



Association for Water and Rural Development

Final report

## **Harmonising policy and practice:**

# **Governance, integrated development planning and capacity development for natural resource management in the Sand river Catchment and Bohlabela Municipal District**

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For  
CARE South-Africa Lesotho

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## Definitions

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Where appropriate the source of the definitions is given.

Catchment (NWA):

Area from which any rainfall will drain into the watercourse(s) or part of a watercourse, through surface flow to a common point(s).

Common-property resources and regimes: (natural resources)

This refers to the private property of a group and the regime (see below) refer to the relations between persons with respect to the resource in question. Guarantees rights and assigns duties. These regimes are dynamic, responding to the differing spatial boundaries of various resources (e.g. grazing land versus wetland use).

Development (MSyA):

means sustainable development. and includes integrated social, economic, environmental, spatial, infrastructural, institutional, organisational and human resources upliftment of a community aimed at—

- (a) improving the quality of life of its members with specific reference to the poor and other disadvantaged sections of the community; and
- (b) ensuring that development serves present and future generations;

Ecosystem (NFA):

a system made up of a group of living organisms, the relationship between them and their physical environment.

Environment (NEMA):

the land and water of the earth; micro-organisms, plant and animal life or a combination of these things; and the interrelationships among them (Section 1).

Environmentally sustainable (MSysA)

in relation to the provision of a municipal service, means the provision of a municipal service in a manner aimed at ensuring that—

- (a) the risk of harm to the environment and to human health and safety is minimized to the extent reasonably possible under the circumstances;
- (b) the potential benefits to the environment and to human health and safety are maximised to the extent reasonably possible under the circumstances: and
- (c) legislation intended to protect the environment and human health and safety is complied with;

Forest (NFA)

includes (a) natural forest or a woodland or a plantation, (b) the forest produce in it and, (c) the ecosystems which it makes up (see natural forest and woodland).

Forestry (NFA):

means management of forests, including land which is not treed but which forms part of a forest management unit.

Governance (Water Policy):

Governance means setting policy to guide an activity and then making sure that the money, people and institutions to do the work are in place. It also means making sure that people are accountable for the work they do, monitoring what happens and making plans to carry the work forward.

Informal right (to land; IPILRA):

The use of, occupation of, or access to land in terms of (i) any tribal, customary or indigenous law or practice of a tribe; (ii) the custom, usage or administrative practice in a particular area or community, where the land in question at any time vested in SADT, SGT, former Transkei, Bophuthatswana, Venda and Ciskei...

Natural forest (NFA):

Means a group of indigenous trees (a) whose crowns are largely contiguous or (b) which have been declared by the Minister to be a natural forest under section 7(2). (see woodland).

Reserve (NWA):

Quantity and quality of water required to (a) satisfy basic human needs....(b) and to protect aquatic ecosystems in order to secure ecologically sustainable development and use of the relevant water resource.

Resource regimes:

A resource regime is a structure of rights and duties characterizing the rights and duties of relationships of individuals to one another with respect to a particular resource (Bromley & Cernea<sup>1</sup> 1988). Generally, four potential natural resource regimes are recognised: (1) State; (2) Private; (3) common-property and (4) open access (or non-property).

Riparian habitat (NWA):

the physical structures and associated vegetation of areas associated with a water course which are commonly characterized by alluvial soils, and which are inundated or flooded to an extent and with a frequency sufficient to support vegetation of species with a composition and physical structure distinct from those of adjacent land areas

Sustainable utilization (of natural resources):

This is a contested paradigm. Here it refers to natural resource use that does not result in resource depletion or ecological degradation (Murombedzi 1991). It implies some form of management (Murphree 1991<sup>2</sup>).

“traditional leader” (TLGFA 2003)

means any person who, in terms of customary law<sup>3</sup> of the traditional community concerned, holds a traditional leadership position, and is recognised in terms of this Act;

Water course (NWA):

A river or spring; a natural channel in which water flows regularly or intermittently; a wetland, lake or dam into which, or from which, water flows and any collection of water which the Minister may, by notice in the Gazette, declare to be a watercourse and a reference to a watercourse includes, where relevant, its beds and banks.

Water resource (NWA):

water course, surface water, estuary or aquifer.

Wetland (NWA):

Land which is transitional between terrestrial and aquatic systems where the water table is usually at or near the surface, or the land is periodically covered with shallow water, and which land in normal circumstances supports or would support vegetation typically adapted to life in saturated soils.

Woodland (NFA):

means a group of indigenous trees which are not a natural forest, but whose crowns cover more than 5% of the area bounded by the trees forming the perimeter of the group (see forest and natural forest)

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<sup>1</sup> The Management of common property natural resources: Some conceptual and operational fallacies. Paper prepared for the World Bank 9<sup>th</sup> Agricultural Symposium, Washington, D.C.

<sup>2</sup> M.W. 1991. Communities as institutions for resource management. Paper for National conference on Environment and Development. 7 – 11 October 1991. Maputo, Mocambique.

<sup>3</sup> This is not defined in the Act

## LIST OF ABBREVIATIONS

|       |   |
|-------|---|
| AWARD | Association for Water and Rural Development   |
| BBR   | Bushbuckridge                                 |
| BHNR  | Basic Human Needs Reserve                     |
| CBO   | Community based organisation                  |
| CDF   | Community development forum                   |
| CF    | Catchment Forum                               |
| CMA   | Catchment Management Agency                   |
| CMC   | Catchment Management Committee                |
| CMS   | Catchment Management Strategy                 |
| DPLG  | Department of provincial and local government |
| DWAF  | Department of Water Affairs and Forestry      |
| ER    | Ecological Reserve                            |
| FBW   | Free Basic Water                              |
| IDP   | Integrated Development Plan                   |
| IWRM  | Integrated Water Resources Management         |
| MSysA | Municipal Systems Act                         |
| NEMA  | National Environmental Management Act         |
| NGO   | Non-Governmental Organisation                 |
| NWA   | National Water Act                            |
| NWP   | New Water Policy                              |
| NWRS  | National Water Resource Strategy              |
| RDP   | Reconstruction and Development Programme      |
| SA    | South Africa                                  |
| SFWS  | Strategic Framework for Water Services        |
| VWC   | Village Water Committee                       |
| WB    | Water Board                                   |
| WMA   | Water Management Area                         |
| WMI   | Water Management Institution                  |
| WSA   | Water Services Act                            |
| WSAU  | Water Services Authority                      |
| WSDP  | Water Services Development Plan               |
| WSP   | Water Service Providers                       |
| WSPL  | Water Services Plan                           |
| WUA   | Water User Association                        |

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# PART A: Overview

## 1. Introduction

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### 1.1 Project Background

This report constitutes the final report for work undertaken over the past year by AWARD, entitled "*Harmonising policy and practice: Governance, integrated development planning and capacity development for natural resource management in the Sand River Catchment and Bohlabela Municipal District*". The project falls under the auspices of an integrated catchment management initiative, known as the Save the Sand Project, which is aimed at restoring the ecological integrity and livelihoods of the catchment and its people, in a semi-arid region of South Africa (see Section 2).

In South Africa, the Sand River Catchment is an example of the increasing conflict that is developing around natural resource use and their sustainability. On the human side, the imperative to generate and share wealth through development, land reform and black empowerment are widely stressed. The natural capital of the region, contained in scenic or game-rich areas currently utilised mainly as ecotourism destinations, is situated in and around poor rural communities. Water resources in particular, are stressed and likely to come under further pressure to meet the demand for increased development.

By now South Africa is well-respected globally for the comprehensive policy changes that have accompanied the democratic transformation of 1994. Underlying all of these is the challenge of redressing past inequities and supporting development whilst ensuring the sustainability of the resource base upon which livelihoods are founded. In the water sector for example, the new policies reflect two themes: ensuring adequate quality and quantity of water for human needs and protecting the available resources for current and future use so that the national slogan of 'some, for all, forever' can be realized. The details and intentions of this slogan are laid out in the Constitution, the National Water Act (NWA 1998) and the Water Services Act (1997). Several initiatives are currently underway in Southern Africa to establish integrated approaches to water resources/ natural resources, their sustainability, equitable use and management. In the case of water, Integrated Water Resources Management takes a catchment focus, whilst bioregional planning often reflects a conservation objective. Almost all of these more holistic approaches make direct reference to balancing human and natural systems in an equitable way. Importantly, they speak to the need for co-operation both vertically (between national, provincial and local levels) and laterally across sectors. A key catalyst for this re-orientation in thinking arose as a critique to the sectoral view and management of natural resources. This narrow view – often referred to as the 'silo' mentality – is considered to be ill equipped to meet the challenges of a complex and rapidly changing world.

Nonetheless, after a complete revision of its legislation pertaining to natural resources such as water, land, wetlands, woodlands, forest and soil, South Africa is at a point where it needs to turn its attention to implementation. A number of issues are apparent in this regard. In many cases the new legislation is so different from the old that it requires a complete re-orientation of stakeholders, including both government staff and civil society. Not only have the legal requirements transformed, but the roles and responsibilities of officials and the public have changed considerably. Added to this is the introduction of an entire new level of government, namely local government to whom a range of functions have been designated. Moreover, the policy frameworks have been accompanied by the development of planning instruments. In the water sector these include the Integrated Development Plans (IDP) and Water Service Development Plans (WSDP) of local and provincial government, and the Internal Strategic Plans and Catchment Management Strategies of DWAF. The above mentioned IDPs and WSDPs focus specifically on service delivery (water and sanitation) whilst the ISPs and Catchment Management Strategies focus on the protection and allocation of the water resource base.



It is against this background, together with longterm experience in the catchment that this project evolved. Essentially an increasingly precarious situation is developing within the catchment with respect to natural resources, their sustainable use and management and in turn, the implications that this has for rural livelihoods. In trying to find answers as to what 'powers' exist within the community to act on transgressions and to implement sustainable NRM, as well as the roles and responsibilities of various institutions, we were confronted by a range of discordant or mutually exclusive statements and perceptions (see Box 1). Without clarity various institutions and agents have either chosen to remain silent on these issues (particularly given other huge developmental pressures), or to respond in a knee-jerk fashion, or are seemingly in a state of paralysis. Given this, we set out to analyse these various planning frameworks and policy instruments, to examine how these "speak" to the policy intentions and to explore ways in which some harmony and clarity could be achieved at a local level. The results are to then form part of a series of dialogues with various levels of government and with other relevant stakeholders.

**Box 1**

**Some perceptions being examined by this project**

- It is local governments role to monitor and protect natural resources in their area of jurisdiction (implication is that they will also assign rights of use). *This statement is questioned as being inaccurate and oversimplistic on the basis of (a) legislative directives (MSA, NEMA, NWA etc), (b) the role of co-operative governance and (c) the role of customary law, particularly within communal lands.*
- Local authorities grant land-use rights in communal area (K. Erasmus Oct 2004). *(this statement is contested as inaccurate within communal lands outside of towns)*
- The harvesting of common property resources is controlled by the appropriate department/ local government/ the ward councillor/ the chief / the community. *These "throw-away" statements are often made at meetings on natural resources and are regarded as largely meaningless for a suite of reasons. For example, in considering the role of 'appropriate departments', it is hard to imagine a scenario where provincial DEAT would allocate rights of usage to a community for a variety of wetland products.*
- The new CLRA provides a way forward for the management and use of common-property resources in communal lands.

## 1.2 Project objective and focus

The overall objective of this project was to explore ways to facilitate the harmonization of policy, legislative and planning frameworks pertaining to water and other natural resources with a specific focus on the Bushbuckridge Municipality and Sand River Catchment. A major body of research into co-operative governance, catchment management and water provision has already been conducted by Mazibukop and Pegram (2004) in an attempt to shed light on opportunities for cooperation between CMA's and Local Government. The work deals largely with policy and provides generic/theoretical frameworks. This work will not be repeated here. Instead we hope to take such work further and provide actual examples of attempts to harmonise policy and practices within the SRC/ BBR Municipality. To this

end we have structured a research process in order to explore both the policy environment and the context within which the policy has been or is being applied. The research process forms the basis on which this report is based.

### **1.2.1 A structure for the research process**

The research process comprised a number of components. These were:

1. dialogue and information gathering at various levels: national, provincial and local. This involved the gathering information from responses to questions and dialogues regarding the research topic. Dialogues were conducted telephonically and as personal interviews,
2. information gathered was used to generate context relevant questions that fed into further questions to a reference team and other relevant persons. Information gathered in 1 and 2 was used in the final analysis,
3. gathering and analysis of local level planning instruments and management plans, integration and harmonizing tools,
4. gathering and analysis of examples of actual practice associated with administration and implementation of legislation and NR policy at the catchment level.
5. the development of a number of research themes stemming from 1 – 3 above.
6. derivation of scenarios from the three zones (described later) regarding NR management and implementation of legislation. The scenarios were used as:
  - a. a basis for discussion with reference persons
  - b. a basis for seeking legislative solutions to problems outlined by scenarios
  - c. Critical discussion of issues emerging from 1-5 with a reference team.

