.

5.3.1 The Zambezi Valley

Nature of the resource and the users

McGregor (2003) discusses the Middle Zambezi Valley (including hot springs at Binga) through the lens of the politics of landscape ideas, or the politics of heritage and identity through connections to the landscape. The people who lived along this part of the Zambezi referred to themselves as the 'river people' (*bamulwizi*) and identify themselves variously as the Tonga, Leya, Dombe and Nambya. Today the Tonga are also known as the people who were forced removed from the area that is now submerged by Lake Kariba. She contrasts the African and European way of seeing the landscape and contests that the latter's views were central to the appropriation of the river and lake to tourism and conservation and to the marginalisation of those who lived there. Moreover, the Europeans constructed a relationship for local people with the river that was both erroneous and simplistic. The notion of the 'River God', heavily commodified for tourists at Victoria Falls, is far from the intricate relationship of the river and the ancestral spirit world as narrated by local people. Even today all of these communities emphasise or invoke (in the case of communities that were moved) their relationship with the river. She notes a certain pragmatism to people's accounts recognizing that life would have changed with the changing demographic and economic changes.

Today there is increasing anger focusing on the betrayal of promises made by Cockroft, the native commissioner, at the time of the move. When some 80,000 people were moved (Magadza, 2002), Tonga leaders were promised that the 'water would follow them', meaning that the state would provide them with new sources of water (McGregor, 2003). This never happened and water shortages are one of the most acute problems faced. The Leya, Dombe and Nambya, living upstream of Kariba, have a somewhat different narrative of loss and marginalization as the role and significance of the river changed. Sacred places were desecrated and their gardens prohibited by law or made impossible by war. The encroachments of the 20th C were more slowly felt as state intrusion, Christianity and commoditization took hold. Between 1900 and 1930 the Leya/ Dombe people of the falls were

evicted to make way for a tourist resort. The last religious ceremony of the Leya that took place at the boiling point was in the 50s, and the sacred place is now given over to a tourist path and handrail.

The identity as river people, which persists, has particular relevance in relation to conflicts over resources that are evident today. After the Dam, the thesis that development would be rendered through tourism and commercial fishing took precedence over local livelihood issues. In Hwange, after two decades of prohibition the Dombe/Nambya have only just secured rights to have fishing camps and boats, and still struggle to cultivate riverbank gardens in the face of this being deemed illegal.

Historical context and external environment

The 19th C riverine political economy was one of east-west linkages and facilitated trade in ivory, slaves and other goods. The Zambezi was a fearful barrier and the 'river people' were known for their command of the river crossing. Also at the height of the Ndebele stronghold, the river with its island was viewed as a place of refuge. In the mid-19 C, the Nambya fled to the Zambezi and lived on its northern shore under Lozi protection.

The colonial era brought and end to this river-focused life. The construction of Kariba (1957-58) brought massive changes and increased the states presence. Areas with Malende shrines were replaced by the lake shore and people were resettled in tsetse-infested – often already overcrowded – communal lands.

Magadza (2002) notes that the Tonga had evolved an agricultural strategy that gave them a number of options in coping with their food needs. They used both floodplains and rains to ensure all year food production. However, with the inundation of the valley, they were translocated to semi-arid lands with a high risk of crop failure. The Tonga then became a food deficit people and there were indications of widespread famine in the early days of the resettlement. Furthermore, the presence of the tsetse fly made it impossible for them to rear livestock. During the liberation war, many canoes were destroyed by the Smith regime as people were suspected of assisting river crossings. With the dissolution of the Federation of Rhodesia and Nyasaland in 1963, the river also became a security issue as an international boundary between Zambia and Zimbabwe, and the activities of the Rhodesian navy and air force effectively prevented the Zambians from developing a pelagic fishery on their side of the Lake.

Property regimes and institutional arrangements

The riverine society (comprising the Tonga, Leya, Dombe and Nambya) was not a tightly bounded nor centralized political authority (McGregor, 2003). Nonetheless, the Zambezi River is viewed as a provider by all offering sacred places, refuge, fish and gardens for cultivation in retreating flood. McGregor notes that even today all of these aforementioned communities, even those that were moved, emphasise their relationship with the river. McGregor does not deal with water resources management *per se*, although she implies that local people mediated their relationship with the river (and probably other resources) through ancestral spirits. Thus the invocation of sacred places placed limits on activities such as fishing which was possible at certain times of the year under instruction from those responsible for shrines. Fishing often involved ceremony with rituals of respect being paid to the ancestors.

Interestingly, the same author points out that the notion of a 'River God' is one that has been created and popularized by Europeans. It is very different from the spirit world and its relationship to the river that was respected by the riverine communities. They share a central concern for ancestral spirits in religious places and practices, but not in a 'river god'.

With specific reference to the inland fisheries, (Jackson, 1995) asserts that 'the quest for a long-established customary inland fisheries tenure' is inappropriate given the abovementioned major influences following impoundment. However, what McGregor points out is that these local communities feel marginalized from a natural resource that was theirs and so exclusion from commercialization of the resource (part of which is fisheries) is the issue at hand.

Outcomes
McGregor emphasizes the links between tourism and conservation, and to the marginalisation of river people. Moreover, these residents have been ignored as new commercial fishing ventures were established with whites and other newcomers receiving preferential treatment. Still today people's identity is linked to the river as they talk of 'the pain they feel when they see others using the lake freely when we are the owners'. She makes the case that marginalized and dispossessed minorities have invoked and continue to hold a relationship to the landscape as part of a claim for rights over resources that they regard as taken from them.

5.3.2 The Shona: Management of water resources in the Mazowe and Manyame Catchments

This case study emanates largely from work undertaken by Chikhozo and Latham between 1996 and 2002 (Chikozho and Latham, 2005). In their papers, some information on customary management practices is provided although the main theme of their work is exploring the disjuncture between customary and statutory approaches (introduced by Zimbabwe's water reform process) and what this means for integrated water resources management.

Nature of the resource
The above authors focused on two case studies: those of the Dande and Mazowe rivers. The Dande River rises on the Great Dyke and flows through Guruve Communal Land to the Gota Hills where it descends to the lowlands, merging with the Manyame River before joining the Zambezi.

Historical context and external environment
The early Shona are believed to have moved to this area around the 2nd Century (AD). In a narrow gorge in the Gota Hills of the Zambezi escarpment, the colonial administration built a concrete bridge across the Dande River that breached and was never re-built. Recently, the Zimbabwean Government has embarked upon an ambitious project to build a dam at the site to deliver irrigation water into the Zambezi Valley (first with German donor support, and more recently with aid from the Chinese). However, for a number of reasons, local support for the dam has been less than enthusiastic. Many people will be displaced once the dam fills and they are not likely to receive much benefit. Consultation with them has been minimal and the flooding of sacred sites led to wide-scale opposition and resistance, led by the ancestral spirits (*mhondoros,* see below).

The use of water for the Dande Irrigation Scheme has been highly contested. It is intended to provide water for 5000 ha of land in Chief Chitsungo's area. This area has already suffered the consequences of the 'Mid Zambezi Project', a top-down intervention introduced by Central Government in the 1980's, to rationalize settlement patterns and to accommodate the many people who were moving to the Valley seeking agricultural land. This has seen the resettlement of local people, and the influx of many 'outsiders'. A very controversial component was the forced removal of people away from the river banks where they had lived for centuries and the prohibition of the use of riverine alluvial soils for cultivation. A protracted

struggle ensued between the original Valley people and the central planners, in which Central Authority ultimately prevailed. The proposed Dande Irrigation Scheme would mean resettling people that have already been resettled, onto small irrigation holdings of about 2 ha. As the authors point out, opposition to the scheme was inevitable, except from those who had settled more recently in the area (see also Sithole, 2001). Another aspect to these plans (which includes water from the Manyame) was the use of a natural pool in the Dande River as a storage and abstraction point. Mushongaende Pool is sacred. More resistance was felt and the scheme has not materialised, due to 'cultural problems'. Also, research suggests that throughout the communal lands there is a rather strong preference for small and micro-irrigation projects which are felt to be much more manageable than large-scale government interventions.

Nature of the users, property regimes and institutional arrangements

The Shona chieftainship consists of nested levels of governance, starting at the village level. A number of villages (typically between twenty and fifty), comprise a ward, and several wards, a chieftainship. Legal proceedings invariably commence at the village level but failing reconciliation between disputants, the matter is referred to the court of the ward headman. The chief's court is the final institution for appeal before entering the State system comprising district courts presided over by professional judicial officers.

The management of natural resources is intimately linked to the Shona world view. A number of dictums are key to understanding the relationship between Shona people and natural resources: The 'land is the people' and 'the chief is the people, the people are the chief.' The authors point out that these sayings encapsulate an institutional reality that has profound implications in that they imply governance by a head through general consensus (be it village, ward, chiefdom or state). Moreover, this worldview embraces a notion of humans as part of – not separate to – their environment (the land is the people).

Traditional Shona religion (still strong today) centres on the belief in a Supreme Being (God). God is generally approached through a hierarchy of spirits, representing departed members of society. In the area traversed by the two rivers, ancestral spirits called *mhondoros* are revered and held in high regard. The areas of influence for different *mhondoros* are delineated by territorial boundaries more-or-less coincident with current chiefdoms. The *mhondoro* territories are arranged in nested levels – called spirit districts and provinces which culminate in 'commonwealths' (Latham, 1987, cited in Chikozho and Latham, 2005). These domains of the spirit world are concerned with the care and management of the earth (rituals are performed to counteract drought, floods and so on) as well as community well being (crops, livestock, fishing and social cohesion).

Traditional courts have been weakened by the 'peoples' courts' introduced after independence. Nevertheless, they have continued to operate as forums for arbitration. According to Chikozo and Latham, with the reinstatement of authority that is implied by the Traditional Leaders Act (1997), the courts of chiefs and headmen may well assume a more positive role in the legal and social framework of the lives of rural people.

Outcomes

The aforementioned world views, so fundamental to the resource use behaviour of the Shona people, are quite contrary to the tenets of western statutes. What the authors assert is that this creates a gap between the demands of statutory law and actual (customary) water use practices on the ground. Indeed, they make the point that where laws prohibit certain local practices, they are simply disregarded (although in discussions inhabitants may feign ignorance or compliance). The authors also argue that these customary institutional

arrangements are better suited to water resource management given fundamental characteristics which lend themselves to successful natural resource management. These include flexibility, adaptability (adaptive management is increasingly receiving formal attention in the field of resource management) and congruence. Additionally, there is a devolution of authority to the lowest appropriate level.

5.3.3 Other cases

Jackson (1995) deals with Lake Kariba resource use post-impoundment (i.e. for the last 30 years). He makes mention of the new institutions that have been created at Gache Gache on the Lake. Here the new administration has perversely defined opportunistic immigrants as residents rather than the long standing chieftaincy-based fishing camps. Also many longstanding licensed fishers were defined as non-residents despite their 30 year association with the resource. In fact he concludes that these fishermen, who have adhered to licence conditions, have been prejudiced by doing so. As mentioned above, the need of the administration to 'tidy up' anomalous, fuzzy resource-users-use boundaries led them to limit resource use to village boundaries. From a community perspective the anomaly is the legislation, particularly since several sectoral policies tend to 'collide' at a community level, a point also made by Nemarundwe (2003).

5.4 Opportunities for integrating local-level governance regimes into statutory arrangements

A number of authors point out that little attention has been paid to the role of customary or locally-developed systems (see Katerere and Zaag, 2003; Manzungu and Machiridza, 2005). These conclusions were endorsed at the joint workshop held to discuss this issue as part of this project (see Pollard and de Wolf, workshop report). Participants identified the need to better understand these systems particularly given the conflict in priorities between local approaches, often driven by the need to survive, and statutory approaches which can focus on one stakeholder group and often holds long-term sustainability at its core. This research would need to not only understand the dynamism of such systems and the multiple resource and regime boundaries, but also the implications of marrying these boundaries with jurisdictional boundaries (which often occur at a much larger scale), an issue also raised by (Pollard and du Toit, 2005).

Theoretically, Zimbabwe has undergone a process of decentralization and devolution. Participation is to be ensured through involvement on catchment boards. However, as pointed out by Sithole (2001), although inclusive of a wide range of stakeholders, catchment boards are far from being democratic organisations. She points out that the differential access to resources merely perpetuates differentials in participation by all stakeholders. Thus the notion that this is how and where local-level governance can be embraced in the statutory institutions should be treated extremely judiciously. This is particularly true given the recent political turmoil in that these formal bodies are either severely weakened or inoperative since they are failing to generate revenue. Indeed, the current situation in Zimbabwe makes drawing any valuable conclusions rather difficult. It was noted however, that in times of 'surprise' where vulnerability is greatly increased, people have fallen-back on local-level systems as the ones that they know and understand.

5.5 Conclusions

The literature on common-property regimes in Zimbabwe – although extensive – is focused on terrestrial resources and most often wildlife resources. The local-level management of freshwater resources has received far less attention except insofar as considerations from a water supply perspective (see for example Manzungu et al., 1997; Sithole, 2000; Manzungu, 2001; Sithole, 2001; Manzungu, 2003; Manzungu and Machiridza, 2005; van der Zaag and Senzanje, 2006), although there are some exceptions to this. Indeed, more recently a number of authors have pointed to the almost complete absence of any discourse regarding indigenous water management experiences in policy, even in the post-colonial state with its professed orientation towards 'indigenization' (Katerere and Zaag, 2003; Chikozho and Latham, 2005; Manzungu and Machiridza, 2005).

The recent water reforms that focus more squarely on securing water for small-scale productive purposes, seek to decentralize and devolve management to local levels, namely catchment councils and their boards (Sithole, 2001; Sithole et al., 2003). Experience shows that their role and that of Rural District Councils has been somewhat confusing. These councils are theoretically representative of all users in the catchment. However, some authors raise the issue that catchment councils are far from democratic organisations- indeed, power differentials are merely exacerbated. Again, one must caution that participation, even if effective, is not the same as the real devolution of power to govern and such interpretations should be treated cautiously. Moreover, conflicts have emerged between catchment councils and traditional leadership. Recent evidence from the field suggests that given the current political crisis in Zimbabwe, catchment councils have all but collapsed and people have fallen back on what they know and understood– that is, local level systems.

Finally, an additional dimension is that of land reform which, through the Fast Track Land Reform Programme (see Sithole, et al., 2003) has added another layer to local-level governance discourse. In the past decade, more smallholders are entering irrigated agriculture with very limited knowledge of what is required (Manzungu and Machiridza, 2005). As in Mozambique, this may also result in low levels of recognition and respect by newcomers of local-level systems.

Chapter 6

Zambia review:

Community-based governance of freshwater systems

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As with any country analysis, the Zambian review can only provide an overview. Most importantly as (Phiri, 1999) points out, with over 70 tribes in Zambia, their associated bodies of 'law' are equally varied. Yet all share a central feature; that first and foremost, the customary laws are grounded in the notion of community membership and responsibilities whereas western systems place individual rights at centre stage. What other features of customary law[23] are recognised in the literature? Phiri (1999) notes that there is no African jurisprudence, no systematisation of legal institutions, and no clear distinction between 'civil' and 'criminal' law. Thus African customary law is not a set of rules of law, but rather traditional expressions relating to law. He also notes that although traditional Zambian law recognises individual rights and interests, these are not individual rights per se. Thus, although control falls under the Village Headman, the rights are actually held by the village community he represents. In terms of the literature, attention has been paid to issues of local governance – most notably in large systems such as the Barotse Royal establishment and Lake Mweru, In contrast, the smaller systems such as wetlands and dambos, are less well understood. The Zambian situation is somewhat different to the other countries reviewed in that the water reform process is still underway.

6.1 Introduction

Zambia has extensive river systems, floodplains, wetlands and forested plateaus. Miombo woodland is the dominant vegetation community, covering about 80% of the country (www.wcsz.org.zm). A considerable proportion of Zambia falls within the Zambezi River Basin, via the Kafue, Luano, and Luangwa rivers (Figure 9). Zambia is well-known for its vast wetlands: they cover 6% of Zambia's surface area, and between 13% (Thole and Dodman, 1997) and 20% when dambos are included (Akayombokwa and Mukanda, 1998). They are classified as swamp, floodplains and dambos.[24] Information on traditional or local governance regimes is very limited.[25] Seemingly, a socio-economic dambo survey in Luapula in 1995 indicated that dambo's could be used by anyone provided they belonged to the village and the headman was informed (Akayombokwa and Mukanda, 1998). Zambia's 10 million people are highly urbanized, with 47% living in cities primarily along the main transportation corridors. The extensive wetlands and lakes of Zambia are of vital importance to local livelihoods, and in particular that of the rural poor.

[23] Phiri advocates for the use of the term 'rights of avail' rather that 'communal rights'.

[24] Dambos are seasonally or permanently wet grassy valleys, depressions or seepage zones on slopes.

[25] According to Mukanda (2000) although there is a fair amount of literature on Zambian dambos, it is limited to ecological studies.

As mentioned, with over 70 tribes in Zambia, customary law is somewhat more varied and is dealt with under specific case studies. It is worth noting that in terms of the recognition of customary systems, some mention, albeit limited is made of the customary law of 1939 by Thole and Dodman (1997) but it is unclear if this has been revoked. Water rights in Zambia and customary law relating to land and water in the Western province of Zambia are addressed by Chileshe et al. (2005), whilst those of Lake Mweru are detailed by Gordon (2003).

Despite their extensive nature, Zambia has no specific national policy towards wetlands management although this appears to be changing. In 1983 a wetlands conservation project was proposed to SADC and member states were urged to establish national programmes. The Environmental Council of Zambia, established in 1992, was given the mandate. Three of Zambia's wetlands are Ramsar sites: Kafue flats, Bangweulu swamps and the Lukanga swamps (Figure 9). Another proposed area is the Barotse floodplain. Previously it was believed that the cultivation of dambos would degrade headwaters, but as Akayombokwa and Mukanda point out, policies on dambo use are slowly changing to allow the strictly controlled use of dambos for agriculture. Dambos are widely used both during the dry and wet seasons (Kokwe, 1995 in Akayombokwa and Mukanda, 1998).

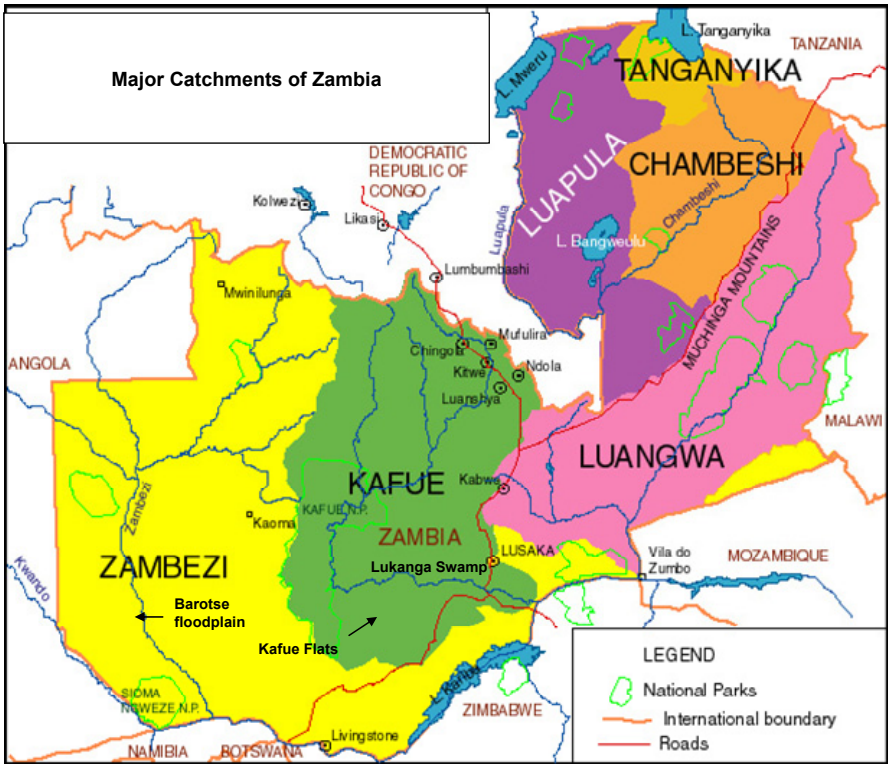

Figure 9: Map of Zambia showing the 6 major catchments and the locations of the case studies (source: GWP)

The Water Act of 1948, now under revision and discussed below, is the main statutory legislation that deals with water management in Zambia (Chileshe et al., 2005). As with most developing nations, great disparities exist between the legislative and de facto management of national water resources.

For large-scale users property rights and common law prevail but Zambia has a dual system and customary law is more prominent at a local level (Chileshe et al., 2005). Generally, customary systems changed under the sway of colonialism and then independence. For example, the colonial system emphasized male ownership, although some Zambian tribes are matrilineal and rights are inherited through the mother. Zambia is interesting also in that added to this dualism, are the nuances of the former Barotseland in Western province where water management is governed as a riparian system and not by the National Water Act. As discussed later, this reflects the historical peculiarities that gave Barotseland a certain degree of autonomy in the early 20th Century.

6.2 Summary of statutory laws pertaining to water and land

The Water Act of 1948, now under revision, is the main statutory legislation that deals with water management in Zambia (Chileshe et al., 2005). Through this, the ownership of water is vested in the president although legal pluralism exists within state law. The Act makes a clear distinction between private and public water.[26]

The water – or more specifically the rights of its use – are closely linked to the land on which the water body lies. Thus in the Zambian case, both the land and water are vested in the President since the revision of the Land Act in the early 1970s. This revision also sought to bring the Barotse Land under one system with the rest of former Northern Rhodesia. The land in Zambia is classified as State land, Traditional land and Reserve land.

- State land, occupying less than 10% of the area, is the former crown land of the colonial era with a 99 year lease in title deeds. Officially, state land can be repossessed if no developments are undertaken within 3 years of title being granted. The repossession ideally minimises absentee landlords.
- The largest landmass, approximately 70%, is the traditional land, which is formerly customary land where the chief is the custodian of the land on behalf of his subjects. Though all the land is vested in the President, the chief continues to give consent for any development on traditional land and consequently any title to the land still needs to have the chief's consent. The maximum tenure that can be authorised by a chief is reportedly 14 years but families maintain land in virtual perpetuity if they follow the local rules and customs of tenure. In some areas with customary tenure, some residents believe their land can also be repossessed if they do not cultivate it for 3 years.
- The reserve land is often uninhabited and includes forests and national game parks.

As stated, the Water Act of 1948 is currently under review. One of the main elements in this review is to strengthen the legislative and institutional frameworks in managing Zambia's water resources. Currently the strategic document in water resources management and development is the National Water Policy (NWP). The water resources development is managed by the Department for Water Affairs (DWA), which has a decentralised structure along local government. The DWA also provides technical assistance to the Water Board, the licensing body for water resources abstraction in Zambia. Along with the promulgation of the NWP in 1994, two regulatory bodies have been formed in Zambia separating the water supply and water resources management and development functions. The National Water and

[26] Private water is defined by the riparian principle. Public water means all water flowing or found in or above the bed of a public stream, including lakes, swamps or marshes. A public stream refers to either a watercourse or a dambo (seasonally flooded wetland) of natural origin, forming part of a natural drainage system, where water flows in ordinary seasons and where such water is not private water.