### **1.2.2 The focus**

The focus of the research at the outset was to:

- a) explore the legislative environment in relation to the SRC,
- b) identify attempts to harmonize various policy instruments pertaining to natural resources, particularly water, and
- c) critically evaluate the attempts at embedding natural resource management within planning frameworks, such as the IDP and WSDP (in the absence of a CMS).

However, these objectives have been shaped by ongoing research and have now expanded to include not only a focus on the IDP and WSDP but also on other planning instruments available at the catchment and district levels e.g. SDF's, LUMS, and EIMP's.

## **1.3 Purpose and structure of the report**

This document has been prepared as the basis for discussion with stakeholders involved or interested in natural resource governance. It is designed to explore, review and better understand the roles and responsibilities of stakeholders regarding natural resource management in South Africa as well as to identify gaps, constraints and opportunities. It must be stressed that whilst a large part of the process is to undertake the review from a legislative perspective, it must equally be grounded in reality – past and current experiences on the ground. In order to provide this 'reality' check, the focus is on the natural resources in the Sand river Catchment and our hope is to draw on lessons from other areas. Accordingly, this document provides a review against the different situations that exist within the catchment and presents explorations as research themes and scenarios. The intention is to share with the reader some actual examples of how policy and planning instruments either function harmoniously or discordantly. The report is closed with a discussion of matters arising out of the research process.

## 2. Key issues underlying natural resources management and the imperative to harmonise

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The Oxford dictionary defines "harmonise" as *to make something harmonious* which is something that is *free from disagreement or ill-feeling.....arranged together in a pleasing way*, and the Collins dictionary talks of *order or congruity of parts to their whole or to one another* and *to collate parallel narratives*. Integration on the other hand, refers to the *act of combining or adding parts to make a unified whole*. One of the first questions to arise is: why is harmony an important construct in the arena of natural resources management? As the following section shows, the Sand River Catchment presents us with a complex social, political, economic and biophysical environment. Attempts to manage such a system require that an integrated approach be adopted (Pollard et al. 2004) and hence that some degree of harmonization is an integral corollary. In the case of a resource such as water, the overall goals of equity, efficiency and sustainability will only be achieved if an integrated orientation is adopted where social, political, economic and biophysical aspects are considered. Indeed, this is reflected in the constitution and various aspects of the statutes (see Box 2 & 3). However, as we attempt to show, an integrated approach requires that different policy<sup>4</sup>, legislation, planning instruments and practices need to act in harmony in order for this integration to become a reality. Outlining the critical underlying issues that provide the imperative to harmonise provides a telling background to the harmonisation of plans and actions.

### **Box 2: The Constitution, statutes and harmonisation**

#### **The Constitution**

The Constitution obliges all levels of government to work co-operatively with each other (Chapter 3, Section 41)

co-operate with one another in mutual trust and good faith by-

- fostering friendly relations;
- assisting and supporting one another;
- Informing one another of, and consulting one another on, matters of common interest;
- co-ordinating their actions and legislation with one another;
- adhering to agreed procedures; and
- avoiding legal proceedings against one another.

(2) An Act of Parliament must-

- (a) establish or provide for structures and institutions to promote and facilitate intergovernmental relations;

#### **Statutes and harmonization**

##### **The National Environmental Management Act (NEMA)**

- NEMA refers to intergovernmental co-ordination and harmonization (p.12)
- **Chp. 2** on institutions refers to the Committee for Environmental Coordination which promotes integration and co-ordination through EIP and EMP.
- **Chp 3** discusses procedures for co-operative governance and requires a consolidated EI&MP which co-ordinates and harmonizes environmental policies (p. 22)
- Each Provincial government must produce a provincial Environmental Implementation Plan.
- It is the responsibility of provincial government to ensure that each municipality complies with the EIP – in particular through the IDP.

##### **Municipal Systems Act**

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<sup>4</sup> It can be argued that harmonisation should be sought through the alignment of planning instruments and practice rather than seeking to harmonise all policies – which can be a longterm objective

- The Systems Act specifies the role of local government in co-operative governance. Section 24 (1) stipulates that “any planning must be aligned with, and complement development plans and strategies of other affected municipalities and other organs of state so as to promote co-operative government contained in section 41 of the Constitution”.
- Through the IDP and EMP local governments are expected to adopt an integrated approach to environmental management and planning

#### **National Water Act and Water Services Act**

The two water Acts cover water resources management and water services provision respectively. Roles and functions of water services and WRM are linked with the implication that water services planning need to be compliant with the NWA and that the functions of WRM need to be cognizant of the needs of local government. Co-operation needs to take place through planning (IDP and WSDP), stakeholder participation and formal agreements.

#### **Box 3: Imperatives to integrate**

South Africa’s policy of environmental management outlines the need to adopt an integrated approach to environmental planning:

#### **The White Paper on Environmental Management (1997)**

*The integration of environmental concerns into every human activity is central to the achievement of sustainable development. Priority areas for environmental governance include:*

- *The integration of environmental, social and economic considerations in development and land use planning processes and structures. This requires assessment of environmental impact at policy, planning programme and project levels.*
- *An integrated approach to environmental management addressing:*
  - *All environmental media*
  - *All social, cultural and natural resources*
  - *Pollution control and water management*
- *An integrated approach to government’s environmental functions including:*
  - *Organisational and institutional arrangements*
  - *Legislation*
  - *All policies in all spheres of government*

It has been our experience that in practice, the **implementation** of policies and legislation is often confused with critical functions either ‘falling between the cracks’ or being erroneously adopted and undertaken. This is exacerbated by the near-collapse of land administration systems in former-bantustans (Pollard et al. 2003; Cousins and Claasens 2004). This has direct bearing both the viability of the resource base itself as well as for people’s livelihoods. In rural areas, and particularly in the former Bantustans where land is held under common-property regimes, the implications of this flux are significant. Indeed a major catalyst for the work reported herein was the increasing sense of **confusion and vulnerability** being experienced by rural communities in Bushbuckridge- often the poorest of the poor- with regard to common-property resources.

In the past, people turned to the nduna and then chief to establish norms and rights of use of natural resources as well as to adjudicate transgressions. This system, albeit one that was associated with the apartheid regime, was nonetheless one that residents understood. With a breakdown in the power of **traditional authorities** with transformation various bodies such as local government, ward councilors, provincial departmental staff and the populace at large all lay claim to the administration of norms and standards regarding natural resources and their use. In reality however, the ‘environment’ is regarded as less important than service delivery and is given short shrift so that very little happens on the ground. The insecurity created by ambiguity, confusion and uncertainty creates an environment ripe for opportunism by some. For example, villagers in the Bushbuckridge Municipality (which falls within the

Sand River Catchment) 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.

Integral to the above issues is the question of property rights, land tenure reform in South Africa and as a corollary, the governance of natural resources. These **issues are not new** – indeed they have been highlighted and intensely debated by various researchers focusing on land administration within communal tenure systems (see for example Cousins 1997; Cousins and Hornby 2002; Cross 1998; Kepe and Cousins 2002; Lahiff 2001; Turner 1997). In particular, they point to the incongruencies between livelihood security and the new Communal Land Rights Act. As stated by Cousins and Claasens (2004), the continuing, unresolved questions of jurisdiction and authority constrain effective management of common property resources, which are key to rural livelihoods. However, what we are seeking to do within the ambit of this project is to explore how this plays out within the **context of a catchment** (the unit for water resources management) which shows a multiplicity of land tenure regimes, institutional arrangements, actors and issues. Although the focus is strongly on water, this does not exclude other natural resources, particularly since there are important land-water linkages that cannot be ignored. Thus it goes further than communal land issue alone and examines how various scenarios play out under these different “messy matrices” of institutional relationships (Cousins 1997) within the spatial framework of a catchment. This is important for a number of reasons which reflect the fact that water resources management and water supply are governed by different legislative and institutional arrangements with different spatial boundaries to that of land administration.

These issues are set within an evolving institutional landscape. Since 1994 the role and status of **local government** and specifically municipalities has changed dramatically. Municipalities are now seen as important agents of delivery. But taking municipalities to rural communal areas is proving to be very challenging. Both the Bohlabela District Municipality and Bushbuckridge Municipality are new, and much is needed by way of capacity development and clarification of roles and responsibilities. Areas of jurisdiction, or wards, are new and there is frequently tension between traditional areas of jurisdiction and the new democratic demarcations. It is worth stressing again that whilst service delivery – of water in this case – falls under local government, the resource base from which this water is supplied (rivers, groundwater and dams) falls under the remit of the emerging **Catchment Management Agencies**.

In considering the various pieces of legislation and planning instruments, a number of **issues** surfaced that highlight the confusion and ambiguity that surrounds NRM in the Sand Catchment. Attempts to resolve these provided much of the impetus for this project. Moreover these have implications not only for the Sand River Catchment and the Bohlabela District Municipality but also for other areas in South Africa.

1. Firstly, water services plans and IDPs are developed in such a way that the requirements and intentions of the NWA (1998) and other acts pertaining to natural resources (such as NEMA) are not even considered when plans and projects are developed. The potential to work at **cross-purposes** is high. If for example, the Bushbuckridge Municipality intends to develop new bulk infrastructure or support a new scheme from the Sand River, the success of the scheme would be highly unlikely as the resource is already over-allocated.
2. Secondly, the NWA stipulates that the requirements for the **Reserve** must first be met. In BBR the first generation of the IDP and WSDP were developed without cognisance of many essential statutory requirements. Catchment management authorities<sup>5</sup> on the other hand, operating on a catchment basis, may be unaware that a municipality falling in a neighbouring catchment plans to request water from them. These discordances clearly need addressing so that policy and planning frameworks are integrated and mutually supportive.
3. Thirdly, the spatial boundaries of the planning for water resource management (the catchment) and water service delivery (the district) do not correspond. For managers within both institutions this is clearly problematic in that the intentions of one authority (e.g. the

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<sup>5</sup> currently presented by DWAF

- Water Services Authority) may be unknown or may undermine those of the other authority (e.g. the Catchment Management Agency).
4. An examination of the current IDP reveals that responsibilities for projects are assigned to local Government that are **statutorily incorrect** e.g. the development of new agricultural schemes. This not only places excess demands on local government but also effectively renders projects illegal through unlawful expenditure.
  5. A number of issues arise in **communal land** in particular which are either ambiguous or totally unclear. In particular, these centre on where the **onus of responsibility** lies for the management of natural resources, including the obligation to rehabilitate degraded land. For instance, the institutional powers that are created by various acts and in particular NEMA, place that is the duty of the land owner to rehabilitate degraded land on the land owner.  
What

Clearly, if we are to address this in any meaningful way, these policies and the planning instruments that flow from various policies need to be harmonized which in turn underscores the need for co-operative governance. For the various planning tools to be aligned, understanding the **roles and responsibilities** of the various actors needs to be clear. Thus we place a heavy emphasis in this report on trying to elucidate the functions of various actors within the Sand River Catchment.

### **3. Approach taken**

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The methodology used to address the above issues included desktop research as well as a series of interviews, workshops and focus group meetings with various people. The aim of the approach was to seek patterns and trends in relation to actual harmonisation practices located in the SRC.

#### **3.1 Key outputs**

A number of key outputs were associated with the research process. These were:

1. Identification and articulation of policy and legislation in relation to three main zones for the SRC (Appendix 2)
2. Collation and review of policy, legislative and planning frameworks
3. The preparation of research narratives in order to highlight key patterns, trends and challenges.
4. A series of scenarios for the harmonised implementation of policy in the SRC
5. A specialist workshop
6. Paper presented at international conference on water laws

#### **3.2 A zonal approach as the basis for the analysis**

The initial step was the selection of the system boundary. A key focus of the SSP is that of water security and the links with livelihoods. The rationale for this focus is that preceding work by the SSP has identified water as the key constraint within the catchment (Pollard et al. 1998). In keeping with the new policies in South Africa that pertain to water, the natural corollary is the selection of the catchment as the system boundary. We believe this unit to be a pertinent place to start as the catchment represents a natural unit that delimits not only water resources but also natural vegetation, soils, wetlands, human settlements, resource use and governance at the local scale.

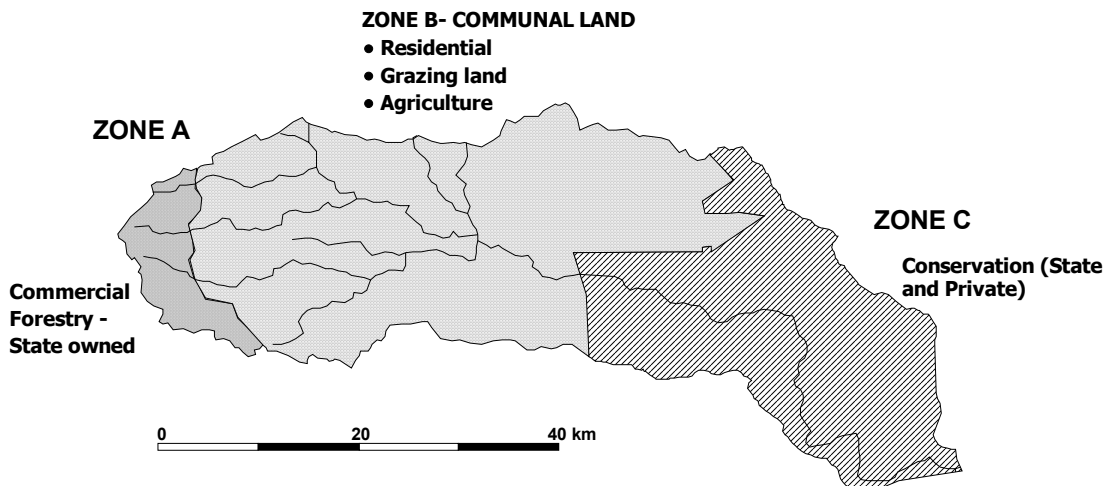


Figure 1. The Sand River Catchment showing the three zones of commercial forestry, communal lands and conservation areas in the East.

In an earlier feasibility study (Pollard et al, 1998), three land-use zones emerged within the SRC as the basis for understanding natural resources and their management (see Pollard et al. 1998). These partially reflected land-cover, but were mainly driven by political factors which so shaped the profile of the catchment (Figure 1). These were:

- **Zone A:** Commercial, state-owned forestry in the upper mountainous, western regions of the catchment. This
- **Zone B:** Communal lands of the mid-catchment comprising the former Bantustans of Lebowa and Gazankulu.
- **Zone C:** Conservation area of the lower, eastern region including the privately-owned Sabie-Sand Game Reserve and small portions of Manyeleti Game Reserve and the Kruger National Park (KNP).

These zones have been used as the basis for this work since different natural resource availability, types of activities and institutional and ownership arrangements characterise each zone. A brief overview of their history and socio-economic profile is given below.

#### **4. The policy, legislative and planning environment**

The perennial need to understand the multiple statutes and how they affect key areas of interest (often sectoral) is reflected in the various documents that have emerged in South Africa in the last five years. For example, an exhaustive study on land tenure and the environment by DLA/DANCED (2001), details a plethora 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 important statutes for environmental planning. Lizamore (2000) lists aspects of the legislation that are relevant to wetlands and Winstanley (2000) integrates various laws around the theme of wetland rehabilitation. Muzibuko and Pegram (2004) provide a comprehensive overview of issues related to co-operative governance between CMA's 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, 1997, Cousins and Hornby, 2002, Cousins & Claasens, 2004). Given the availability of relevant literature, the aim of this section is not to provide an exhaustive narrative on legislation but rather to summarise aspects of the key statutes that apply to NRM in the Sand River (see

also Appendix 1 & 2). Additionally, we provide a short description of the various planning instruments that flow from the laws.

## **4.1 Policies and legislation that regulate activities that impact on natural resources**

### **4.1.1 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 3). The main imperative to harmonise is set in the constitution. 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 and hence responsible for its management.

#### **Box 4 Environmental rights enshrined in the Constitution**

##### ***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 generation, through reasonable legislative 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*

Since the basis for the Constitution is a Rights approach (enshrined in the Bill of Rights), governance systems that currently apply to the SRC are grounded in a Rights Approach. This gives rise to legal instruments that focus on a **rights orientation** to resources access, control and management. The South African Constitution is underpinned by a number of principles that have important bearing on the governance and management of natural resources. It is from these principles that various legislative instruments that govern resources management are derived (Appendix 2). 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 to turn to the courts regarding infringements of rights. The rights orientation is repeated by NEMA in its specific legislative clauses. Section 5.1 details a pertinent research issue that focuses on a rights approach to water to meet Basic Human Needs and the Ecological Reserve.



#### 4.1.2 Overarching and sector specific legislation

As stated by Winstanley (2000), there is no doubt that some confusion arises from the fact that activities that impact on the environment (such as roads, mining, changing land-use, water abstraction) are controlled by **sector-specific legislation** as well **overarching and key provisions** of South African policy and law. The overarching and key provisions, to be dealt with first, include (i) the National Water Act (ii) Environmental Impact Assessments (EIA) under ECA; (iii) Aspects of NEMA (in particular Section 28), and (iv) the General Policy under ECA (summarized in Table 1). Clearly, a question that arises is who administers each of these pieces of legislation – an aspect dealt with in Table 1.

**Table 1. Overarching and key legislation that pertains to NRM including property rights within the SRC (adated from Winstanley 2000)**

| What  | Activities  | Who   |
|---|---|---|
| NEMA<br>(Note that the provisions of NEMA are retrospective)            | <ul style="list-style-type: none"> <li>▪ Effectively NEMA boosts the EIA requirements in that it contains provisions regarding obligations to conduct EIAs even for activities not identified by Minister (above) The minimum requirements for investigation and assessment contained in Section 24(7) of NEMA must be complied with even when the activity is not scheduled under EIA regulations.</li> <li>▪ Activities must comply with a two-pronged test therefore:               <ol style="list-style-type: none"> <li>i. any activity that requires permission by law;</li> <li>ii. any activity that may significantly alter the environment.</li> </ol> </li> </ul> | <ul style="list-style-type: none"> <li>: NEMA gives considerable power to specified officials.</li> <li>: Delegation of powers may only be to a named official in the department or an officer in the provincial administration or <u>municipality</u></li> <li>: NEMA allows civil society to conduct criminal prosecutions in the public interest or in the protection of the environment<sup>6</sup></li> <li>: NEMA imposes a general duty on every person who causes or has caused pollution or degradation of the environment to take "reasonable measures"<sup>7</sup></li> </ul> Similar to provisions of NWA (?) |
| NWA   | Development of water management strategies and the protection of water resources of South Africa as well as international obligations.  | <ul style="list-style-type: none"> <li>: Institutional powers primarily those of DWAF and the CMA.</li> <li>: The Act does not allow that CMAs to delegate their powers to other authorities or people.</li> </ul>  |
| Environmental Impact Assessments <sup>8</sup> and rehabilitation of ECA | Activities identified by the Minister <sup>9</sup> <ul style="list-style-type: none"> <li>▪ Roads, canals and channels, including diversion of normal flow of water in a river bed and impoundments;</li> <li>▪ dams levies or weirs affecting the flow of the river;</li> <li>▪ schemes for the abstraction or utilization of ground or surface water for bulk supply purposes;</li> <li>▪ intensive husbandry of, or importation of any plant or animal that has been declared a weed or invasive species;</li> <li>▪ reclamation of land below the highwater mark of the sea and inland waters including wetlands;</li> <li>▪ defined change(s) of land use.</li> </ul>    | <ul style="list-style-type: none"> <li>: EIA Requires permission of a competent authority<sup>10</sup>.</li> <li>: Under ECA rehabilitation can be directed by the Minister, a competent authority, <u>local authority</u> or government institution. This is a far wider scope of powers than NEMA provides (Winstanley pers. Comm.).</li> </ul>   |
| General Policy <sup>11</sup> of ECA                                     | Not used in any significant way until recently <sup>12</sup> . Essentially is requires that all interested and affected parties must be involved before embarking on any large-scale or high-impact development project   |   |

A comprehensive table of policy and legislation that applies to the SRC is provided in Appendix 1

<sup>6</sup> Section 33

<sup>7</sup> Section 28: Includes investigate, assess and evaluate, inform employees and cease, modify or control.

<sup>8</sup> Promulgated in GNR 1183 Government Gazette 18261 5<sup>th</sup> Sept. 1997

<sup>9</sup> Section 21 of ECA

<sup>10</sup> Section 22. In most cases the authority is the provincial department or directorate within the provincial ministry responsible for the environment (Winstanley pers. Comm.).

<sup>11</sup> Section 2 of ECA

<sup>12</sup> In 2000, the court set aside land-use rights for a planned development at Hangklip by the Western Cape Government for failure to involve interested and affected parties

## **4.2 Instruments for co-operative governance and integration: plans, strategies frameworks and projects**

A range of planning instruments flow from the policies and statutes. These are summarized below.

### **The National Water Resource Strategy (NWRS)**

The NWRS, called for in the NWA, is a workplan that guides institutions in the implementation of the National Water Policy. In terms of co-operative functions, the NWRS must determine interrelationships between institutions involved in water resources management and other water related activities.

### **Catchment Management Strategies (CMS)**

In terms of the NWA each WMA must develop a CMS that must harmonise with the WSDP of local government. The CMS is a specific strategy that is applicable at the WMA level. It must however be in line with the NWRS and the Internal Strategic Perspectives (ISP) of the DWAF. The CMS is based on participatory and integrated process that should reflect the plans and visions of water users located in a particular WMA.

### **Water Services Development Plans (WSDP's)**

Every district municipality is required by the Water Services Act to develop a Water Services Development Plan as part of the IDP. The WSDP must be consistent with the broader goals of IWRM and be informed by the CMS. The plan must also reflect an implementation programme for a five-year period.

### **The Integrated Sustainable Rural Development Strategy (ISRDS)**

The ISRDS is a national plan of the government to implement development plans for rural areas that are integrated and sustainable. The aim of the ISRDS is to work cooperatively with all sectors to provide services and support development of rural areas by providing services and supporting economic growth. The . Integrated Sustainable Rural Development Strategy, whilst not dealing with NR per se, talks to issues of sustainable rural livelihoods..

### **Area Planning frameworks**

APF's are technical planning documents aimed at guiding the infrastructure development and water services and sanitation delivery. These plans are important in that they need to be aligned with the CMS and take into account the processes of WRM. The APF's are set to become redundant as IDP's become the major instrument for localise planning.

### **Integrated Development Plans (IDP)**

An IDP is the main 'strategic planning' tool for planning and development within a municipality. It must link, integrate and co-ordinate plans and be compatible with national and provincial development plans. Local government must facilitate community participation in the development and implementation of the IDP.

An analysis of the local IDP is given in Section 5.3.

### **Spatial Development Frameworks (SDF's)**

The Municipal Systems Act<sup>13</sup> calls for spatial development frameworks to be set in a municipalities IDP's. The SDF must relate the development priorities to different geographic areas of the municipality. The SDF, CMS and WSDP need to be Harmonised in terms of water allocation and provision.

#### **Box 5. Core requirements for IDP's**

The IDP must include:

- a vision for long-term development
- an assessment of existing levels of development, including communities with no services
- development objectives and priorities
- guidelines for land use management
- operational strategies and disaster management plans
- budget and financial plan
- performance indicators and targets to measure local government efficiency
- new tenure systems and laws must be in line with the situation on the ground and in practice.

### **Land Use Management Systems (LUMS)**

In terms of the Municipal Systems Act (2000) and the Local Government Municipal Demarcation Act (1998), land under Traditional Leadership has been incorporated into municipal boundaries. The MSA and the Land Use Management Bill requires a single Land Use Management System (LUMS) be developed for the entire area. Land use management is closely interlinked with resource management and provisions and should therefore be harmonized with relevant resource management strategies such as the CMS, EIMP,s and EMP's and WSDP's.

### **Provincial Environmental Management Plan and/or Environmental Implementation Plans (EIMP's)**

#### **Box 5.**

##### **The EIMP's purpose is to:**

- a) co-ordinate and harmonise the environmental policies, plans, programmes and decisions of the various national in order to:
  - (i) minimise the duplication of procedures and functions; and
  - (ii) promote consistency in the exercise of functions that may affect the environment;
- b) give effect to the principle of co-operative government in Chapter 3 of the Constitution;
- c) secure the protection of the environment across the country;
- d) prevent unreasonable actions by provinces in respect of the environment; and
- e) enable the Minister to monitor the achievement, promotion, and protection of a sustainable environment.

The NEMA<sup>14</sup> calls for both National and Provincial Environmental Management Plan – sometimes called Environmental Implementation Plans. Regulatory functions and drafting of the EIMP's can be delegated. For example, Mpumalanga Parks Board has acquired a number of functions from the provincial office.

### **Local Government Management Plans**

Local Government need to prepare EMP's as part of the IDP planning process. These plans guide and regulate local government activities to be in line with sound environmental planning. These

<sup>13</sup> Part 2, Section 27

<sup>14</sup> S 11. (1) Every national department listed in Schedule 1 as exercising functions which may affect the environment and every province must prepare an environmental implementation plan within one year of the promulgation of this Act and at least every four years thereafter.

plans need to be harmonized with all other forms of environmental plans that are applicable to a district.

### **Land Redistribution for Agricultural Development policy (LRAD)**

LRAD policy is designed to provide grants to previously disadvantaged South Africans to access land specifically for agricultural purposes or to improve current land uses. Links between spatial planning and resource allocation are critical.

### **The Strategic Plan for South African Agriculture (2001) Department of Agriculture**

This strategic plan proposes a number of interventions to increase the participation of small, communal and subsistence farmers in the formal agriculture sector and make it more profitable, and to ensure that agricultural developments are not implemented at the cost of degrading natural resources.

### **Working for Water**

Working for water is a multi-Departmental programme to clear alien invasive plants. It also holds as an aim to create jobs and combat poverty, particularly in rural areas. Since the activities of the WfW project impact on water resources, biological diversity, agricultural production, secondary industry, and employment it is important that it co-ordinate with a wide range of role players.

### **The Save the Sand Project**

The Save the Sand Project is a national pilot project that is implemented in the Sand River Catchment. Its goal is to address rehabilitation and sustainable WRM in an integrated manner. Since water use is a concern common to all inhabitants of the catchment the need for co-operation and coordination is crucial. The SSP provides a forum for integration by providing an alliance of institutions, government departments, communities and individuals working in, with or using water from the SRC.