Sanitation Council is a result of the Water Supply and Sanitation Act (1997) and the Environmental Council that monitors the quality of water in natural bodies is a result of the Pollution Control act of 1990.

The Lozi Kingdom and the Barotse Royal Establishment

The Barotse Royal Establishment (BRE) requires mention here because of the relative autonomy that it has enjoyed in managing its own affairs as well as its long standing traditional leadership (see also case study below). Its separation in the earlier years of colonial rule as a British protectorate contributes to its continual legitimacy in the Western Province. It includes other tribes apart from the dominant Lozi tribe. These smaller tribes also identify with the BRE and perceive it as an equity driven body. The local people have a grater allegiance to the throne of the Litunga than to the elected leaders. Thus any group with prospects to work in the province would benefit from an endorsement by the Litunga.

6.3 Case studies

Clearly, the reports on which the following case studies these are based were written for different reasons and not surprisingly, the treatment of governance issues varies. Phiri (1999) points out, with over 70 tribes in Zambia, their associated bodies of 'law' are varied. Yet all share a central feature; that first and foremost, the customary laws are grounded in the notion of community membership and responsibilities whereas western systems place individual rights at centre stage. The other features of customary law[27] include the fact that there is no African jurisprudence, no systematisation of legal institutions, and no clear distinction between 'civil' and 'criminal' law. Thus African customary law is not a set of rules of law, but rather traditional expressions relating to law. Phiri also notes that although traditional Zambian law recognises individual rights and interests, these are not individual rights per se. Thus, although control falls under the Village Headman, the rights are actually held by the village community he represents.

Despite some sophisticated analysis of legal pluralism in the Zambian context, many studies fail to pinpoint the underlying drivers behind increasing resource depletion and livelihood vulnerability. Whilst recognizing the increasing impacts of economic growth and population pressures, scant mention is made of changing governance regimes (see for example IUCN, 2003; WWF, 2004; Emerton, 2005). In other cases, notably those of the Barotse Royal establishment and Lake Mweru, local-level governance systems are well documented. Unsurprisingly – given the prominence of expansive freshwater systems in Zambia – the smaller systems such as dambos, are less well understood although the 'grey literature' may hold more information.

6.3.1 The Lozi Kingdom and the Barotse Floodplain

The Barotse floodplain is outstanding in its vastness, beauty and the longstanding and continued relationship between the communities and their wetland. As noted by Thole and Dodman (1997) 'strong traditional systems have rarely lasted as in the Barotse floodplain'. In Zambia, the Western Province is distinct for a number of reasons, not least of which is the role of the royal establishment in safeguarding natural resources. Each natural resource – fisheries, land, water, forests, wildlife, – has a designated induna (meaning a representative of the chief) to supervise its use and management.

[27] Phiri advocates for the use of the term 'rights of avail' rather that 'communal rights'.

Nature of the resource and the users
The extensive floodplain varies between 15 and 45 km wide with a length of 160 km. The floodplain covers some 550,000 ha and the total wetland covers in the region of 1.2 million ha (IUCN, 2003). The river overflows its banks in December and again between February and March. The floods slowly recede after May.

As stated, the users belong to the Lozi tribe led by a Lozi Paramount Chief, the 'Litunga' together with his representatives, the Indunas (headmen). In total the four districts of the Barotse floodplain are estimated to house about 225,000 people, or about 30% of Western Province's population (based on figures given by Lewanika, 2002).

Most of the people depend on a mixed livelihood strategy of crop farming, livestock, fishing and natural resource exploitation (see also Table 4). Almost all residents cultivate crops. Over 75% of the cattle are pastured in the floodplain including 265,000 head of cattle that belong to floodplain residents. Just over half of the floodplain residents are involved in fishing.

Historical context
The Lozi Kingdom occupies the fertile Barotse floodplain, and has done so since the late 18C.[28] However, the arrival of the Europeans led to change. In 1890 Barotseland became a British protectorate and enjoyed a certain degree of autonomy. Apparently during the colonial period, the colonial administration worked with the indunas to control bush fires and tree harvesting. Then in 1964, the Paramount Chief agreed to renounce the special treaty relationship with the British and accepted integration into the new state of Zambia. Before the enactment of the Forest Act in 1974, the Barotse Forest Reserves were protected under customary law of 1939 but powers of control were placed almost exclusively in the hands of the Forest Department after 1974. This change in governance sparked the resentment of the local community manifested in massive forest destruction. Numerous organizations have subsequently attempted to facilitate new governance arrangements with varying degrees of success.

External environment (see also history)
Before the central government took control of the Western Province there was abundant wildlife but alarmingly, this is no longer the case. The principle issue is that local people feel that there was a traditional management system that worked in the past and that this has been eroded through government policies and plans that have largely ignored them. Part of the resistance is seen in the transgressions of imposed 'laws'. With opposing viewpoints, indunas and government officials have always been at loggerheads. Attempts to introduce (impose) natural resource management systems have been thwarted by the lack of community support and cooperation. Recognition of this has spawned a number of donor-assisted interventions to incorporate indigenous knowledge into a multi-sectoral management plan for the area.

Importantly also is that planned developments outside of the Barotse floodplain will undoubtedly effect the wetland status and local livelihoods. These include hydropower schemes, reservoirs and dams along the Zambezi River (IUCN, 2003).

Property regimes and institutional arrangements: The Royal Establishment and natural resources management
The Lozi Kingdom was remarkably centralised with graded officialdom and councils.

[28] This powerful kingdom also dominated parts of the north-west, south and Angola.

According to Lewanika (2002) the Barotse system of government consists of five tiers from the central government to village level structures with the responsibilities outlined in Table 3.

Table 3:

Summary of Lozi government responsibilities (Lewanika, 2002)

Government responsibilities:
- To make laws, rules and regulations and to prosecute contraventions; - To conserve natural resources for the benefit of present and future generations; - To provide every subject with suitable land for a home and farming; - To allow every subject to utilize specific natural resources according to laws, rules and regulations pertaining to the utilisation of specific natural resources; - To distribute unallocated land; - To repossess land that has been abandoned or for which heirs cannot be traced; - To adjudicate disputes, including land.
The induna, who is directly responsible for natural resources management such as wetlands, performs the following broad functions:
- To advise the litunga, chiefs and citizens on all issues pertaining to natural resources; - To perform administrative work pertaining to natural resources; - To plan, control and monitor the utilisation of natural resources (fish, birds and wild animals).

The legal system is based on five cornerstones which also govern natural resources: *milao* (laws), *liswanelo* (a body of rights and responsibilities), *lituekelo* (rights of a particular position or social status), *mikwa* (methods or ways of doing things) and *mulatu* (an offence or wrongdoing).

In the pre-colonial period the Lozi implemented policies and legislation that encourage the sound management of the natural resources of the floodplain (Table 4). Indeed, the Lozi are recognised for their unique traditional methods of wetland cultivation, fishing, hunting and forest use. Most notably, the Lozis continue to practice an annual transhumance[29] marked by the Kuomboka ceremony when, at the height of the floods, the Litunga shifts from the dry-season to the wet-season capital.

Outcomes

The Barotse system is widely recognised for sustainable practices. Moreover, the benefits accrued from natural resources were shared between local people and the authorities (Lewanika, 2002). In particular, people in authority distributed part of their portion to the vulnerable. Concerns are being expressed that with increasing centralized authority, this system is increasingly under threat.

[29] At this time the entire kingdom undergoes a migration.

Table 4: Summary of controls and responsibilities for natural resource use of the Barotse floodplain

Agriculture: The intensive agriculture increasingly depended on forced labour for digging the drainage networks and channel maintenance. In 1906 slavery and labour enforcement was outlawed. The floodplain is the economic centre of the region and the Lozi developed and extensive agricultural system. The floodplain was divided into different zones for cultivation (Chiuta, 1995): - *Litema* gardens: shifting cultivation with burning to enrich soil; - *Matongo*: Seepage zones at the plain edges with ridges to combat erosion; - *Litapa* gardens: naturally fertile areas where women grew early maize; - *Sishonjo*: permanently wet land cultivated with hoes; - *Maluzu* gardens: ridged land planted with late maize; - Drainage canals were used for rice and finger millet. In Barotse it is common for natural water bodies to be used as the boundary for demarcations for land plots in order to maximize the number of water users (Chileshe, Trottier et al., 2005)
Forests: The Lozi protected forests through the control of bush fires, tree-cutting and the limitation of firewood collection to the use of deadwood.
Livestock played perhaps the most important role in Lozi lives and use was made of both the uplands and lowlands. Controlled burning – to improve grazing – was managed through the indunas.
Fishing was strictly controlled via prescribed fishing methods and seasonal and geographical limitations. Again, the management of fisheries was vested in the Royal Establishment and fishing fell under the control of a fishing induna. Lagoons used for fishing fell under specific indunas who implemented set policies.
Wildlife: All wildlife belonged to the Litunga. Hunting, controlled by strict rules, was carried out using dogs, spears, bows and arrows and trapping. Strict rules existed regarding the conservation of wildlife resources. - Certain species, regarded as sacred, were subject to hunting prohibition. For example, the Crowned Crane Balearica regulorum, was regarded as a royal bird. Hippo (symbols of the Lozi way of life and maintainers of canals), vultures and scavengers (cleaners of the environment), certain antelope such as Lechwe and Reedbuck (food for lion and thus protection for cattle) were all valued. - Laws were strictly monitored through the village headman who reported to the local chief and thereafter to the Litunga. Transgressions resulted in reporting and gift-bearing, both lengthy procedures which served to discourage hunting. - Particular wildlife groups were placed under the control of appointed indunas, the ndaleti. For example, the bird ndaleti monitored bird habitats, the arrival of migratory species and the breeding of certain species. Other ndaleti monitored illegal hunting through their scouts. - Protected areas were designated by the Litunga for the increasing wildlife stock.

6.3.2 The Kafue Flats

The Kafue Flats lie on the Kafue River in southern Zambia. Unlike Barotse, the Kafue governance regimes encompass loosely affiliated chiefs. Natural resources management has been dogged by polemic and rampant breakdown in controls (Thole and Dodman, 1997).

Nature of the resource

The Kafue Flats comprise a series of lakes, swamps and plains on a wide floodplain of the Kafue River with an average gradient of only 3 cm/km over a 425-km course. With a very high productivity, the flats support substantial fish stocks and breeding grounds, as well as wildlife and livestock on the grass plains. Two hydro-electric dams at either end of the flats now

impose an artificial flooding regime. Abstraction for the irrigation of a large sugar production scheme is high.

Historical context and external environment
Traditionally, the Kafue Flats were occupied by the Tsonga who used the area mainly for cattle grazing and hunting (Thole and Dodman, 1997). Apparently, fishing was conducted principally by immigrant ethnic groups. Little else appears to be reported in this regard.

The advent of ranchers and hunting operators, together with the hydroelectric schemes and commercial agriculture, brought significant changes to the area. In order to address the resultant and extensive lack of controls over natural resources, the late 1980s saw a programme developed to bring local people back into natural resources management (Jeffery and Chooye, 1989, cited in Thole and Dodman, 1997). The main focus was on attempts to control hunting and the revenues generated from commercial operators. Despite the problems with fishing controls, less mention is made of fisheries than of hunting in the literature.

Considerable support was provided by WWF-Zambia between 1987 and 1995. A major thrust was the establishment of local authorities and development mechanisms for sharing the costs and benefits of sustainable conservation and management between local communities and the government (WWF-Zambia Wetlands Project 1992). Nonetheless, according to Thole and Dodman progress was slow and lasting strategies which would enable local communities to actively take part in the management of their resource were never really developed.