### **LandCare**

The LandCare Programme (NLP), run by the Department of Agriculture and Land Affairs, provides capacity building and awareness raising to small-scale farmers to help them adopt more sustainable practices. The vision of the Department's NLP is to have communities and individuals adopt an ecologically sustainable approach to the management of South Africa's environment and natural resources, while improving their quality of life.

In order to facilitate a harmonised approach, plans and practices at the catchment level can be co-ordinated, integrated and harmonized a number of ways. These include harmonising:

1. the content of strategic and integrated plans;
2. programmes and activities that are delimited by the three levels of government;
3. actions and communication between different institutions active within the catchment. For water these include CMA (water management), municipal (services provision and delivery) and traditional leadership (resource allocation, conflict management);
4. actions and activities of catchment-based practitioners (law enforcement officers, technicians, researchers, etc);
5. the budgets and timeframes set out in planning instruments;
6. and synchronizing the review and submission of strategic plans (EIMPs, IDP's, SDF's, WSDP's, CMS's);
7. participation in planning and decision making processes through providing platforms such as Catchment Management Fora

In the Sections 4 & 5 of this report we will share some experiences of attempts to harmonise from the SRC.

### 4.3 Institutions: their powers and responsibilities

The development and implementation of policy and legislation is a complex process with a wide spectrum of institutions and organs of state involved. We provide an overview of the structures that might have an impact on the attempts to harmonise NRM practices at a catchment level.

#### A. National government

National government is the highest authority in respect of policy generation, regulation of implementation and co-ordination of activities within the provinces. Chapter 3 of the Constitution sets out the responsibilities of national government. Parliament has two components: the National Assembly and the National Council of Provinces (NCOP). These two components meet regularly to ensure that national and provincial functions are coordinated.

#### B. Provincial government

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.

**Box 7. 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.

#### C. Local government: Municipalities

The Constitution provides for three categories of municipalities: Category A municipality (metropolitan municipalities), Category B (local municipalities), Category C (district areas or municipalities). The municipalities within the Sand River Catchment are:

- (1) category B, Bushbuckridge and Maruleng Local Municipalities, and
- (2) category C, the Bohlabela District Municipality, that oversees the two local municipalities and the Kruger National Park.

As stated earlier, local government are now seen as important agents of delivery. However, areas of jurisdiction, or wards, are new and there is frequently tension between traditional areas of jurisdiction and the new democratic demarcations.

#### D. Traditional leadership

Traditional leadership is operative in land held under communal tenure. Generally it consists of Chief and his indunas who administer customary laws, supported by a traditional courts of elders. With the incorporation of the '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*", but this recognition is subject to the Constitution. Section 81 of the Local Government: Municipal Structures Act (Act 117 of 1998), was amended during 2000, providing enhanced representation of traditional leaders in municipal councils.

#### E. Statutory and non-statutory bodies

Law frequently requires the establishment of specially designated bodies to carry out defined functions. The bodies, which may be statutory or non-statutory, have an important harmonising

function as they are frequently multi sectoral and represent a range of stakeholders and interest groups. Examples include:

- Catchment Management Agencies: management of water resources
- IDP fora: Integrated planning for local government
- Community Development Fora: facilitate community participation in development
- Ward Committees: community participation in local government
- Land Administration Committees (LAC): make decisions regarding land administration on communal lands on behalf of communities
- Communal Property Associations (CPA): statutory institutions associated with representing communities and their communally held assets on communal land.

**Table 2: Summary of key roles and responsibilities of various structures**

| <b>Structure</b>       | <b>Roles and responsibilities</b>  |
|------------------------|--|
| National government    | <p>National government is the highest authority with the most legislative powers (***) Constitution).</p> <ul style="list-style-type: none"> <li>• It has the power to amend the Constitution and pass legislation on any matters</li> <li>• It may also assign powers to any legislative body in any sphere of government (except to amend the Constitution)</li> <li>• Implement national legislation</li> <li>• Develop and implement national policy</li> <li>• Coordinate function of the various departments and administrations</li> <li>• Preparing initial legislation</li> <li>• Carry out the functions set out by the constitution</li> </ul>  |
| Provincial government  | <ul style="list-style-type: none"> <li>• To pass legislation on certain issues (listed in schedule 4 &amp; 5 of the constitution)</li> <li>• To pass legislation on matters as requested by the national assembly</li> <li>• To implement national legislation at a provincial level</li> <li>• Administration of the provinces</li> <li>• Developing and implementing provincial policy</li> <li>• Co-coordinating the functions within provinces</li> <li>• Performing functions as required by national assembly</li> <li>• Appoint commissions of inquiry</li> </ul>   |
| Local Government       | <ul style="list-style-type: none"> <li>• To provide services to communities in a sustainable manner</li> <li>• To promote social and economic development</li> <li>• To promote a safe and healthy environment</li> <li>• To encourage community involvement in issues of governance</li> <li>• Develop and implement bylaws</li> <li>• Impose and collect rates and taxes</li> <li>• Raising of loans for various schemes and projects</li> <li>• To budget and plan</li> </ul>   |
| Traditional leadership | <p>This has been a highly contested area as TA's felt that they were taken to be subservient to Provincial and Local Government. The White paper on Local Government sets out the role and relationship between traditional leaders and elected local government. Traditional councils and/or traditional leaders are to be involved in activities relating to:</p> <ul style="list-style-type: none"> <li>• arts and culture;</li> <li>• land administration;</li> <li>• agriculture;</li> <li>• health;</li> <li>• welfare;</li> <li>• the administration of justice;</li> <li>• safety and security;</li> <li>• the registration of births, deaths and customary marriages;</li> <li>• environment;</li> <li>• tourism;</li> <li>• disaster management;</li> <li>• the management of natural resources; and</li> <li>• the dissemination of information relating to government policies</li> <li>• Whenever an organ of state within the national government or a provincial</li> </ul> |

|                                    |   |
|------------------------------------|---|
|                                    | <ul style="list-style-type: none"> <li>• government considers allocating a role for traditional councils or traditional leaders</li> </ul>  |
| Statutory and non-statutory bodies | <ul style="list-style-type: none"> <li>• To make decisions regarding planning and equitable resource allocation</li> <li>• community representation and requests for access and use of resources and land</li> <li>• Mediate conflict and resolve tensions arising out of communal property</li> <li>• Set norms and standards for access to resources and maintenance of healthy ecosystems</li> </ul> |

## **PART B:**

### **A focus on the Sand River Catchment**

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#### **5. Overview of the Sand River Catchment**

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##### **5.1 General biophysical characteristics**

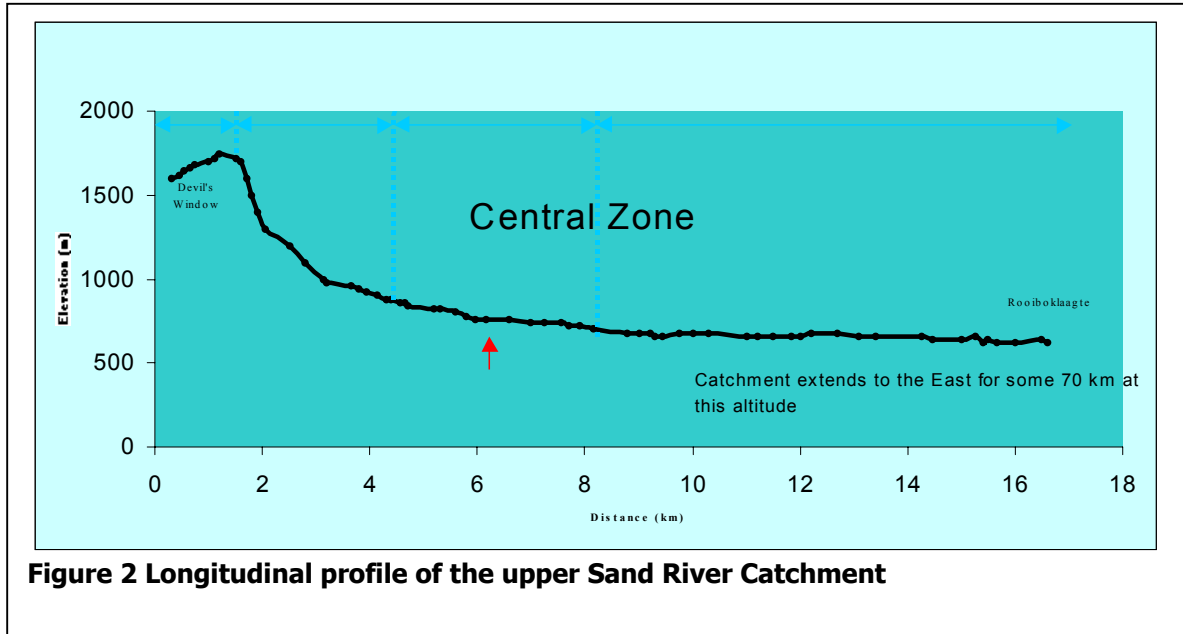
The Sand River sub-catchment (SRC) falls within the Sabie River Catchment, regarded as the most pristine of all six rivers that flow eastward through South Africa into Mozambique (Pollard et al. 2003). Unlike the larger Sabie sub-catchment however, the Sand catchment is severely degraded (Pollard et al. 1998). The Sabie-Sand forms part of the Inkomati Basin- and one of the 19 Water Management Areas, which are the legally-constituted units for water resources management in South Africa. The Inkomati is an international watercourse, with shared rivers between South Africa, Swaziland and Mozambique. The majority of the Sand Catchment falls into an area colloquially known as the Lowveld (lowland savannahs). The SRC covers some 1910 km<sup>2</sup>, straddling the provinces of Limpopo and Mpumalanga.

There are a number of key characteristics of the catchment.

1. Firstly, in terms of **water resources** the catchment is closed i.e. there is no more allocatable water. The annual estimates of water demand (Table 1) indicate that forestry and agriculture are the highest users of water. Like most domestic consumers, they do not pay for water although this is under review. The high population densities, inadequate and inappropriate infrastructural development combined with the aridity of the area and frequency of drought means that there is insufficient water to meet current sectoral needs at the appropriate levels of assurance. In some areas people still have to use water from rivers, unprotected springs, wells dug in the riverbeds, or a dependent upon sales from private vendors.
2. The second feature is the high degree of **variability**. Indeed, geographic variability – with altitude decreasing from 1800 m to 450 in just 80 km - is an overwhelming biophysical characteristic. This is reflected in the sharp changes in rainfall, streamflows, soils and vegetation. The Sand River source is situated in a humid, mountainous region of high precipitation (2000 mm a<sup>-1</sup>) where much of the runoff is generated, but thereafter the river rapidly descends into a semi-arid region of low rainfall (550 mm a<sup>-1</sup>).



Nearly half of the runoff is generated in the mountainous and middleveld region of the catchment; and it is this headwaters area that the entire catchment relies on to furnish much of the water supplies. Temporally, rainfall and hence streamflows are also highly variable. Intra-seasonal **drought** is common.



3. The communal rangelands are home to some 400 000 people with remarkably **high densities** of people per km<sup>2</sup> for a so-called rural area. This places high pressure on the natural resource base.

## 5.2 History, politics and the socio-economic profile

These diverse biophysical landscapes are paralleled by equally diverse cultural and socio-economic heterogeneity. As stated, a striking feature of the catchment is the dense concentration of people in the so-called 'rural' areas juxtaposed with sparsely-settled, often affluent areas. This contrast is reflected in the socio-economic differentials that exist and huge disparities in access to services, most notably water. How did this situation arise? Indeed, any consideration of contemporary water issues within the catchment and, in reality in many areas of rural South Africa, must be set within the wider historical context. It is well-recognised that the country's apartheid policies have shaped the landscape and practices of the catchment that we see today. Whilst this report cannot present a detailed history of racial division in South Africa, human settlement patterns were strongly controlled by dominant political ideologies and a brief mention of some key events is warranted (Box 1).

Colonisation in the lowveld was relatively recent and it was in the mid-1800s that the socio-economic landscape was transformed in favour of whites. Interestingly, much of the lowveld was regarded as worthless and inhospitable for permanent settlement at this time due to erratic rainfall and high temperatures, poor soils, and endemic and sometimes fatal livestock and human diseases (Carruthers 1995). However, with the reduction in malaria and demise of the tsetse fly (due to rinderpest in 1896 and drought between 1897 and 1913) this perception changed and the lowveld opened up for denser settlement (Pollard et al. 2003). It was also at this time that nascent conservation areas were established in the drier eastern regions, and the Kruger National Park was proclaimed in 1926. In the communal lands, agriculture was the mainstay until the mid-1930s, but political and economic policies

acted in concert to produce a rural economy that, by the 1940s, was dependent on migrant remittances and state pensions for cash injections (Bundy 1988; May 1995; Tollman *et al.* 1999; see Pollard *et al.* 2003). Somewhat ironically, it is estimated that only 6% of the local cash economy is generated by agriculture in these 'rural' areas (Harries 1989). The direct use values of home consumption from livestock, agriculture and natural resource harvesting are high, accounting for more than 50% of total livelihood streams (Shackleton *et al.* 2001).

Today, as a consequence of forced removals, a large number of people - between 320 000 and 400 000- reside within the SRC, with densities varying between 176 and 300 people km<sup>-2</sup> in the communal lands (Pollard *et al.* 1998). An estimated 55% of the population are women, and they head some 30% of households. The average literacy rate is 66%. Only 46% of children attend secondary school. Densities and distributions of people have vast implications for development of water services provision and general natural resource management.

Unemployment varies between 40% and 80% although establishing accurate figures is confounded by the difficulty in distinguishing between formal and informal economic activities. An estimated 50% of men are economically active outside of the catchment. For many households, the major sources of income are wage remittances, pensions and social grants. The major employment sectors commercial activities, tourism, forestry, agriculture, and civil service posts such as teachers and nurses.

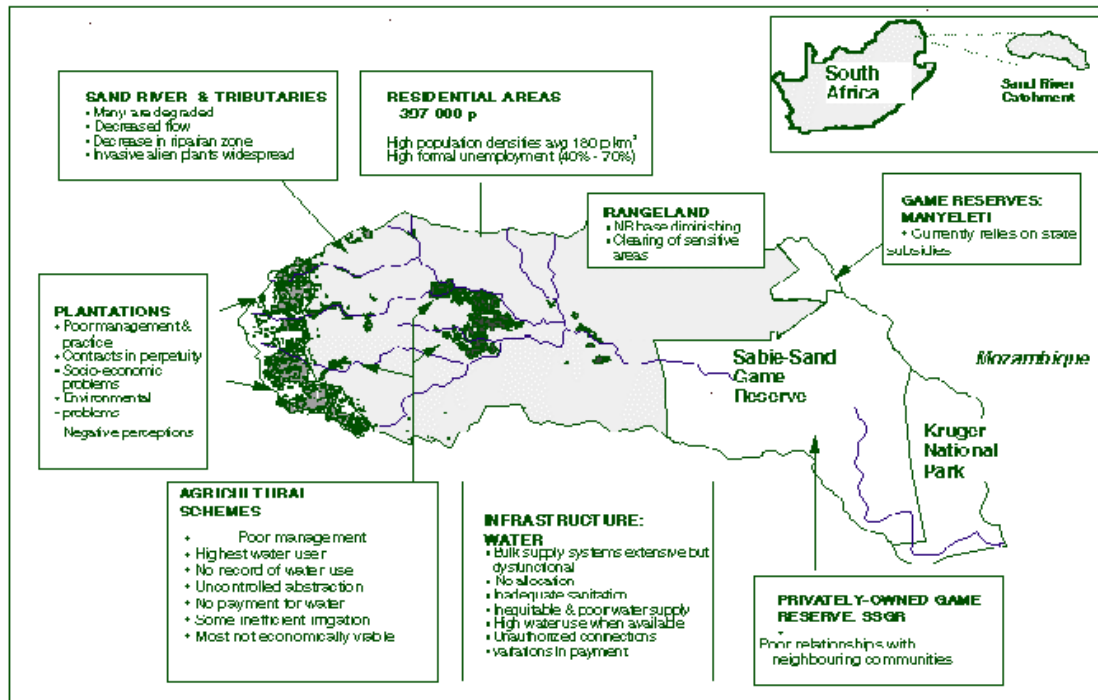
Women perform an important role in the social and economic life of the area. They are responsible for water and firewood collection, they usually run household gardens and perform minor income generating activities to supplement household incomes. At the same time women are marginalized from political life although this is changing.

The high human population has had a number of consequences.

- Firstly, the limited and marginal land was farmed and harvested more intensively with a concomitant effect on the natural environment.
- Secondly, in response to the attendant unemployment that accompanied the burgeoning population, the homeland governments embarked on a number of infeasible job-creation schemes, involving agriculture, conservation and forestry (Fischer 1988).
- Thirdly, this deleterious environmental and economic situation fostered conflict over land and resources (Stadler 1994), equally evident in the socio-cultural and political landscape (Ritchken 1993; Niehaus 2000).

### **5.3 Land Use and Tenure**

Land use patterns have major implications for water demand. The major land use is shown in Figure 3. The upper portion of the catchment is state-owned and is under commercial afforestation. The middle portion – comprising the former bantustans of Gazankulu and Lebowa - is under communal tenure through the Department of Land Affairs. The majority of the population live in the middle portion of the catchment. The lower catchment is under conservation, both state and private. The dominant land use activities in the communal lands include small-scale cropping, state-owned commercial farming, and grazing. Uncultivated land is used for natural resource harvesting and grazing, where stocking rates are at agricultural carrying capacity (Parsons *et al.* 1997). The privately-owned conservation area is run as a share-block scheme (e.g. encouraging traversing rights on each others' properties). Interestingly, whilst being economically-dominant, as the downstream stakeholder they are located in the most vulnerable part of the catchment in terms of water security.



**Figure 3: Map of catchment showing main zones, land-use.** The area is broadly classified as moist forest and semi-arid savanna and is characterised by a mixture of trees, shrubs and grasses (Shackleton *et al.* 1995). Three major tributaries drain the upper catchment, and join to form the main Sand River.

#### 5.4 Activities that impact on natural resources

A range of activities occur in the catchment that impact on natural resources. In each zone these are executed by different actors and play out in different ways (Table 3). For example, the clearing of riparian zones and wetlands in Zone A is a direct result of practices by the forestry sector itself.

**Table 3. Summary of the key activities per zone. (WfW = Working for water)**

| AREA             | Water Abstraction | Clearing (land-use change) | Harvesting                                    | Spread of Invasive aliens              | Road construction    | Cropping | Sand mining |
|------------------|-------------------|----------------------------|---|--|----------------------|----------|-------------|
| <b>Zone A</b>    |                   |                            |   |  |                      |          |             |
| Wetlands         |                   | For plantation             | Subsistence of rare species from swamp forest | Uncontrolled forestry, poor management | Through wetlands     |          |             |
| Riparian zones   |                   | Cleared for plantation     | subsistence                                   | Uncontrolled forestry                  | Along riparian zones |          |             |
| River (quantity) | Reduction to SFRA |                            |   |  |                      |          |             |
| River (Quality)  |                   |                            |   |  | high sediment        | Unknown  |             |

| AREA               | Water Abstraction         | Clearing (land-use change) | Harvesting                | Spread of Invasive aliens | Road construction            | Cropping                 | Sand mining     |
|--------------------|---------------------------|----------------------------|---------------------------|---------------------------|------------------------------|--------------------------|-----------------|
|                    |                           |                            |                           |                           | loads                        |                          |                 |
| Afromontane forest |                           | For plantation             | subsistence               | Uncontrolled forestry     | Some                         |                          |                 |
| Grassland          |                           | For plantation             |                           | Uncontrolled forestry     | Excessive slopes             |                          |                 |
| Soil               |                           |                            |                           |                           | Loss of soil                 |                          |                 |
| <b>Zone B</b>      |                           |                            |                           |                           |                              |                          |                 |
| Wetlands           | Some for cropping         | See cropping               | Limited reeds             | Limited                   | Gullies from paths = erosion | For subsistence use      | limited         |
| Riparian zones     |                           | See cropping               | Wood and medicinal plants | Limited, Cleared by WfW   | Informal and formal          | For subsistence use      |                 |
| River (quantity)   | Mainly by 3 agric schemes |                            |                           |                           |                              |                          |                 |
| River (Quality)    |                           | Some sediment increases    |                           |                           | sediment increase            |                          |                 |
| Woodland           |                           | Subsistence                | Substantial               | Limited, Cleared by WfW   | Yes, with impacts            | See clearing             | For building    |
| Soil               |                           | Little soil conservation   |                           |                           | Major cause of soil loss     | Little soil conservation | Loss of topsoil |
| <b>Zone C</b>      |                           |                            |                           |                           |                              |                          |                 |
| Wetlands           |                           |                            |                           | Limited                   | Gullies from paths = erosion |                          |                 |
| Riparian zones     |                           | Very limited               |                           | Limited, Cleared by WfW   | Limited                      |                          |                 |
| River (quantity)   | Mainly for domestic use   |                            |                           |                           |                              |                          |                 |
| River (Quality)    |                           |                            |                           |                           |                              |                          |                 |
| Woodland           |                           | Limited for camps          | Limited for staff         | Limited, Cleared by WfW   | Yes, with impacts            |                          |                 |
| Soil               |                           | Some soil conservation     |                           |                           | Some soil conservation       |                          |                 |

## 5.5 The status of natural resources and their management in the SRC

### 5.5.1 Social actors, including institutions, involved in NRM

The contemporary literature on natural resources management contends that the use and management of resources is predicated not only on the resource availability and legislative environment but, importantly it is mediated through a range of social actors. For example, in examining environmental entitlements in the Transkei, Kepe (1997) identifies gendered roles for medicinal plant collection by herbalists and hawkers as well as headman, chiefs, government staff, villagers and the buyers. An appreciation of the historical and contemporary relations of these actors is essential to an understanding of current patterns of NRM and their potential trajectories. Whilst a detailed analysis is beyond the scope of this project, some of the key actors are outlined in part E.

### 5.5.2 Key issues affecting natural resource use and their management for the entire SRC.

#### *Land Tenure and Administration*

The use and governance of natural resources is taking place within a broader context of dynamic socio-political and ecological change. The changing face of land reform in particular, forms a capricious, unresolved - and hence challenging – backdrop to the central issue of NRM in South Africa. The inequities of land ownership created through colonial administrations and statutes are being addressed through a three-pronged approach: land redistribution, land restitution and land tenure reform. Land tenure reform aims to improve tenure security for all South Africans, and in particular for those living in rural areas held under communal ownership. Land administration is the “operational arm” of tenure (Leap internal documentation). Land in zone A is state property, Zone B is communal land and Zone C is a mix of private and state.

The changing face of land tenure for communal area captured in the recent CLRA (2004) is of concern given multiple factors that inform this process. The issues surrounding land tenure and administration have been the focus of heated debate between government, academics and practitioners (Cousins, 1997, Hornby and Cousins, 2002, Kepe, 1999). The current land administration, although weakly upheld, is a mix of continued - albeit diminishing - traditional authority inputs, autonomous action on the part of the community and perceptions by ward councillors and the CDF that this now falls within their jurisdiction. Little clarity is given by the acts framing the functions of these different role-players (MSysA, TLGFA) and to our knowledge there are no efforts underway to inform communities of the changes. Indeed, the municipality has budgeted a mere R2000 for this over five years (see Section 5.2). Similar situations are reported elsewhere. For example the land administration system in the communal areas of Macubeni is considered to be “... in a shambles, both from a policy and regulatory point of view” (GTZ 2004). In the SRC, no-one had any knowledge of the new legislation although there has been a marked and sudden increase in the fencing of land – previously unheard of. Informal interviews indicate that these people have heard that things are changing and that one will only gain title by fencing and using land.

#### **Riparian zone use and protection:**

Rather surprisingly, riparian zone protection has not received specific attention in the NWA of 1998, although it is defined as part of a water resource (i.e. it comprises the water course- see definitions). As such, it is afforded protection under the NWA although practical implementation is confounded by a lack of clarity regarding (a) the demarcation the riparian zone and (b) what may or may not be undertaken in a riparian zone. have been unable to find any reference except 100 year floodline. Protection is also conferred through the remaining overarching legislation (Table 2), as well as CARA (maintenance of production potential of land, combating and preventing erosion, weakening or destruction of water resources, protection of vegetation) and national and provincial ordinances of protected species.

#### **Wetlands use and protection:**

Theoretically, wetlands are protected through a range of legislative instruments but this still does not outline who defines rights of access, use and control. Department of Agriculture has a statutory obligation to protect wetlands. The NWA states that water use must be licensed (with certain exemptions) and Section 21 of the NWA defines use (amongst other activities) as taking or impeding water or altering the bed, banks, course or characteristic of a watercourse.

#### **Control of invasive alien species:**

Legislative and institutional fragmentation compromises the management of **invasive alien species**. Currently, statutes that pertain include ECA (the requirement for an EIA), CARA and the Biodiversity Act (NEMA, 2004) which calls for prevention of introduction and spread.

In terms of where responsibilities lie, the legislative responsibility for the control, management and eradication of invasive alien species is dispersed throughout government, mainly between DEAT, D.A. and to a lesser extent DWAF. The Biodiversity Act (NEMA 2004) provides that the

Minister must establish programmes for prevention and spread of aliens<sup>15</sup> and establishes the SANBI whose brief also includes control of invasive aliens. CARA specifies a range of institutions as does Sustainable Utilisation of Agricultural resources Bill (2003).