Nature of the users, property regimes and institutional arrangements
Unlike the Barotse floodplain, the traditional management system of the Kafue flats exhibited little in the way of a centralized management system under a paramount chief. Rather, it comprised loosely affiliated individual chiefs who for example, controlled the *chila* (traditional hunt with dogs). Thole and Dodman (1997) contend that whilst this system was effective prior to 20th C, it soon eroded with the advent of ranchers with firearms. Indeed, today illegal hunting is rife, much of it conducted by large-scale operators. The two national parks, Lochinvar and Blue Lagoon (established on former private-property to protect the Kafue Lechwe and birdlife) that straddle the Kafue River are continually embattled by persistent conflicts.

The state of fisheries management is similarly beset by problems. The use of illegal methods is rife, and the main fishing harbour which exists within the park, services commercial traders. With little benefit and no direct involvement, there appears to be little incentive for local communities to respect laws.

Outcomes
The Kafue system has undergone enormous change by external drivers, mainly as a result of hunting concerns and hydroelectric and agricultural development. Today, the rampant lack of resource control has led to a lack of sustainability and equity. This is ascribed to the lack of local involvement and benefits, although attempts are being made to address this.

6.3.3 The Mweru-Luapula Lake and the Bangweulu lagoon in the north-eastern Zambia

The Mweru-Luapala Lake and Bangweulu Lagoon are essentially part of one vast interconnected system (Figure 9). However, with the exception of Arnink (1999), most authors report on each system separately and indeed, their histories have been quite different. Lake Mweru is a transboundary system shared with the DRC, whilst Bangweulu lies

totally within Zambia. Mweru is distinguished by the ecological collapse of its key fishery in the 1940s, driven by widespread exploitation by Belgian and British interests. Following a period of dormancy, a new fishery, exploited by local people emerged in the 70s. An extensive account of customary management regimes and their transformation under colonialism is given by Gordon (2003a,b). The literature on Bangweulu is somewhat more limited and focuses mainly on the fisheries (Kolding et al., 2003).

Bangweulu swamp

Little is reported on the history or external drivers that have characterized and influenced natural resource regimes in Bangweulu swamp. Likewise, despite the enormous importance of Bangweulu in terms of local livelihoods (some 10,000 fishermen), the author could find little detail on local-level institutional arrangements. References are seemingly restricted to contemporary attempts to control the fisheries.

Nature of the resource

The Bangweulu perennial swamp in Luapula Province, Northern Zambia (Figure 9), is a vast, shallow, oligotrophic, seasonally fluctuating, but predictable aquatic system. The main inflow is the Chambeshi River from the east and the outflow is in the south western part through the Luapula River, which later enters Lake Mweru further north and subsequently connects with the Congo River system. Strong seasonal water level fluctuations with relatively low inter-annual variations create annual changes in habitat availability (areas of inundation), pathways of fish dispersal and pulses of food availability.

Nature of the users and institutional controls

The swamp is used by some 10,000 fishermen with 5,900 canoes (1992 data, in Kolding et al., 2003). Little has been reported in the way of historical, local management although it must be recognised that changes in governance arrangements date back to the colonial administration.

Today, fisheries management by the Department of Fisheries is primarily focused on regulation. A number of nation wide fisheries regulations have been gazetted and one of the duties of the Department is to enforce them. Regulations currently in place are: a closed fishing season, mesh size and fishing gear and method restrictions (including the popular kutumpula fishing) and industrial fishing. Furthermore Bangweulu is declared an open access fishery. This means that everybody with a fishing licence and legal fishing gear is free to enter the fishery. In practice these regulations are largely ignored by the fishers who disagree with most of them. The Department has neither the means nor the manpower to enforce the regulations other than through sporadic patrols.

Outcomes

Kolding et al. (2003) conclude that given the 'open-access' nature of the system, the fishery of the Bangweulu swamps is in reality, an artisanal small-scale multi-gear, multi-species fishery.

Lake Mweru-Luapala: *Mwelu mukata mukandanshe* – 'the wide waters that the locust cannot cross'

Lake Mweru holds some import within the disciplines of common property theory and socio-political studies because of the role of the '**owners of the lagoon'** in local-level management (Gordon, 2003a), and because of the well-documented conflicts that accompanied colonial interests, as well as the resultant collapse of the lake's fisheries.

Nature of the resource
Lake Mweru is situated on the border of Northern-Zambia and the Democratic Republic of Congo in the Luapula valley. Lake Mweru is some 120 kilometres long and 40 to 50 kilometres wide (a total area of 4 650 km), fed by the Luapula River. The lake and river form the southern-most section of the vast Congo drainage basin. Lake Mweru is an allotrophic riverine lake, meaning that production is predicated on nutrient pulses entering the system with the floods (Kolding, 1994, cited in van Zwieten et al., 2003). In such a system susceptibility to increased fishing effort is thought to be low, recovery potential rapid and yield potential high but variable. Its **fish provides the basis for food, employment and income** for the estimated 400 000 people that live there (van Zwieten et al., 2003).

The Mweru-Luapula is presently divided between two national administrations and a number of different autochthonous and migrant peoples. The unity of the area is primarily geographic; a valley bounded by escarpments to the east and west.

Resource users
Lake Mweru and the Luapula River with its floodplains, swamps and lagoons have a long history of fishing and cassava farming as main economic and subsistence activities (Aarnink, 1997). Since the beginning of last century, fishing has been, and still is, closely linked by trade to the towns of the Copperbelt and the diamond mines in Zambia and Congo (Musambachime, 1981 cited in van Zwieten et al., 2003; Gordon, 2003b).

The population of the valley has grown from about 50 000 in the 1920s to about 400 000 in the 1990s; with exceptionally high densities in the south. At least 50 000 people are involved in fishing as gear owners, workers or traders. The most important economic activities are cassava farming and fishing. Cassava farming was essential for local subsistence and fishing for a commercial economy linked to the towns of the Zambian and Congolese copperbelts.

Historical context, external environment and changing institutional controls
Gordon makes the point (in contrast to present-day statutes, see Zwieten et al., 2003 for example) that Mweru-Luapula was not an *a priori* open-access common resource. Although it is unclear when the first people settled in Mweru-Luapula, in his review of pre-colonial resource management, Gordon suggests that they were probably BaTwa, so-called 'pygmies'. The most significant pre-colonial event recorded in oral testimony was the conquest of the valley by a Lunda lord called Mwata Kazembe in the early eighteenth century (infamous for his involvement in the slave trade). As farming changed from millet to cassava and requiring less male labour, they became involved in fishing. Sanctions were strongly spiritual and political in nature (Box 4).

With the rise of the colonial regimes, traditional restraints and sanctions on fishing enforced by the Owners of the Lagoons were undermined in favour of a formal state authority enforced by colonial chiefs, administrators and fisheries officials.

The political economy associated with the labour force needs of the copper mining placed demands on the valley's fish, and both local and expatriate entrepreneurs (mainly from Greece and Italy) came to exploit the fishing resource[30]. Expatriate traders bought fish along the Luapula from local and migrant African fishermen. Traditional restrictions enforced by Owners of Lagoon were undermined as colonial administrators, concerned with increasing

[30] In the Belgian Congo (now DRC), the distrust of African traders meant that large-scale expatriate traders were the main beneficiaries of the fishing business from the 1920s to 1940s. In Northern Rhodesia (now Zambia), however, where colonial control was more tenuous, many African businessmen and fishermen also prospered, and a monetized economy based on Congolese francs spread to both sides of the river.

numbers of fishermen, appointed chiefs to exercise power. These appointments often did not correspond to the original 'Owners of the Lagoons'.

Box 4: Local resource regulation in Lake Mweru

(source: Gordon, 2003)

Resource regulation and allocation were decentralized and linked to sacred forms of control by local matrilineal clans, using a combination of spiritual and political power over the resources of the valley. They maintained authority over the land and lake through *ubutwa*, which paid deference to the ancestral spirits (*imipashi*) and nature spirits (*ngulu*) of the land and lakes.

In the river area where fish spawned and were easy to catch with traps and floating nets, local leaders called 'Owners of the Lagoon' (*Bamwine Kabanda*) marked out distinct areas of control. By prayer and giving libations, they ensured that nature continued to perform life-sustaining miracles such as the spawning of fish. Only after the correct rituals had been performed and the fishery 'opened' (*kufungule isabi*) could fishers begin to harvest. It was primarily this form of sacred control that placed certain restraints on resource exploitation, although this was not its primary concern.

In the actual catching of fish, there was little moderation. Fishermen in canoes caught spawning fish with floating nets in the river. Nearer the rapids and falls of Mambilima, villagers built dams and weirs and installed traps to catch fish as the floodwaters receded. Traps and nets were used to catch everything they came across. However, although fishermen caught as much as they could, certain technological limitations and ecological conditions checked levels of exploitation. The *kaboko* fibres, out of which nets were made, broke easily, crocodiles and hippos often destroyed nets that took weeks to manufacture, and the number of nets and other fishing gear a fisher owned depended on the limited labour he could mobilize and control.

With the decimation of the crocodile population by the Belgian authorities in the 1940s and the ensuing fishing by European fishermen, the once important fishery of the cyprinid *Labeo altivelis* virtually collapsed (Musambachime, 1987 cited in van Zwieten et al., 2003). After some 20 years, women washing in the lake noticed large amounts of small fish, interest grew and fishing resurged into what became known as the *chisense* fishery. This resource offered opportunities to two new actors in the market: male migrants from the declining urban areas became fishermen and women, disenchanted with farming due to decreasing land access, became fish traders. Although less fruitful, net fishing has persisted along with the *chisense* fishing.

With the end of colonialism, state authority collapsed in many rural areas. Since pre-colonial restraints had long been abolished, there were few formal restrictions on who could fish and the fishery became more 'open access' than ever before, especially in the fishing towns and camps (although apparently local mechanisms restricted access in the more remote areas). This institutional landscape also facilitated the growth of the *chisense* fishery.

In the 1990s a donor-funded buying agency together with the Department of Fisheries initiated negotiations for restrictions and a closed season. Gordon's account seems somewhat sceptical of these efforts, noting that "influenced by the idea of 'co-management', they incorporated several 'community' organs in to their programme, including 'traditional' chiefs and fishermen's associations". Some success has been achieved in Zambia's major fishing

towns and camps, although almost none has been noted in the more remote camps and most of the Congolese fishery.

Outcomes
The original governance systems no longer exist. These were undermined by the arrival of two colonial administrations: the Belgians (who regarded the resource as open to all), and the British (who held the resource in trust for the Africans). Widespread exploitation of the fisheries by these newcomers led to the collapse of the fisheries in the 1950s. The area around the lake is extremely densely populated and, in search of food, a new industry, *chisense*, started in the 1970s. Today, operating alongside gill-netters, it supports migrant workers and women. Indeed, perhaps the most profound effect of the *chisense* industry has been the promotion of an independent class of female fish traders (Gordon, 2003). Attempts to institute new controls by the state authorities – based on 'co-management' – have met with partial success.

6.3.4 Other cases

ADMADE and the Luangwa Integrated Resource Development Project (LIRDP)
A number of authors document two key issues for natural resource management in Zambia that spurred a growing recognition for the re-involvement of communities: the cutback in budgets and the centralized management approach which alienated local people from the benefits of natural resources (e.g. Thole and Dodman, 1997; Lyons, 2000). In the case of wildlife a real cost for communities was that associated in living with wild animals. This led to whole-scale increase in poaching, not only in Zambia but in many African countries (Oates, 1999 cited in Lyons, 2000) such that both government and conservation interests started exploring new approaches to NRM. ADMADE is one such example.