## 5.6 Key land and water-use issues associated with each zone

### Zone A: State forestry

Table 3 indicates that the key natural resources in this area include the Sand River headwaters, wetlands, afro-montane forest and grasslands. The upper SRC comprises the steep mountainous slopes of the eastern escarpment, sometimes known as the Drakensburg. Historically, the natural vegetation comprised a mixture of grassland and cloud forest- an uncommon vegetation type in South Africa. However, the need to provide labour to the Lebowa Bantustan (the administrator at the time) and the desire to develop strategic reserves acted in concert to radically modify the landscape. Today the land use is strongly dominated by plantation forestry. Of the 11 900 ha, on three farms about 50% is under pine. By the time the new government of a unified South Africa took over these former-Bantustan operations in 1994, the area was showing suffering the effects of poor management in the form of evergreen contracts and the afforestation of highly sensitive areas such as wetlands, riparian fringes and excessively steep slopes. Nonetheless, under a strategic plan to reduce forestry in the area through the conversion of these state-owned forests to conservation in the form of the new Blyde Canyon National Park, all alien trees will be removed from the slopes by 2006.

### Zone B: Communal land

The communal rangelands comprise a mix of woodlands and open bushland, although this is being increasingly cleared. So-called 'commercial' agriculture, amounting to 438 ha of permanent tree crops, is limited to three state-administered schemes namely Champagne Citrus, Allandale and Zoeknag which is effectively defunct. The total area is estimated to be 2145 ha although only some 1612 ha of this is farmed. A crude estimate of jobs created for the agricultural sector is 6,488 people or about 1.6% of the population. If each person supports an average of six household members, the livelihood benefits accrue to some 39,000 people or 10% of the population.

#### Land allocation:

Historically, land was allocated through the PTO system administered by the chiefs, through a permit system issued through the office of the Tribal Authority (see Section 4.5.2). Land tenure is in a state of disarray and recently questions raised about the role of elected LG in land allocation, although this is actually restricted to 'urban' areas. (i.e. non-communal).

#### Woodlands management (use, regulation, enforcement, compliance):

Historically, the protection and use of woodlands in the communal land of the catchment was effected through the chiefs. Certain species such as marula were protected under a blanket prohibition. For other species, harvesting was controlled through a permit system.

The NFA (1998) makes a clear distinction between forests<sup>16</sup> and woodlands. The majority of rangeland in the communal areas of the catchment would constitute 'woodlands'. A common view of the people interviewed is that woodlands and their protection have been inadequately dealt with in the NFA and are legislatively, poorly protected. Most agreed that the process for

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<sup>15</sup> Section 74 of BDA

<sup>16</sup> (x) "Forest" includes (a) a natural forest, a woodland or a plantation; (b) the forest produce in it; and (c) the ecosystems which it makes up;

(xx) "Natural forest" means a group of indigenous trees (a) whose crown is largely contiguous; or (b) which have been declared by the Minister to be a natural forest under section 7(2)

(xxxix) "Woodland" means a group of indigenous trees which are not a natural forest, but whose crowns cover more than five percent of the area bounded by the trees forming the perimeter of the group.

getting a permit for protected species is clear but the roles and responsibilities and protection of unlisted species is very grey area<sup>17</sup>.

Wetlands:

As with most natural resources in the communal lands, the protection and use of wetlands was effected through the chiefs. Some grey areas do exist however in terms of subsistence agriculture, since theoretically it was illegal to farms in wetlands (CARA 1986). Nonetheless, communities that we have worked with do say that previously it was the chief who allocated land within the wetland. The situation with regard to the harvesting of reeds is somewhat clearer in that the chief would declare the season open (normally toward the end of April). Only then would be harvest the various reed species. It is less clear however, who conferred rights of use – indeed it seems that there was sufficient resources for this to not be an issue, certainly at a local level. Shackleton (pers. Comm.) reports however that with the fencing of plots in wetlands to protect crops from cattle, these common-property resources have effectively been privatised. These findings are corroborated from a study of one wetland system (Pollard et al. 2004). Moreover people are now noting that 'outsiders' (i.e. people from other villages not directly adjacent to a wetland) are not only disregarding seasonal regulations around harvesting but show no regard for what is regarded as a 'local' resource. Clearly this situation raises a range of questions:

- Security of tenure over common-property resources
- Whose responsibility is it to set norms and standards and regulations of rights of access?
- What if any legislative support exists for this?

**Zone C: Conservation areas, private game farms and the Kruger National Park (KNP)**

There are three conservation areas with the SRC, totalling 69486 ha: Manyeleti Game Reserve, the Sabie-Sand Wildtuin (SSW) and the Kruger national Park. Manyeleti reserve is state-owned and falls under the jurisdiction of the Limpopo province Department of Agriculture, Land and Environmental Affairs. Commercialization through the involvement of the Mnisi Tribal Authority in a long term lease aims to use profits for community development projects. The SSW comprises a number of privately owned farms that are used as nature reserves. The SSW has a 'no-hunting' agreement with KNP with the result that the fence between the reserve and the KNP has been dropped. The reserve falls under the jurisdiction of the DEAT Mpumalanga and must therefore comply with applicable legislation and regulations. A small portion (16 971ha) of the SRC at the lowest end of the catchment falls within KNP. The para-statal South Africa National Parks (SANParks) oversee the KNP.

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<sup>17</sup> White Paper on sustainable forestry development (1996): 2.7 states: Protection of other forest lands: Stewardship of forests and woodlands on land outside state forests lies in the hands of conservation agencies, communities and the private sector, but clearly this sheds little light on practical processes and functions.

## PART C: Themes and scenarios

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When examined from a catchment or municipal perspective, the range of issues regarding NRM, roles and responsibilities is expansive. As we mentioned in the introduction, it is our experience that some of these have emerged as pressing either because of the pressures on departmental staff to respond to changing statutes, the implications that these have for plans and strategies and the capacity to integrate and harmonise incompatible policies and plans. We have therefore selected a selection of pertinent themes for exploration below. In the scenarios, key issues are explored through the use of actual scenarios that have arisen in the Sand River Catchment. Effectively these scenarios are integrating platforms for policy and practice discussed in the preceding sections. They also provide an invaluable test of emerging policy and planning frameworks and a opportunity for discussion.

### 6. Research themes and scenarios

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The following section examines NRM and the role of various agencies and stakeholders from two perspectives. The first of these – the research themes- presents findings related to specific research issues developed at the start of the project. The second perspective is developed around a range of scenarios that we have confronted during our eight years of experience in the area. Although there is some overlap, the second perspective is developed in response to real situations and hence carries an action component. In response to requests by various participants in this project, potential actions are summarized in a “route map” where appropriate. Nonetheless, it can be appreciated that many situations are dynamic and changing as new bodies come into place and the roles and responsibilities may change. Moreover, these reflect a Bushbuckridge/ Sand River catchment perspective which may not be directly applicable or appropriate in other areas.

#### 6.1 Research focus 1:

##### ***How can a rights approach to water be implemented in the SRC?***

South Africa has placed the right to sufficient water as a Constitutional Right in its Bill of Rights. Consequently, the Constitution (Act 108 of 1996) has placed a *legal obligation* on the government to realize the right to sufficient water. This means that different levels of government all need to work towards fulfilling this obligation. It is the responsibility of the National DWAF to clearly define the roles and responsibilities for achieving this obligation and then for sharing those roles out amongst the different levels of government and statutory bodies.

This rights focus is articulated by a suite of policies, legislation, strategies, and special institutional arrangements. When the rights of people and the environment are not met a violation is committed on the part of those responsibility for management and provision. However, violations cannot be determined until the roles and responsibilities are clearly defined in terms of obligations. A number of important issues emerged from this research focus relating to identifying roles and responsibilities of the different role players, understanding obligations and therefore being able to determine violations of the obligations.

#### **The main instrument for a rights approach to water**

The main instrument that gives meaning to the right to water is the Reserve (NWA, 1998). The Reserve is an articulation of the Constitutional right to water and consists of two components, namely the Basic Human Needs Reserve (BHNR) and the Ecological Reserve (ER). All other rights are conferred rights are



not guaranteed and as such are subject to allocation and licensing (Pejan et al. 2005). These two rights are often conflated.

The **ER** is defined as that quantity and quality of water required to maintain the health of an aquatic ecosystem. Without maintaining and management of ecosystems we will not be in a position to provide for basic human needs. These two rights are therefore linked to form a unified instrument of the Reserve.

**BHNR:** This concept is an expression in real terms of the constitutional intention to provide water to meet basic human needs (currently taken to be 25 litres per person per day) before water can allocated for use to the various sectors within a catchment.

The ER and the BHNR are the overall responsibility of national DWAF. However, the responsibility for their delivery and monitoring will be devolved to a regional (allocation planning through the CMA), provincial (administrative and financing) and local level (services provision through local government) The legislation providing a framework for this is: NWA, MSysA, WSA.

In exploring a rights approach to water management in the SRC we have found a number of complexities and challenges to achieving the smooth implementation of such an approach.

**Complex and confusing terminology:** The meaning associated with the word "right" is frequently carried forward from old legislative frameworks and practices. For example, the concept of a right to water from a constitutional position is a new one and is frequently conflated with "entitlement" as well as "licensed use" (as a secondary right such as riparian rights).

**Decentralisation:** In seeking to bring coherence to water resources and the issues of equity and sustainability, South Africa has embarked upon a process of decentralisation. Key to this has been the devolution of roles and responsibilities from a national to local level, and has been fraught with problems relating to: asynchronous implementation schedules, varying capacities to take up responsibilities, lack of clarity with regard to new roles and responsibilities, amongst others.

For the Reserve to function as an instrument for management and supply of water it must be planned for at a local or catchment level. This requires its quantification and incorporation into planning frameworks and instruments such as the CMS's, WSDP and IDP's so that allocation, licensing, infrastructure and service delivery can be coordinated and responsibilities are clear. However, of major concern to a rights focus is the lack of clarity regarding roles and responsibilities between the need to manage water resources on the basis of a catchment and the imperative to supply water within administrative boundaries of municipal districts (research theme 5). Here the conflation is largely between water management and supply as devolved to catchment management agencies and water services authorities respectively.

Furthermore, the need to monitor water provision and the ER from a rights focus needs to be embedded within the practices of both management and supply and the appropriate institutions tasked with overseeing these. The lack of appropriate understanding and capacity of key role players is likely to be a major obstacle in the determining, reporting and monitoring of rights violations within the SRC.

**Planning for the delivery of the BHNR and the ER:** The Reserve is a statutory requirement and must be the first priority in the planning for water security within a catchment. This might not be a problem were resources are abundant. However, where catchments, such as the Sand are water stressed the concept of the Reserve provides a mechanism for prioritising the allocation of scarce resources. Since primary rights are not open to negotiation, they cannot be contested by competing users.

However if it is not articulated clearly, it is impossible to plan for fulfilling the obligation at the level of a catchment. This is not a simple process (see Appendix W). In cases where a municipality straddles more than one catchment, the quantification of the BHNHR will be based on population figures of the entire district whereas the CMA's obligation for allocation is to the population within the catchment boundary. This will place responsibilities on water management institutions to recognise this mismatch and to compensate through additional collaboration, planning and monitoring and communicating procedures. Additionally, this has implications for the monitoring of infringements of the BHNHR.

It is not hard to envisage a similar issue arising with regard to the ER. For example, the current population of the BDM is estimated as 774,000 whilst that of the SRC is 420,000. Practically, the BDM cannot request water for the total figure from the Inkomati CMA. If this is used to calculate water required over and above that to meet the BHNHR minimum (25 l) the implications for the water resources and infrastructural planning could be considerable. It would need to disaggregate these figures according catchment boundaries. The question is: Is Local Government cognisant of the need to do this and how?

## 6.2 Research Focus 2:

***Does the IDP for BBR act as an integrating tool for sustainable development and environmental planning for the SRC?***

The IDP is an **instrument**, through which the Bohlabela District Municipality and Bushbuckridge Local Municipality articulates their vision, leadership and direction (see Table z). Although both municipalities need to produce an IDP, the following analysis will focus on the IDP for Bushbuckridge (henceforth referred to as BBR IDP) since this is roughly congruent with the SRC.

The IDP is an important instrument for integrating sectoral plans. An inter-sectoral approach is, in theory, given meaning through an appreciation of cross-cutting themes (Table cc). Additionally, the IDP should contain core elements. Despite recognition for both of these, the current BBR IDP addresses only a few of these (Tables 4 & 5).