Box 5 ADMADE

(source: Lyons, 2000)

As a result of the Lupande Development Workshop convened by the Zambia National Parks and Wildlife Service (NPWS) (which brought together over 40 government and community representatives, conservation organizations, and donors) two pilot CBNRM projects were launched: the Luangwa Integrated Resource Development Project (LIRDP, funded by the NORAD), and the Lupande Development Project (a NPWS-sponsored project which later expanded to become ADMADE). As Lyon points out, defining ADMADE as a program is complicated because it exists in various stages of implementation throughout Zambia, maintains a low profile in the field, falls under a government department but with some characteristics of an autonomous NGO, and encompasses a wide array of stakeholders.

Whilst ADMADE focuses principally on wildlife, what is interesting however is the associated institutional transformations. Both the National Parks and Wildlife Service at the national level, and ADMADE communities are undergoing a significant restructuring. The sub-authorities are being replaced with democratically-elected community resource boards, and the traditional chiefs are being converted from influential chairmen to honorary patrons. Lyons (2000) suggests that while virtually all participants recognize the importance of this restructuring, it raises questions as to management implications if the chiefs object or try to obstruct the work of the community resource boards, or if the community resource boards fail to be effective administrative bodies or mobilize action as effectively as chiefs.

In a review of the Luangwa experience, Child and Clayton (2004) contend that since chiefs are not democratic (neither elected not accountable), the use of chiefs as entry points by projects (e.g. ADMADE, LIFE) is questionable.[31]

6.4 Opportunities for integrating local-level governance regimes into statutory arrangements

As pointed out by Phiri (1999) and endorsed at the specialist workshop held (see Pollard and Wolf, workshop report), little attention has been paid to the role of customary or locally-developed system in discourses around statutory water resources management. Unlike other countries however, this has been fairly well-documented in some cases.

Currently the water reform process is still underway and so it is difficult to make any detailed assessment of the potential opportunities for local-level governance. The policy at the moment is fairly similar to the other countries reviewed in that stakeholder involvement is envisaged through some type of stakeholder platform at sub-catchment level.

6.5 Conclusions

Relative to the other country reviews, local-level governance systems have been explored for some of the larger freshwater systems. Nonetheless, this still remains the 'domain' of the social sciences whereas conservation initiatives have overlooked the importance of governance.

Legal pluralism, contrasting national policies and local realities distinguish every case study. In most cases, statutory 'law' is simply ignored by local users. Many reasons for this are offered: either local-level regimes are already in place such as in the Barotse floodplain or the institutional landscape is transformed and held hostage to numerous, competing interests driven most frequently by 'outsiders'. Notably, the blueprint approach of national statutes is simply inappropriate at a local level. For example, Kolding et al. (2003) contend that the regulations in the Fisheries Act are inappropriate for the multi-species Bangwuelu swamp fisheries. Indeed, artisanal fishermen recognise this and for the most part, the 'law' is disregarded. Another issue, well documented in common property literature concerns how formal laws really do address the needs of local livelihoods and in particular of the poor. Chileshe et al. (2005) argue that under traditionally governed water rights there is a more flexible pro-poor range of rights transfer than that of the formal Zambian water law. This is because of the socially embedded character of the transactions. Kolding et al. (2003) note that "striking a balance between the enforcement of regulations, and leaving room for fishers who are simply trying to survive, is not easy". This situation has catalysed a growth in efforts focused at co-management (e.g. Malasha, 1999; Overa, 2003; Syampaku, 1998; Whande et al., 2006) but the current situation does not appear to bode well for sustainability. Within the water reform discourse real mechanisms to meaningfully embrace local-level governance regimes still need to take place.

[31] A number of authors make claims that chiefs are not democratic but fail to distinguish between assumption of duties (not elected) and the process in which chiefs operate, which may well be consultative and participatory.

Chapter 7

Governance arrangements for natural resource management in the communal areas of South Africa, with a focus on water resources

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With inputs from Derick du Toit

Contemporary natural resource management (NRM) in the communal lands of South Africa is transforming. Historical systems within the former Bantustans have been contested and the introduction of new institutional arrangements, together with principles, policies, laws and planning instruments have all added uncertainties around where the locus of power for NRM lies.

In terms of land reform, two new pieces of legislation have direct bearing on local level governance of natural resources: the Traditional Leadership and Governance Framework Amendment Act (41 of 2003; TLGFA); and the Communal Land Rights Act (11 of 2004; CLRA). This chapter points to a number of concerns regarding both the conceptual basis and the reality of implementation for CLRA and the TLGFA. Thus, the question here is whether these laws will achieve what they set out to? The reality of social dynamics within communities, severe capacity constraints of government at all levels together with power dynamics at every level, the confusion created by institutional change and a suite of sophisticated laws, means that much of our reform is not meeting its objectives and is all too frequently having unintended negative consequences.

Although water reform has not specifically addressed the issue of legal pluralism, we suggest that opportunities do exist for embracing local-level governance regimes within the formal, institutional arrangements derived from national statutes. However, whilst this is possible in theory, the practical realities may prove to be more weighty than anticipated given the aforementioned concerns relating to land reform. Nonetheless, it is hoped that this chapter serves to catalyse dialogue in this regard.

7.1 Introduction

The preceding chapters indicate that the extensive range of institutions that govern natural resources – from international law to local rules – are rarely uniquely present. Rather a range of overlapping and evolving rules gives rise to a nuanced and context-specific natural resource management regime (see also discussions in Cullinan, 2002). In all the case studies natural resources management is characterized by a dual legal system: a set of 'western-style' statutes on the one hand and local-level rules and practices on the other. It is our experience that one often looks to the formal statutes for answers to how natural resources should, or can be, managed and then acknowledges that in communal lands, what happens in reality is quite different. We argue that these local rules cannot be ignored, for in many cases not only are they the *de facto* governance system but, in the absence of state capacity, they are the **only** system.

Overlaid on this legal 'pluralism' is a South African state and society in transition. This means that policies and statutes, together with associated planning instruments, are changing. Included in this changing landscape are both water and land reform programmes which will bring changes to governance and management. Emerging from this is uncertainty around the concepts of ownership, trusteeship, custodianship and stewardship. Further the drive to democratize and decentralize the responsibilities for natural resource management (NRM) is confounded by the disaggregation of issues (water, land and environment) and responsibilities. Added to this are attitudinal shifts in the communities whose livelihoods depend directly on natural resources. This complex and dynamic societal and institutional landscape makes understanding where authority, and interest, for natural resource management might lie (both in theory and in practice) difficult to fathom.

In this chapter we turn specifically to South Africa to examine these issues. Although the focus of the research was on freshwater systems (such as wetlands and lakes) as common property resources, we remarked that these represent an interesting intersection of land and water.[32] Thus in this chapter we seek to examine which statutory laws apply and according to these, where the locus of power for natural resource management and governance lies (in theory, at least) and where options exist to embrace local-level governance systems. To this end, we ask: do the policies and statutes provide the enabling environment from which can be derived meaningful, appropriate and sustainable natural resource governance in communal areas? As a preface to this we track, briefly, the changing face of NRM from apartheid to the present in communal areas. The chapter concludes with some preliminary analysis of possibilities for integrating localized governance regimes with the national statutory frameworks.

7.2 The changing face of natural resource management in communal areas: From apartheid to the present

Most of the following account emerges from work done in the Bushbuckridge area of the eastern Lowveld of South Africa but the patterns are generally true for most communal areas (Cocks, 2000; Lahiff,,1997; Pollard et al., 1998; Pollard and du Toit, 2005; Shackleton et al., 1995; Shackleton et al., 2002). A number of issues are described below: land allocation, woodland management and wetland management.

Under apartheid, land was demarcated, allocated and verified through a mix of customary and bureaucratic practices, in which agricultural officers, Tribal Authorities and magistrates all played a role. The tenure for homesteads, and sometimes fields, was run officially as a permit system, evidenced through the Permission to Occupy, or PTO certificate. All such permit systems were officially prohibited after 1994, but have continued in some form in many areas. Today, land tenure is both behind schedule and contested such that the authority for its administration is unclear. In some cases Local Government officials are of the opinion that they can allocate land although this is not legally the case.[33]

Likewise, the protection and use of natural resources in the communal lands was effected largely through the chiefs and their indunas (headmen). Certain species such as marula were protected under a blanket prohibition. For other species, harvesting was controlled through a

[32] In contrast, customary systems rarely distinguish between land and water but rather view the system as a whole with multiple and flexible boundaries, depending on the resource in question.

[33] Local government is responsible for spatial planning and zoning of land but not for the allocation of land to individuals. Both processes however have direct bearing on access to and the management of natural resources.

permit system. Transgressions, monitored through a system of induna 'police', were dealt with through fines. Since revenue went directly to the tribal authority, which had limited funds, there was a very real interest in apprehending transgressors. This is borne out by a discussion with Collen Moeng, an elderly resident of the communal lands:

> "In 1987 I used to go to the bookkeeper of the Tribal Authority and pay R5. He would give me a letter. With this letter I could chop wood for one month. This would come to about 6 loads. You could also get a letter for R2 which would allow you to chop for 2 weeks and another letter for R10 would allow you to chop for 5 weeks. If you got caught without a letter by the Chief's Police you would have to go and pay a fine. But now it is no longer necessary to get a letter because they say the wood is finished. Now we buy wood by bakkie (truck) load from a supplier. It costs me R200. Sometimes, when I have no money, I go with my children and cut wood near the river."

Likewise, the protection and use of wetlands was effected through chiefs and indunas. Some grey areas did exist however since although wetland plots were 'allocated' by the induna (Pollard et al., 2005)[34], it was illegal to farm there according to the Conservation of Agricultural Resources Act (1983). In the case of reed harvesting, the chief would declare the season open (normally toward the end of April). Taboos ensured that only then would harvest commence as transgressions would bring wind and drought.[35] It is less clear however, who conferred rights of use – possibly there were sufficient resources for this not to be an issue.

With the political changes of 1994, the power and authority of Tribal Authorities was challenged. In most cases this was not a direct challenge to 'tradition' and traditional governance in itself, but rather to individuals who, regarded as lackeys of the apartheid regime, were seen to have sustained a highly detested system. Accordingly, since Tribal Authorities comprised the administrative arm for NRM, this system has largely collapsed. This has been blamed, in part, for the governance 'vacuum' that now exists in many rural, communal areas and the transformation of a common-property regime to one of open access (see for example Shackleton et al., 1995). For example, villagers in the Bushbuckridge area complain that neighbouring woodlands are being harvested with impunity by entrepreneurs from as far afield as Gauteng, often by force. For them, there is seemingly little recourse. In wetlands, the fencing of wetland plots to protect crops from cattle has effectively led to the privatization of common-property resources (see also Shackleton et al., 2005). Moreover people are now noting that 'outsiders' (i.e. people from other villages not directly adjacent to a wetland) are disregarding seasonal regulations around reed harvesting. Clearly this situation raises a number of questions such as (a) what, if any, security of tenure over common-property resources exists? (b) whose responsibility is it to set norms and standards and regulations of rights of access? This applies to local-level rules as well as to the issue whether legislative support exists for this.

Understanding varies between officials but all agree that the situation in communal lands is unclear (Pollard and du Toit, 2005). For example, a DWAF official stated that the general rule of 'no chopping without permission still applies'. In most areas licencing and enforcement are not occurring. When questioned, departmental officials noted that with the incorporation of the homelands into South Africa a number of procedures had not been carried forward and adequate practices still needed to be developed for communal land.

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[34] This is also part of work in progress: 'Developing community based governance of wetlands in Craigieburn Village', IDRC RPE Programme.

[35] See Chapter 3 for discussions on the role of spiritual sanctions.

They also remarked that 'communal lands are a grey area and, with the eroding of traditional authority, there are some serious problems for law enforcement'.