**Table 4: Dimensions and sectors of development relevant to the planning process of a generic IDP. (Source: IDP guide V)**

| Dimensions and crosscutting issues   | Sectors (IDP):  |
|--|---|
| <ul style="list-style-type: none"> <li>• <b>The natural environment</b></li> <li>• Spatial dimension</li> <li>• Economic dimension</li> <li>• Institutional dimension</li> <li>• Poverty</li> <li>• Gender</li> <li>• HIV/AIDS</li> <li>• Rural and Urban Development</li> </ul> | <ul style="list-style-type: none"> <li>▪ Health</li> <li>▪ Education</li> <li>▪ Tourism</li> <li>▪ Safety and Security</li> <li>▪ Land</li> <li>▪ Energy</li> <li>▪ Transport</li> <li>▪ Water and Sanitation</li> <li>▪ Housing</li> <li>▪ Infrastructure</li> </ul> |

**Table 5. The core elements of an IDP and how these are reflected locally in the BBR IDP**

| Core elements of an IDP (paraphrased)                         | As reflected in the BBR IDP  |
|---|--|
| 1. The municipal council's <b>vision</b> for the long-term    | <i>Envisage a prosperous BBRM to develop and improve the standard of living for all.</i> |
| 2. An <b>assessment</b> of the existing level of development  | Undertaken but no reference to data sources.   |
| 3. The council's development <b>priorities</b> and objectives | No clear statement of priorities but budgetary   |

|   |  |
|---|--|
|   | allocations infer that roads development is the priority. See fig. 4   |
| 4. The council's development <b>strategies</b> which must be aligned with any national or provincial sectoral plans | Claim to have adopted national strategic guidelines (p.29)   |
| 5. A spatial development <b>framework</b> ,   | Superficial framework and analysis for future development  |
| 6. The council's operational <b>strategies</b>  | Despite writing about the outcome of the analysis phase being an operation strategy, which should include an Integrated Environmental Programme, this has not been done. (pg.8). |
| 7. Applicable <b>disaster</b> management plans.   | In process   |
| 8. A financial plan   | See fig 4  |
| 9. The key performance indicators and performance targets.  |  |

## Analysis

In the following section a general critique pertaining to water and the environment is given, followed by an assessment of the situation analysis and the financial planning.

### General comments:

- In terms of water, no mention is EVER made regarding water resources and water availability, either in the sections of water, or on environmental issues, or on constraints to LED. The major sources of water in the catchment are secured from the Sand and Sabie Rivers and yet no reference is made to either system, nor is any statutory requirement to meet the Reserve acknowledged. This omission occurs despite the clear guidelines that require such an assessment and the fact that the Sand Catchment is a closed system. Indeed, the only substantial reference to water is in terms of service delivery. Again, where figures are given, no sources are quoted. Additionally, there is no reflection of the current innovative and far-reaching discussions within DWAF on the potential of multiple water sources to support peoples' livelihood needs.
- The Department of Provincial and Local Government, together with GTZ and others, produced a toolbox to assist in the formulation of individual IDPs (DPLG, 2003). Although, the BBR IDP states that this IDP pack was used, there is little evidence of this.
- Although a requirement, there was no environmental representative on the steering committee.
- The section on legislative requirements is inadequate and no reference is made to various acts and other planning documents.
- In terms of landuse (pg. 13), the largest area (with no units) is referred to as "other". It is unclear what this might be but given its size, it should be a key focus for land administration which it is not.

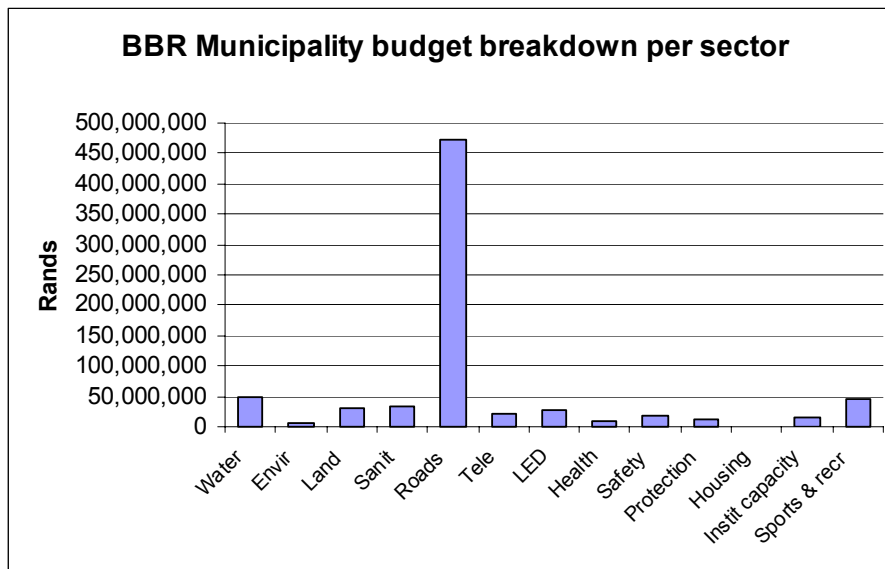
A key element of an IDP is the **situation analysis** since this sets the development agenda through the objectives, strategies and projects that flow from this analysis. These, together with comments and concerns are detailed in Appendix A. A number of key concerns are summarized below:

- Firstly, no mention is made of land reform and agrarian reform in terms of land use planning.
- Secondly, the **situation analysis of water** only talks about water in terms of supply and not in terms of water resources (see above comments).
- Thirdly, the situation analysis of the **environment** identifies seven environmental problems in which the linkages between cause and effect are largely unsubstantiated (Table vv). There is no acknowledgement of the major limiting and limited resource of the catchment – water (Pollard et al. 1998; NWRS 2004; Moriarty et al. 2004). Furthermore, no mention is made of the issue of governance, infringements and enforcement of common-property resources, nor is there a recognition of local governments role in this. Finally, there is no mention of the important links with land tenure nor the need to alignment with other departments.

**Table 6. A summary of the major environmental problems as identified in the BBR IDP (2004)**

| Environmental problems and causes (BBR IDP)  | Comment   |
|--|---|
| Water pollution ascribed to littering (?) and sewage leakages.   | No mention is made of the effects of roads in terms of sediment.  |
| Deforestation due to de-vegetation, runoff (??) and soil erosion   | The issue of cause and effect is confused here.   |
| Veld fires due to honey-harvesting, poaching, firewood collection and negligence.  | No reference is made to the Veld & Fire Act (roles and responsibilities) nor to the fact that some fires are a necessary part of the system.  |
| Soil erosion is proportionally higher due to deforestation, overgrazing, the terrain relief, veld fires and poor land management | Fail to state that it is higher than what. Note that the issue of soil erosion and the loss of topsoil is never picked up again in the IDP despite the need for soil and water conservation measures in land-use practices. |
| Overgrazing is said to result from shortage of land, overstocking and game reserves  | The issue of game reserves is unsubstantiated. The root causes of overgrazing are not acknowledged. This issue is never picked up again in the IDP  |
| Informal settlements are said to have a major impact on the environment.   |   |
| Waste management system – no proper facilities.  |   |

The **financial plans** reveal some interesting priorities that also do not seem to reflect the situation analysis very clearly. Of the total budget, 64% is to be spent on roads, 6% on water, 4% on sanitation and less than 1% on the environment (Figure 4).



**Figure 4 The BBR municipality budget (IDP 2004)**

Key issues:

- Although it must be recognized that this is the 'first generation' IDP for the BBR LG, it fall far short of what is intended and expected by the policy and legislative frameworks. This is an important point, because it could have a range of consequences:
  - a. it sets a precedent for the quality of future IDP's,

- b. determines the developmental priorities and,
  - c. hence ring-fences budgetary allocations and resources
  - d. Confounds alignment with other local municipalities (Maruleng) within the district and departmental plans (e.g water resource allocation)
- In many cases the links between 'cause and effect' for problem analysis are tenuous or questionable.
  - As an integrative instrument it falls far short of addressing environmental security and in the case of water it fails to incorporate the catchment as an important spatial framework.
  - It can be argued that many of the above issues reflect the plethora of expectations and demands placed on under-prepared local government officials. Without due support for capacity development the legislative environment - anticipated to be enabling – may in fact be otherwise.

### **6.3 Research focus 3:**

***In the case of infrastructure development, such as roads, how should a number of legislative instruments, plans and responsibilities be integrated and sequenced?***

The SRC falls within one of the 13 nodes for accelerated development and consequently additional funds will be made available through the Office of the President. The main concern is that additional development efforts place an increased burden on natural resources and introduce increased risks of environmental degradation. In this research focus we explore the issues of infrastructure development through the example of road construction projects in the Sand River catchment.

#### **Policy and legislation affecting roads development**

A suite of policies, legislation and plans apply to an endeavour such as roads development. Technical details associated with contracts will not be discussed here, instead a special focus will be given to the sequence and procedures required to ensure that road development is environmentally sensitive and legislation compliant. The key issue here is to explore how the different legal instruments can be harmonised through sequence and procedure.

#### **Main legislative instruments:**

A number of important pieces of legislation apply to roads development. These are NEMA, CARA and the associated protect tree species lists, NWA, Roads Act, Mining and Minerals Act and Roads ordinances.

#### **Key role players**

The development of roads is a collaborative endeavour. The key role-players are Provincial Department of Public Works, Local government, DEAT, Limpopo Roads Agency (LRA), and the Provincial Department of Minerals and Energy.

#### **Sequence and procedure**

Plans for roads development in the catchment can originate as national, provincial or local government plans depending on the status and nature of the road. We will deal only with municipal roads in this discussion (see Appendix X).

Plans for municipal roads originate in the IDP. These are then framed as a proposed project and submitted to the Department of Works by Local Government. The Department of Public Works then collaborates with the Limpopo Roads Agency (LRA) in the preparation of a project document. It is then presented to the provincial Department of Environment and Tourism who has the responsibility for distributing the proposal to other departments for comment. The Departments of Minerals and Energy

and Water Affairs and Forestry are the principal agents here as borrow pits will be dug and water resources might be affected. Consulted departments are required to draft a Record of Decisions (ROD) that reflect the decisions taken regarding the project. It is at this stage that Departments can halt a project if it is deemed damaging to the environment. DEAT is also responsible for checking that the project is compliant with NEMA and the provincial EIMP.

The ROD must outline conditions with which the future contractor must comply. These conditions have the potential to limit environmentally degrading actions by the contractor (for example, promoting erosion, cutting of trees, etc). If a ROD contains approval for the project the LRA must appoint an independent environmental consultant who is enlisted to set up and run an EIA process (required by ECA and NEMA). It is at this stage that affected communities must be consulted regarding the project.

The next stage requires that LRA appoint a consulting engineer. Once an EIA has been conducted it is the environmental consultants responsibility to brief the consulting engineer and contractor regarding the outcomes of the EIA process. LRA's responsibility is then to monitor and regulate the contractors according to the ROD and EIA. Each EIA must have an environmental management plan that identifies and highlights sensitive issues and contains plans for limiting environmental damage.

The Department of Minerals and Energy has an important role to play in controlling the environmentally damaging effects of borrow pit location and digging. Since borrow pits are taken to be small-scale mines, their authorisation rests with this Department. Such pits have the potential to contribute to habitat destruction and soil erosion, especially if they are not properly rehabilitated. To ensure proper rehabilitation, the Dept of M &E requires a Certificate of Closure (explained in the Prov Guidelines for Borrow Pits). If for some reason a CoC is not issued LRA is held liable for matters arising from environmental destruction and also for subsequent rehabilitation. Once a CoC is issued the liability is transferred to the DM&E.

**Comment:**

A broad spectrum of government departments, associated agencies, consultants and civil society are compelled to be involved in roads projects. This holds the potential for good co-operative governance and integration of policy and legislation.

The procedures for EIA's place environmental management at the centre of road development projects. If these protocols are followed, it provides an example of how development of infrastructure can be environmentally sensitive. However incorrect procedure and poor implementation of process might do little to further the aims and ideals of NEMA. A large responsibility for checking compliance rests with transparent practice and informed public participation.

Since a large proportion of the municipal budget for BBR is allocated to roads (see RF 2) there is likely to be a considerable focus on their environmental impacts. This provides an opportunity to test the legislative instruments within the context of the SRC. How environmental management procedures play out where the public has limited access to resources and where a large proportion of the population has low levels of literacy remains to be seen.

**6.4 Research focus 4:**

***What are the roles and identities (perceived and/or real) of various actors associated with natural resource management within the SRC?***

### ***A narrative from the field:***

In this research focus we will discuss some problems that arise out of attempts to clarify roles, powers and responsibilities afforded to various actors in carrying forward the intentions of national policy. The example of forest management and wood harvesting demonstrates how different roles and functions for woodland and forest protection are vested within multiple bodies (state or non-state) and, that this requires alignment and sophisticated protocols (see Appendix Y). The lack of clarity regarding the delineation of powers and responsibilities especially on communal lands presents a serious problem in the SRC, where woodlands are fast dwindling. Permission to harvest already fast dwindling resources is not a 'one-step' process and different contexts require different procedures.

The NFA creates a number of ways to protect forests and trees. Each of these imposes obligations on the owners of land, as well as a general obligation on people who might be occupying or using land. Neglect of these obligations constitutes a criminal offence in terms of the Act, which may carry with it the possibility of prosecution, imprisonment and/or payment of a fine.<sup>18</sup> The NFA is clear with regard to a number of important issues such as when indigenous trees may be cut, conditions for a licence for harvesting and for activities in state forests, the declaration of protected areas, the development of forest management plans, and the conditions for community forestry within state forests. However the Act is silent on a number of important issues related to forest and woodland management, protection and use on communal lands (Zone B).

During our interviews a number of important issues came to light regarding a) land ownership and b) the status of a tree species. A key point made was that it is the interaction between these two factors that firstly determines the roles and responsibilities for management and secondly, determines the nature of transgressions and illegality so that enforcement procedures and responsibilities can be put in place. Also, roles and functions are governed by legislative instruments –a number of which apply simultaneously. By determining the status of a tree or groups of trees by way of definition, you can determine how it may be used or how it can be protected (interview with DWAF Forestry official). This then determines the powers and responsibilities of agents associated with its protection. The highest order of protection is given to protected species. Thus a *protected species* always requires an license that must be obtained from DWAF. Also, a natural forest<sup>19</sup> can only be destroyed in exceptional circumstances and if the Minister believes that the proposed alternative land use is economically, socially and environmentally preferable.<sup>20</sup>

But what about trees that are not protected? Context plays an important part in determining the conditions for tree harvesting. We have found that a zonal approach may facilitate understanding processes and procedures for a catchment.