7.3 Natural resource management in transition: Overview of the policy and planning environment and changing roles and responsibilities

7.3.1 Policies and legislation that regulate activities impacting on natural resources

A detailed discussion of the legislation pertaining to natural resources is beyond the scope of this document. Numerous documents are available and indeed, the multitude of documents examining 'legislation' that have emerged in the last seven years indicate the widespread need to understand the different statutes. Much of this (and the attendant confusion) reflects the fact that no single piece of legislation governs natural resources management. For example, an exhaustive study on land tenure and the environment by DLA/DANCED (2001), details a host of relevant laws. Fabricius et al. (2003) focus specifically on laws that are applicable to CBNRM. Both the Mpumalanga (2001) and Limpopo (2001) provincial Environmental Management Plans tabulate a number of important statutes for environmental planning. Lizamore (2000) lists aspects of the legislation that are relevant to wetlands and integrates various laws around the theme of wetland rehabilitation (Winstanley, 2000). Mazibuko and Pegram (2004) provide an overview of issues related to co-operative governance between Catchment Management Agencies and Local Government. Thorough reviews of the implications of the new CLRA for rural livelihoods and common-property regimes are provided by various authors (Claasens, 2003; Cousins et al., 2005; Cousins and Claassens, 2004). Most recently a document addressing *Constitutional and National Legislation Relevant to Environmental Protection in Land Reform* is being prepared (McClean in prep).

The purpose of the key statutes is summarised in Table 5, as are the functions of various institutions (Table 6), including those of local government and traditional leadership – two important players in communal lands. Two new pieces of legislation that have a direct and profound relevance for common property resources in communal areas are introduced: (a) the Traditional Leadership and Governance Framework Amendment Act (41 of 2003; TLGFA), and (b) the Communal Land Rights Act (11 of 2004; CLRA).

The Constitution

No discussion of the legislative framework regarding natural resources and livelihoods would be complete without mention of South Africa's Constitution (Act 108, 1996) and the environmental rights contained therein (Box 6). Specifically, it places obligations on the state to enforce and guarantee these rights. These obligations are placed on all three levels of government. Since the Constitution operates both vertically and horizontally, landowners are therefore obliged to ensure that their activities do not infringe on the rights of others. In such cases, individuals or organizations may compel government or actors involved to enforce them.

The environment is an area of concurrent national and provincial competence and therefore both may make and administer laws affecting natural resources. Water on the other hand is a national resource with national government as its custodian.

Box 6: Environmental rights enshrined in the Constitutions

Chapter 2 Section 24:
Everyone has the right:

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

The South African Constitution is underpinned by a number of principles that have an important bearing on the governance and management of natural resources. The relevant principles are equity, the right to a healthy environment, a commitment to land reform (i.e. property-rights), the right to water and food, the right to access information and the right to turn to the courts regarding the infringements of rights.

Overarching and sector specific legislation

There is no doubt that some confusion arises from the fact that activities that impact on the environment (such as roads, mining, land-use, water abstraction) are controlled by both *overarching and key* provisions of South African policy and law (Table 5) as well as *sector-specific* legislation.

In particular, the National Environmental Management Act (NEMA, 1998), together with the new Environmental Impact Regulations (2006) imposes duties on (a) owners, or (b) people in control, or (c) people who have rights to use the land, so that responsibility for lawful land use and management is not linked to ownership. Problems around the enforcement of environmental law (which is reportedly even weaker in the former homelands) has as much to do with the lack of departmental capacity as with any other shortcoming in the local institutions. There is every indication that in these areas this situation will remain so for a long time to come.

7.3.2 Institutions: Their powers and responsibilities

The development of relevant and appropriate NRM practices at the local level needs to take cognizance of and be responsive to the relevant spheres of government and instruments of governance. An overview of the structures and spheres of government, and their functions in terms of NRM is given in Appendix A.

Chapter 3 of the Constitution sets out the responsibilities of **national government**.

Table 5: Summary of environmental protection legislation relevant to land reform
(Source: Pollard and du Toit, 2005; McClean in prep.)

Act	Purpose
National Environmental Management Act NEMA (107 of 1998)	NEMA seeks to provide for cooperative environmental governance by establishing principles for decision-making on matters affecting the environment, institutions that will promote cooperative governance and procedures for coordinating environmental functions exercised by organs of state. It further seeks to provide for certain aspects of the administration and enforcement of other environmental management laws. The important EIA procedures are regulated by NEMA
Environmental Conservation Act ECA (73 of 1989)	The ECA seeks to provide for the effective protection and controlled utilization of the environment. EIA activities previously regulated by ECA now fall under NEMA
NEMA: Biodiversity Act (10 of 2004)	The statute recognises the State's obligation to manage, conserve and sustain biodiversity and its components and genetic resources
NEMA: Protected Areas Act (57 of 2003)	The Protected Areas Act creates a national system of protected areas in order to protect and conserve ecologically viable areas representative of biodiversity in the country. It seeks to achieve cooperative environmental governance and to promote sustainable and equitable utilisation and community participation
Conservation of Agricultural Resources Act (CARA- 43 of 83)[36]	CARA seeks to provide for the conservation of natural agricultural resources by maintaining the production potential of land, combating and preventing erosion and the weakening or destruction of water resources, protecting vegetation and combating weeds and invader plant species
National Water Act (NWA – 36 of 1998)	The statute's overall purpose is to ensure that South Africa's water resources are protected, used and managed in ways which take into account inter-generational equity, equitable access, redressing past racial and gender discrimination, promoting sustainable and beneficial use, facilitating social and economic development, and providing for water quality and environmental protection
National Forests Act (NFA – 84 of 1998)	The NFA seeks to promote the sustainable management and development of forests for the benefit of all, to restructure forestry in State forests, to protect certain forests and trees, to promote community forestry and greater participation in all aspects of forestry activities, and to "promote the sustainable use of forests for environmental, economic, educational, recreational, cultural, health and spiritual purposes"
National Veld & Forest Fire Act (NVFFA – 101 of 1998)	The purpose of the NVFFA is to prevent and combat veld, forest and mountain fires, and establish a variety of institutions, methods and practices for achieving this purpose
Mineral and Petroleum Resources Development Act (MPRDA-28 of 2002)	The MPRDA has a number of diverse objects, including: promoting equitable access to mineral and petroleum resources; promoting economic growth and resource development; providing for security of tenure; giving effect to the 'environmental right' contained in South Africa's constitution.

[36] The Department of Agriculture has developed a draft Policy on Agriculture in Sustainable Development – A Discussion Document. This proposes the need to amend or replace CARA.

According to the Constitution, provinces may have legislative and executive powers that they share with national government. The realm of legislative powers is shown in the box opposite.

Legislative powers of provincial government include:
- agriculture
- cultural affairs
- environment
- health services
- housing
- nature conservation
- police services
- public transport
- regional planning and development
- road-traffic regulation
- tourism
- trade and industrial promotion
- traditional authorities
- urban and rural development
- welfare services.

In 1994 a third tier – that of **local government** – was introduced. This comprises municipalities made up of wards. Municipalities are now seen as important agents of delivery, although their roles and responsibilities are still not well understood locally. There is frequently tension between traditional areas of jurisdiction and the new democratic demarcations.

The Constitution provides for three categories of municipalities: Category A municipality (metropolitan municipalities), Category B (local municipalities), and Category C (district areas or municipalities). Communal land is likely to fall under Category B.

Traditional leadership is operative in land held under communal tenure, including the Ngonyama Trust (KwaZulu-Natal). In general it consists of the Chief and his indunas who administer customary laws, supported by a traditional court of elders. With the incorporation of the former-homelands into South Africa, the role of traditional leadership has been contested but politically, it has been incorporated into democratic structures. Chapter 12 of the Constitution recognizes the "*institution, status and role of traditional leadership, according to customary law*", subject to the principles of the Constitution. The Local Government: Municipal Structures Act (Act 117 of 1998) was amended during 2000, providing enhanced representation of traditional leaders in municipal councils.

The Constitution provides for the establishment of Houses of Traditional Leaders, which was established in 1997.[37] This body advises government on the role of traditional leaders and on customary law. It may also conduct its own investigations and advise the President on request.

The law frequently requires the establishment of specially designated statutory or non-statutory bodies to carry out defined functions. These bodies have an important harmonizing function as they are frequently multi-sectoral and representative. Issues of NRM are likely to be the focus of a number of such bodies. Examples include Catchment Management Agencies, Catchment Management Committees and Forums, Water User Associations, and Land Administration Committees (LAC) (see Appendix A, Table 7 for details).

Given the wide range of legislation pertaining to NRM, the ideal of **cooperative governance** emphasizes the need for various departments to work together to ensure an integrated approach to development. The importance of co-operative governance and intergovernmental relations in South Africa is reflected in Chapter 3 of the Constitution (principles for government departments to work co-operatively) and in the Intergovernmental Relations Act (2005).[38]

[37] Provincial houses of traditional leaders have been established in all six provinces where traditional leaders are found, namely the Eastern Cape, KwaZulu-Natal, the Free State, Mpumalanga, Limpopo and the North West.

[38] While this legislation is aimed at promoting cooperation, there is a possibility that the Act might be counter-productive in that it discards the option of a resort to litigation by one state body or agent against another, unless stringent criteria are met.

7.3.3 Recent changes: Legislative changes pertaining to communal lands and implications for natural resource management

As noted earlier, following democratization after 1994, Tribal Authority control over land and natural resources weakened significantly. This system, albeit one that was associated with the apartheid regime, was nonetheless one that residents understood. With transformation, various bodies such as Local Government, ward councillors, provincial departmental staff and, at times, the general populace all lay claim to the administration of norms and standards regarding natural resources and their use (Pollard and du Toit, 2005). In reality however, the 'environment' is regarded as less important than service delivery so that very little happens on the ground. The insecurity created by ambiguity and confusion creates an environment ripe for opportunism by some. It is possible that the two new laws, discussed below, will serve to exacerbate this situation.

Today, a decade on, land tenure in South Africa is regarded by many to be in disarray (Cousins, 2007). Since land tenure[39] is intimately linked to natural resource use and management, one of the consequences of this has been the dissolution of systems for natural resource governance. In 2003 and 2004 two national laws – designed to go hand in hand – were enacted: the Traditional Leadership and Governance Framework Amendment Act (41 of 2003; TLGFA); and the Communal Land Rights Act (11 of 2004; CLRA). These two acts are intended to impact on how rural people living in communal areas hold land rights and how those rights are administered.

The stated intention of government, through these two laws (Table 6), is to:

- secure property rights, especially in the former homelands;
- facilitate development;
- extend democracy through balancing recognition of customary practices while transforming them; and
- to ensure sustainable land use into the future.

By extension this should result in better management of the natural resources. However, the evolution of these policies has been hotly contested and perhaps most controversially, last minute changes provide for Traditional Councils (see later) to become Land Administration Committees, with the power to allocate and register 'new order' rights in communal land.

39 A **tenure system** is the basis on which the rights to occupy, use and benefit from land are held, for example by permission, by lease, by private or communal ownership. The tenure system also determines who has or who can get these rights (see Chapter 2).

Table 6: Main purposes of the two key Acts pertaining to communal lands in South Africa

Communal Land Rights Act (11 of 2004)
Some key purposes of this law are: - to provide for legal security of tenure by transferring communal land to communities; - democratic administration of communal land; and - co-operative performance of municipal functions on communal land. The Act provides that the Minister of Land Affairs may vest title of such land in 'communities', who will own the land as 'juristic persons' governed by registered community rules. The Act applies to state land in the former homeland provinces, and all land reform land.
Traditional Leadership and Governance Framework Amendment Act (41 of 2003)
A key purpose is to set out a national framework for traditional leadership in a democratic South Africa. It provides for recognition of 'traditional communities' and 'traditional councils', while also setting in motion processes that integrate these into the emerging, aspiring, modern democracy of South Africa. The TLGFA requires that these traditional institutions conform to the principles of democracy and gender equality. It seeks to clarify community boundaries and traditional leadership boundaries of jurisdiction, which sets the basis for creating institutional clarity in relation to the authority and role of traditional leadership (and for transferring land to them under the CLRA.)

Institutional arrangements proposed by CLRA and TLGFA

The CLRA enables the registration of communities as juristic personalities so that they can become legal land owners.[40] The implication is that the existing 892 Traditional Authorities will make up the communities (Legal Resources Centre, 2005).

The CLRA envisages converting the existing 'old order' rights (such as Permission to Occupy Certificates[41]) to **new order rights** registered in the name of a 'community or person'. The Act envisages that title will be transferred to the community as a whole, whilst new order rights, will be vested in 'persons'.

A number of steps, described briefly below, are envisaged as part of the process. The details are provided in Appendix A.

Powers Land Administration Committees:
The LAC will represent the community and can act as the owner of the land as long as they act according to the community rules. They are responsible for
- establishing and maintaining the register and records of land rights and transactions.
- safeguarding the interests of the people in their land, and for
- liaison with the municipality and departments regarding services and planning and development of the land.

[40] 'Community' is defined as 'a group of people whose rights to land are derived from shared rules determining access to land held in common by such group'.

[41] PTOs are the most common record of formally allocated individual land right. PTOs were issued in terms of Proclamation R188 of 1969 – Black Areas Land Regulations. The definition of 'old order rights' in the Act is not limited to formally allocated rights. It also includes tenure rights that are 'formal or informal' and rights that derive from 'law, including customary law, practice or usage'.

For the purposes of this review, the key elements of each step are described below:

- A **land rights enquiry** establishes which communities and individuals already use and have rights over which land, and what kind of rights these are. This is important because in theory, this is when the common-property regime would be identified.
- **Transfer and registration of communal land**. This is when new order rights are registered in the name of the community or person/s entitled to the land in terms of CLRA and the community rules.
- **Community rules**. All communities whose land is registered under CLRA must have a set of community rules. In theory, this is when the common-property regime would be registered.
- **Land Administration**: Before land is transferred to a community a Land Administration Committee (LAC) must be established. Again, this is theoretically where the authority for NRM would sit. The Act states that "If a community has a recognised traditional council the …LAC …may (emphasis added) be exercised and performed by such council".

Implementation has not yet started although the intended date was April 2007. The Department of Land Affairs has stated that first the TLGFA needs to be implemented before CLRA can start.

The role of local government and Traditional Authorities in NRM

A recent study in Bushbuckridge (Pollard and du Toit, 2005) examined the perception that some Local Government councillors felt that it was their role to regulate natural resources in their ward. However, this is not the case, and under the new legislation neither Local Government nor the Traditional Authorities or TA's, are directly responsible for NRM as their primary function (W. Ovens pers. comm., and Appendix A). The key function of Local Government is one of service delivery, that of traditional leadership is focused on customary law, and is otherwise largely facilitatory in nature. This is in itself a grey area in that through the use of the words 'promote', 'assist', 'support', 'recommend' no actual authority seems to be conferred (see Appendix B). Under CLRA (2004) however, a traditional council can be established as a Land Administration Committee in which case they have – by implication – a role in NRM. The final function (customary law, customs) may be interpreted to mean regulating natural resources but this is unsatisfactorily vague. Moreover, this does not offer solutions in cases where there may be no traditional councils.

In statutory terms, there are various references to 'the environment' and stakeholder involvement' as functions of local government (Appendix A, Table 8). Interestingly, the TLGFA (2003; S 20 (1)) does state that national or provincial government, may, through legislative or other measures, provide a role for traditional councils or traditional leaders in respect of land administration, agriculture, environment, tourism and the management of natural resources.

Having noted this, both government and traditional structures are an important and integral part of ensuring that the statutory mandates to a healthy environment and sustainable livelihoods (present and future) are met. It is clear then that co-operative governance is essential with a range of planning and strategic instruments acting as the integrator of co-operative efforts (such as the Integrated Development Plans with the Spatial Development Frameworks, Land Use Management Systems, Environmental Management Plans, Water Services Plans and so on).

Although Local Government does not have powers of authority, they interface with NRM as a mediator and representative of the community – as does the TA – referring concerns to the local DEAT, DWAF or SAPS office. Currently, what is far less clear is the role of the TA in terms of granting permission to use natural resources.

What are the major concerns related to these statutes and what does this mean for natural resource management?

These two pieces of legislation (CLRA, TLFGA) are tightly linked, and are also controversial. Since these two laws will directly engage the property regime of communal areas of South Africa, they will have direct bearing on the management of common property resources. However without the details of regulations (which detail processes and procedures and give clarity of interpretation) and implementation plans (which then give a picture of capacity and therefore a likely scale and timing of implementation), any substantive analysis is difficult at this stage. The following discussion thus highlights some general comments and issues – based of necessity on assumptions but informed by experiences of working with communities and social dynamics as well as legal reforms in this country.

A number of major concerns are evident. Perhaps the most fundamental concern is that of how 'communities' will be defined and therefore at what scale representation, participation and the derived community rules will be developed. Given the nested nature of customary land tenure (see Chapter 2), it is not obvious to practitioners and scholars what the scale should be. Senior officials have stated that, in the former homelands, they view those areas under the jurisdiction of Tribal Authorities, headed by chiefs, as such 'communities'[42]. This matches the operation of the TGLFA. These areas typically have populations of between 10 000 and 20 000, comprising a great many wards and villages. The processes for community rules and decision making are to be spelled out in regulations, but it does seem a dauntingly large group from which to have meaningful participation. The problem of representation – with many people having been placed under the jurisdiction of chiefs and Tribal Authorities that they had no previous connection to – is not addressed. Recent and ongoing experiences of the Makuleke indicate just how acrimonious and problematic this may be (B. Tapello, PLAAS, Univ. Western Cape, pers. comm.).

Secondly, the links between the two acts are controversial. The DLA itself has said that the CLRA is not to be implemented until traditional councils are in place, thus CLRAs implementation is predicated on the successful execution of the TLGFA. Moreover, the provision regarding traditional councils acting as LACs was seen by some as a last-minute inclusion to accommodate traditional leaders in the run-up to a national election. It is thus questioned on the basis of insufficient preparation.

Currently under the TLGFA 'elections' have started for transforming Traditional Authorities into Traditional Councils. The general population has no understanding of this law or process. There is almost no knowledge of CLRA either. Even assuming a basic understanding, one sees few opportunities for affected communities to participate in making key decisions within CLRA, or to challenge them. The best they can do is 'participate' in the Land Rights Enquiry that precedes the Minister's decision, but the terms of participation are not clear.

In addition to the above concerns, many of the critiques relate to capacity. While strengthening land administration through a system of registration of rights could be positive, if there is insufficient capacity and administrative support for registration to be accessible and simple, registration will not be kept up to date. At best the system will then be meaningless; at worst it creates more ambiguity and weakens rights and tenure security.[43]

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[42] Dr Sipho Sibanda of the Department of Land Affairs, addressing a meeting of the Portfolio Committee on Agriculture and Land Affairs, 26th January 2004.

[43] This has been seen in freehold areas where title is not kept updated. Here people lose rights through legal processes that do not reflect a local understanding of rights to land based on more customary principles.

The scale of the tasks of the LAC will depend on the scale of the 'communities' that become owners of their land. The liaison with municipal and departmental bodies, the linking with development plans, the tasks of setting up and then maintaining land registers, let alone those of natural resource management, will take time and capacity. Purely voluntary bodies will not be able to manage this – and how they may be remunerated is not dealt with at all. Of course Traditional Authorities do have some remuneration and some administrative staff – which may indicate that they will be the preferred LACs.

These concerns are equally true for other laws. Despite for example the fact that NEMA imposes duties on owners, or people in control or who have rights to use the land, problems around the enforcement of environmental law (which is even weaker in the former homelands than elsewhere) abound. This has as much to do with the lack of departmental capacity as with any shortcoming in the local institutions – and there is every indication that in these areas this situation will remain for a long time to come. Moreover the intersection with other laws needs a more considered examination.[44] Planning processes regarding land use and management require a greater focus (see Pollard and du Toit, 2005).

The implementation of CLRA could perhaps provide an opportunity to clarify institutional functions. For example, the setting of community rules could offer people the chance to think through NRM, and the development of the communal general plan could provide a land-use planning tool. However, this would require capacity in terms of numbers and skills that are unlikely to be available for the task. With fundamental issues of scale and nesting unresolved, and conflicts likely to be high, the possibility of success recedes further. The current approaches to implementing the TLGFA and the Provincial Acts show no commitment to a careful, community-centred or developmental process. A major concern therefore is that the task at hand through CLRA is enormous – larger in scale than the current land reform, and realistically, capacity and resources will simply not be available for high quality processes.

7.4 Opportunities and challenges for integrating statutory and local-level management of freshwater resources in communal areas

The policies and legislation of South Africa have been developed in such a way as to provide an enabling environment that ensures diverse groups, perspectives and practices can be accommodated in a meaningful way. The National Water Act (NWA) clearly locates the powers and functions for water resources management – certain functions are held by the Minister whilst others are devolved to Catchment Management Agencies or CMAs, which are in the process of being established. As stated, the democratization of the management process is enhanced by a number of representative committees and public forums, including the aforementioned Catchment Management Committees, Forums and Water User Associations.

Although co-operative governance is seen as central to achieving Integrated Water Resources Management, the NWA does not make mention of community governance *per se*. This probably reflects the lack of discourse on this issue in the water sector during the consultative process that preceded drafting of the Act, rather than any pejorative stance on the issue.

[44] A number of specific functions that relate directly to natural resources management fall under the ambit of other laws and authorities which would need to specifically delegate functions to the local level (to either Traditional Councils or Land Administration Committees or some other body).

In contrast, participation in water resource management is a key feature of the NWA. The catchment management strategy guidelines for water resources in South Africa (Pollard et al., 2007) point to the need for a participation in almost every step where communities are encouraged to bring strategic thinking to the planning table. Nonetheless, **this engagement should not be confused with governance**: the former talks to issues of participation[45] whilst the latter places the locus of power in the hands of a community and embraces the notion that the power to control rights of access and use is locally-based (see Chapter 2). Equally it can be argued that participation in the catchment councils in Zimbabwe, or the Water Boards (Ara) in Mozambique is different from **governance** as discussed in this report.

Nonetheless, opportunities do exist for the devolution of governance responsibilities within the overall framework for integrated water resources management. The devolution of some functions to civil society has been mentioned and moreover, certain of the sub-strategies are more explicit in this regard. For example, the strategy aimed at water resources protection (RDM in Figure 10) is directed to take into account civil society initiatives (such as conservancies), and that on co-operative governance tasks the CMA is to ensure co-operation. Theoretically then, the CMA could devolve the management of a resource such as a wetland, or lake, to a local, civil society group. This body, which would govern within the bounds of the NWA and other relevant legislation, would ensure that locally-derived rules of rights and access to the common property resource in question would be upheld. In effect this would represent a blend of customary and statutory laws.[46]

Whether or not this 'community group' in communal areas would comprise the controversial Land Administration Committees or Traditional Councils[47] is not clear. Moreover, what the relationship would be is open to debate.

Nonetheless, the preceding discussion talks only to the structural mechanisms for integrating local and statutory practices. It does not address the concerns that have been raised by scholars and practitioners in the field of common property management. These have been discussed above within the context of land reform in South Africa and in Chapter 2 within the wider CBNRM discourse. Amongst the many concerns it is worth noting the following: those regarding the definition of 'community' (a question of scale), their bureaucratization of community-rules (the potential conflicts associated with the codification of flexibility), and the overwhelming lack of capacity to give implementation meaningful and sustained support. It is argued by many that this undermines the very nature of common-property regimes that are by nature flexible and dynamic. Many of these concerns relate to the western notion of having to formalize things – to 'tidy them up', in the words of a colonial administrator, and to codify them. Thus we should strive to develop what is meaningful and appropriate – with the requisite simplicity – and no more.

[45] Participation is presented as a spectrum: from informing the public to collaboration in the management process (see Chapter 5 of the same document).

[46] This does not imply co-management in the form that has been largely seen up until now where the community co-manages, but based almost exclusively on the rule of law as set out in the statutes.

[47] Until they are established, the Interim Protection of Informal Land Rights Act (IPILRA) protects peoples' land and natural resource tenure rights. In many areas this vests some authority in the Traditional Authorities.

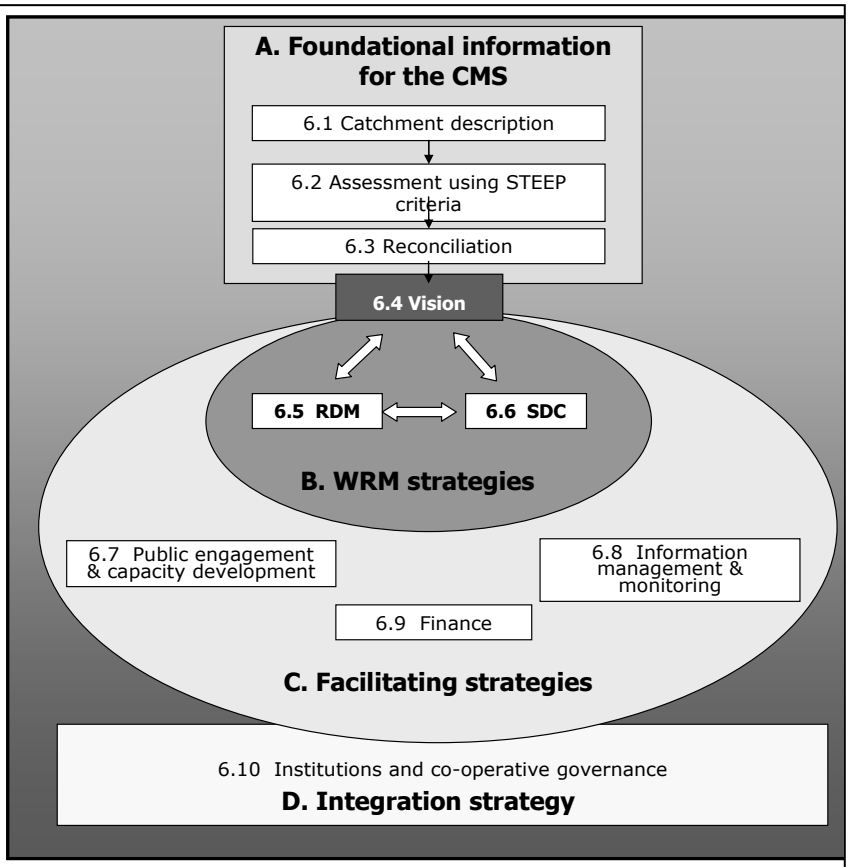

Figure 10 The framework for water resources management in South Africa (from Pollard et al., 2007)

7.5 Conclusions

In many cases, the *de facto* control over natural resources in communal areas is derived from locally-based common property regimes.[48] In some areas such is in Lake Fundudzi, people consider that it is their right to govern what is theirs. This situation raises issues of legal pluralism which is given all the more importance when one considers that the state is unable to govern all of the country's natural resources single-handedly. The un-integrated nature of western statues compounds already vulnerable governance systems and, in the communal lands of South Africa, the two new laws on land tenure may further complicate the matter.

The newly established CMAs need to take cognizance of the intersection of laws, together with the reality that experience shows all too well that they will not have the capacity to manage water resources alone. Within water statutes there does appear to be opportunities to embrace these local-level systems in a meaningful way. Indeed, the NWA directs them to involve civil society. However a number of issues emerge from this. Firstly, participation is **not** the same thing as the devolution of power to govern. Secondly, with freshwater ecosystems representing a nexus of land and water, new bodies – with which the CMA will need to interact – will be created. Although their success remains to be seen, ways to embrace legal pluralism have to be sought if we want to give meaning to the principles of sustainability and equity.

[48] Although, as pointed out by Bennett 1995, these represent a poorly-defined blend of customary and apartheid legislation.

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Appendix A

Key roles and responsibilities of government

The two tables in this appendix summarises of key roles and responsibilities of various tiers of government supported by other bodies (Table 1) and more specifically to natural resource management (Table 2).

Table 7: Summary of key roles and responsibilities of various tiers of government supported by other bodies

Structure	Roles and responsibilities
National government	National government is the highest authority with the most legislative powers. - It has the power to amend the Constitution and pass legislation on any matters; - It may also assign powers to any legislative body in any sphere of government (except to amend the Constitution); - Implement national legislation; - Develop and implement national policy; - Coordinate function of the various department s and administrations; - Preparing initial legislation; - Carry out the functions set out by the constitution.
Provincial government	- To pass legislation on certain issues (listed in schedule 4 & 5 of the constitution); - To pass legislation on matters as requested by the national assembly; - To implement national legislation at a provincial level; - Administration of the provinces; - Developing and implementing provincial policy; - Co-coordinating the functions within provinces; - Performing functions as required by national assembly; - Appoint commissions of inquiry.
Local Government	- To provide services to communities in a sustainable manner; - To promote social and economic development; - To promote a safe and healthy environment; - To encourage community involvement in issues of governance; - Develop and implement bylaws; - Impose and collect rates and taxes; - Raising of loans for various schemes and projects; - To budget and plan.
Traditional leadership	A traditional council has the following functions (**TLGFA, 2003 s 4 (1)**): - Administering the affairs of the traditional community in accordance with customs and tradition; - Assisting, supporting and guiding traditional leaders in the performance of their functions; - Supporting municipalities in the identification of community needs; - Facilitating the involvement of the traditional community in the development or amendment of the integrated development plan of a municipality in whose area that community resides; - Recommending, after consultation with the relevant local and provincial houses of traditional leaders, appropriate interventions to government that will contribute to development and service delivery within the area of jurisdiction of the traditional council; - Participating in the development of policy and legislation at local level; - Participating in development programmes of municipalities and of the provincial and national spheres of government; - Promoting the ideals of co-operative governance, integrated development

	planning, sustainable development and service delivery; - Promoting indigenous knowledge systems for sustainable development and alerting any relevant municipality to any hazard or calamity that threatens the area of jurisdiction of the traditional council in question, or the well-being of people living in such area of jurisdiction, and contributing to disaster management in general; - Sharing information and cooperating with other traditional councils, and; - Performing the functions conferred by customary law, customs and statutory law consistent with the Constitution.
Statutory and non-statutory bodies (see above)	- To make decisions regarding planning and equitable resource allocation; - Community representation and requests for access and use of resources and land; - Mediate conflict and resolve tensions arising out of communal property; - Set norms and standards for access to resources and maintenance of healthy ecosystems. Examples include: - Catchment Management Agencies, Catchment Management Committees and Forums, and Water User Associations (management and use of water resources); - Integrated Development Planning Forums (IDP) focus on integrated planning for local government. They provide a platform for communal areas to articulate priorities for development and the management of natural resources; - Community Development Forums (CDF) facilitate community participation in development processes and link-up to the IDP process; - Ward Committees provide for community participation in local government planning and day-to-day administration; - Land Administration Committees (LAC) make decisions regarding land administration on communal lands on behalf of communities; - Communal Property Associations (CPA) are statutory institutions associated with representing communities and their communally- held assets on communal land.

Table 8: A summary of the key functions of local government and traditional leadership with regard to NRM and the environment

Local Government
The objectives of local government are to: (**Constitution, 1996)**
- provide democratic & accountable government for local communities; - ensure the provision of services to communities in a sustainable manner; - promote social and economic development; - promote a safe and healthy environment; - encourage the involvement of communities and community organisations in the matters of local government.
Executive and legislative authority S11(2)
…promote a safe and healthy environment in the municipality:
Chapter 8
Municipal services must be ...(d) be environmentally sustainable;
Roles and responsibilities (Municipal Systems Act 2000; S 4(2))
The council of a municipality (…) has the duty to: - provide, without favour or prejudice, democratic and accountable government; - encourage the involvement of the local community; - strive to ensure that municipal services are provided to the local community in a financially and environmentally sustainable manner.
Traditional leadership
National government or a provincial government, may, through legislative or other measures, provide a role for traditional councils or traditional leaders in respect of (S 20 (1) TLGFA 2003): - arts and culture; - land administration; - agriculture; - health; - welfare; - safety and security; - environment; - tourism; - the registration of births, deaths and customary marriages; - the administration of justice; - disaster management; - the management of natural resources; and - the dissemination of information relating to government policies. The functions of traditional **councils** are laid out in S 4 (1) of the TLGFA, 2003.
Relationship with LG (S 4(3) of TLGFA 2003)
a) co-operate with any relevant ward committee established in terms of section 73 of the Local Government: Municipal Structures Act, 1998 (Act No. 117 of 1998).

Appendix B

Summary of steps envisaged as part of the process of land tenure reform in communal areas

1 Land Rights Enquiry and determination by the Minister

Before any registration or transfer of land or rights, the Minister appoints a land rights enquirer to carry out a land rights enquiry to find out which communities and individuals already use and have rights over which land, and what kind of rights these are. **This is important because in theory, this is when the common-property regime would be identified.** The Minister then determines the location and extent of land to be transferred, and to whom it is transferred. It may all be transferred to the community or some may be subdivided and transferred to persons and some to the state. The Minister also determines when old order rights should be cancelled, and the holder awarded comparable redress.

2 Transfer and registration of communal land

Once the Minister has made a determination, the minister must:

- transfer the ownership of the land to the community;
- have a communal general plan prepared and approved;
- have this plan registered and have a communal land register opened;
- transfer the new order rights, via a Deed of Communal Land Right, to the person or persons entitled to them.

New order rights are registered in the name of the community or person/s entitled to the land in terms of CLRA and the community rules. Any new allocations of rights that take place after the opening of the register must be registered.

3 Community rules

All communities whose land is registered under CLRA must have a set of community rules, which set out the administration and land use by the community as land owner. Again, **this is important because in theory, this is when the common-property regime would be registered.** The rules can deal with almost any issue such as the powers of the Land Administration Committee, how this committee is chosen, how land is used and whether land can be sold or not. These rules are binding on the community, and are registered by the Director-General.

4 Land Administration

Before land is transferred to a community a Land Administration Committee (LAC) must be established. Again, **this is important because in theory, this is where authority for natural resource management would sit.** The LAC will represent the community and can act as the owner of the land as long as they act according to the community rules. They are responsible for establishing and maintaining the register and records of land rights and

transactions. Also, they are responsible for safeguarding the interests of the people in their land, and for liaison with the municipality and departments regarding services and planning and development of the land.

The Act states in section 21 (2) that "If a community has a recognised traditional council the … LAC … may (emphasis added) be exercised and performed by such council". In section 22 the composition is said to be determined by community rules as well as needing to meet a number of prescriptions, including that the members of the LAC must be elected in the prescribed manner and must not be persons holding any traditional leadership positions, but this is subject to section 21 (2). This was a very controversial aspect of the Act, changed in its final version, seemingly to meet the demands of traditional authorities that they retain functions of land administration.

The Minister will also appoint a Land Rights Board, probably one in each province, to advise her and to monitor implementation of the CLRA.

5 Implementation

Implementation has not yet started. The DLA has stated that first the TLGFA needs to be implemented before CLRA can start. Then regulations for CLRA, which are still being finalised, need to go to provincial DLA offices, which will then each develop a plan for implementation. DLA has said it intends starting implementation in April 2007.