As pointed out by DWAF officials, the forest in Zone A is managed as an estate that includes indigenous trees (protected and non-protected) and commercial plantations (eucalyptus and pine). The conditions for harvesting are spelled out in a lease agreement. For Zone A of the SRC the general rule of 'no tree may be cut without a license or permit' applies.

The management and harvesting of trees in Zone B is somewhat more complicated. A number of important issues are highlighted. Firstly, since all land in the zone is under communal land tenure all resources, including trees, can be deemed common property resources. Hence, in this area national and customary laws apply. The DWAF official interviewed stated that the general rule of "no chopping without permission still applies". Most of the forest resources in Zone B qualify by definition as 'woodlands', where currently licensing and enforcement are not occurring. When questioned why departmental officials noted that with the incorporation of homelands into South Africa a number of procedures had not been carried forward and adequate practices still needed to be developed for

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<sup>18</sup> Section 61 of the NFA

<sup>19</sup> 'Natural Forests' are defined in section 2 of the NFA as a 'group of indigenous trees whose crowns are largely contiguous or which have been declared by the Minister to be a natural forest...'

<sup>20</sup> Section 3(3) of NFA

communal land. He also remarked that, "communal lands are a grey area and with the eroding of traditional authority powers there are some serious problems for law enforcement". To this he added that DWAF has "never really focused on woodlands in the past"

There is no doubt that tenurial issues underlie this 'neglect' for woodlands in communal areas where customary law is eroding and with it the norms and rules for resource use. This is exacerbated by the lack of clarity in the formal statutes regarding powers of authority for controlling wood harvesting in communal land. While the NFA, NEMA, CARA, ECA impose special obligations on the owners and users<sup>21</sup>, such definitions - and where the nexus of powers lie to grant 'permission to use' and for 'power to manage' - are confounded by the transformation from the apartheid homeland system to a new system that recognizes both customary law and democratic structures. The eroding of Traditional Authority powers to make local decisions has left village residents without clear lines for obtaining permission to harvest wood. This is borne out by a discussion with Collen, an old 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 Surprise and Kelego and cut wood near the river.*

From a governance point of view the establishment of decentralised elected local governments has introduced an additional role-player to the catchment. The Municipal Structures Act (2000) calls for 'wall-to-wall' wards that are overseen by municipalities and their ward councilors. Ward councilors have a key role to play as representatives of their villages. They are also important agents for planning, public involvement and conflict resolution. They do not however have any legislated powers of authority over natural resource management. A lack of clarity in this regard has led to some confusion as what "being responsible for a ward" means.

One ward councilor, under the impression that all natural resources within his ward boundaries were under his jurisdiction, demanded: "why was I not consulted when you decided to conduct a project in the wetlands that are part of my ward?" While another councilor was emphatic: "I did not even know that I had any role to play in dealing with resources. I thought that I was responsible only for my villages, not the land and resources around the villages". Although ward councilors may not make decisions regarding wood harvesting they have an important role to play. They act as community representatives and are in a position to report illegal or damaging practices on behalf of their villages.

While concern prevails regarding protection of woodlands in Zone B, a number of legal mechanisms appear to be available to residents. The first is availed through the NFA<sup>22</sup>. Johan Bester of DWAF explains: "*in communal lands communities can apply for a particular status for a forest resource under the NFA. For example a community can use the instrument to have asset or resources classified as protected with specific rules. The rules will specify authority of control and harvesting procedures as determined by the group*". This status affords the community with some control over 'outsider' harvesting on land adjoining villages.

Theoretically, another avenue of control is provided by the Communal Land Rights Act (CLRA, 2004) which allows communities to register Communal Property Associations (CPA) with 'rights' for sections of land. However, this approach has been severely criticized for the added bureaucratic process that it

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<sup>21</sup> Section 61 of the NFA

<sup>22</sup> Section 9 of the NFA



imposes and for the failure to recognize that common-property resources are managed according to flexible and dynamic boundaries.

The challenge ahead appears to be associated with determining where powers of authority to a) grant permission and b) exercise control, are vested. Since these are context specific and open to agreements and negotiation it is not always easy to predict (especially in communal areas) the route that forest protection can take.

## **6.5 Research focus 5:**

***What are the key issues arising out of mismatch between administrative (municipal) and water resources management (catchment) boundaries?***

In this research theme we raise potential disjunctures that are emerging between water resources management and water services provision. The focus falls specifically on the role and planning frameworks of Local Government and the CMA, although many of the comments pertain equally to other stakeholder groups such as agriculture and industry. In Pollard and Du Toit (2005) a comprehensive discussion of this research topic is provided.

### **Integrated Catchment Management**

Integrated catchment management (ICM) is an orientation captured by the national water policy and the NWA. It can be seen as a critique of the fragmented approach to managing water resources, rivers and the terrestrial activities that affect them. The rationale is that the catchment provides a natural framework within which to undertake integrated water resources planning and management. Adopting this orientation means that water cannot, and should not, be viewed or managed simply at the point of extraction or impact, but rather needs to be seen as a key linkage within a catchment system.

Despite the requirements of the new National Water Act (1998) to work toward *Integrated Water Resources Management*, within the wider spirit of the Act (equity and sustainability), the current focus of most water-related institutions is exclusively on supply. It appears that the split between water resources management and water supply, both legislatively and institutionally undermines the intentions of integration.

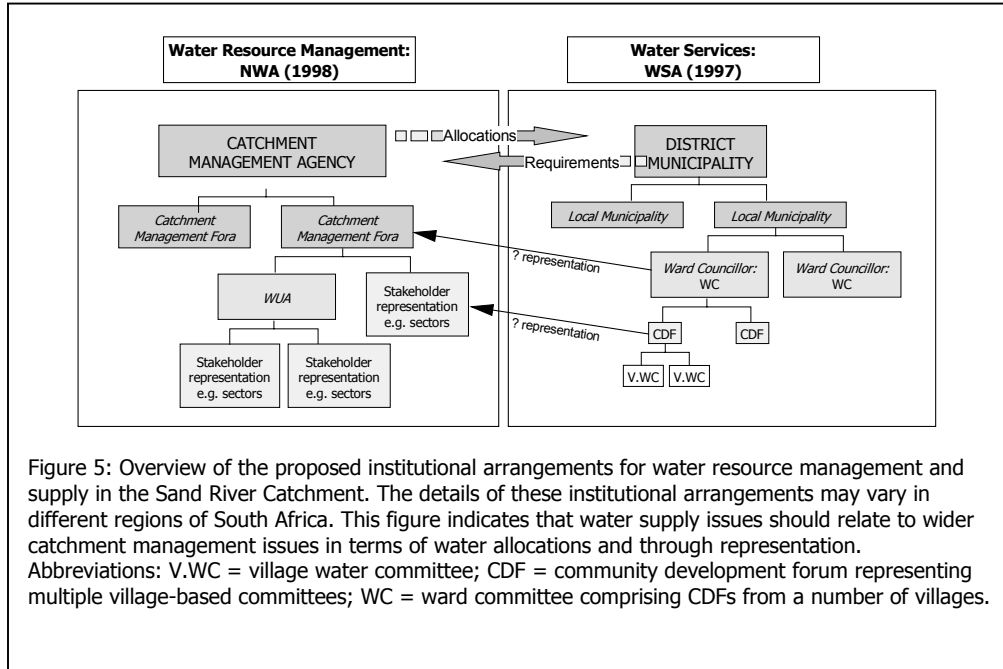
### **Boundaries do not coincide**

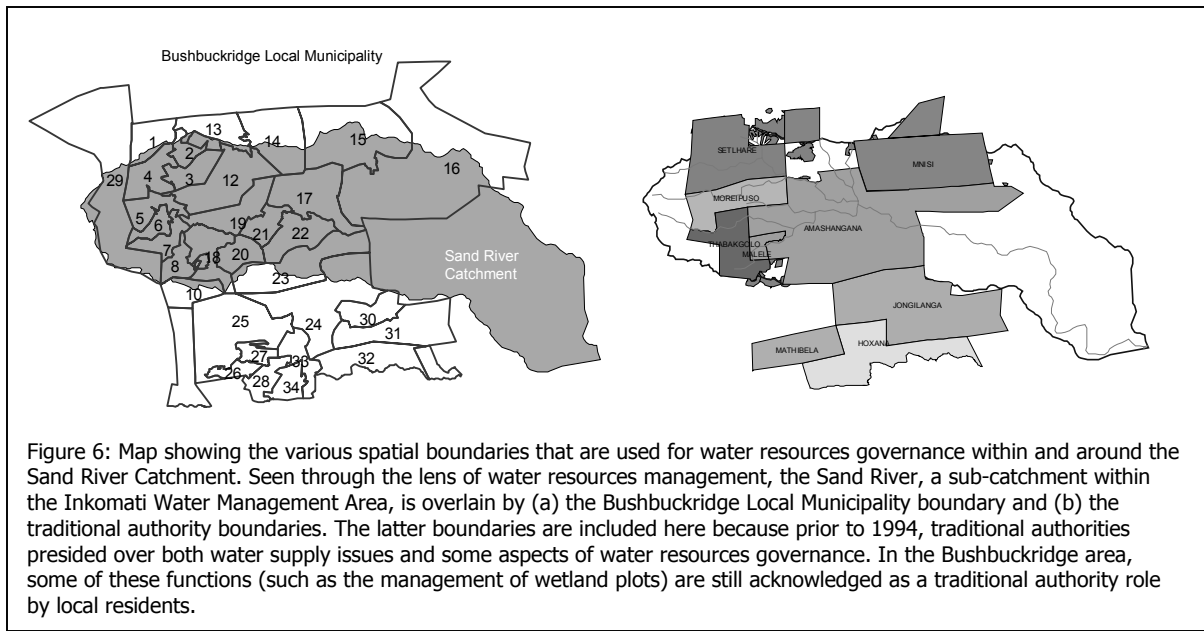
The need to integrate and harmonise planning for sustainability and efficient provision of water is confounded by the mismatch of boundaries in the SRC three kind of boundaries need to be taken into consideration. They are:

1. the catchment boundaries (natural/geographic)
2. administrative boundaries of the Bohlabela Municipal District and Bushbuckridge local municipality (political)
3. land under traditional authority (customary law)

The management of water resources falls under the jurisdiction of the CMA and is specific to catchments (natural boundaries) within water management areas. Water services provision, on the other hand, is the responsibility of local government and planned for within the confines of municipal (administrative) boundaries (figure 5). Resources allocation and conflict management in have traditionally been

conducted by chiefs, *indunas* and advisors that provide an additional form of decision making and regulation in parts of the Sand River Catchment under communal land tenure. Boundaries for all three forms of governance do not coincide (figure \*\*\*).





### Issues and challenges arising out of the boundary mismatch:

1. a general lack of clarity and understanding of a) the need to manage water resources on the basis of a catchment, and b) the imperative to supply water within administrative boundaries of municipal district.
2. The WSDPs can draw on water services delivery from a number of catchments whilst the CMA manages water on a catchment basis. Water service development plans need to be formulated within the context of water resource management principles and vice versa. In the BBR municipality the WSDP been developed effectively in a water resource management vacuum. Allocation plans contained in the CMS are likely to confound the WSDP once they come on track.
3. Catering for the Reserve (BHNR and ER) is complicated by the boundaries mismatch (see research theme 1)
4. It is unclear how common-property governance regimes, such as over the use of a wetland or a spring for example, will be recognised and accounted for
5. Attention is required in cases where District Municipalities straddle WMA's. The domestic demand (and potentially other demands) may actually represent demands beyond the catchment boundary.
6. The need for lines of communication between neighbouring CMAs', provinces and municipalities. Since CMAs are being phased in sequentially there exists the potential for leaving gaps – unless of course the Department of Water Affairs and Forestry takes a proactive role.
7. Considerable co-ordinating and harmonising needs exist. Regional offices are severely under capacitated and national government has prioritised the roles of policy development and regulator for itself. Which institution then will play a co-ordinating role? Even once CMAs and CMC are operative, they will require considerable support in realisation of an integrated approach.

Despite progressive and enabling legislation much still needs to be done to reconcile boundary mismatches associated with water management and supply.

## 6.6 Research focus 6:

### ***What is the role of local government and traditional authorities in natural resource management in the SRC?***

This section attempts to provide a summary of this issue that has been addressed throughout the preceding discussions. In particular it attempts to address the widely-held perception that Local Government (LG) is the primary authority tasked with environmental issues in rural areas.

As has been mentioned previously, 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 Table 4). The key function of (a) LG is one of service delivery and (b) that of traditional leadership is focused on customary law, and is otherwise largely facilitatory in nature (in itself a grey area). Historically, TA's comprised the administrative arm for NRM but as explained in Section 4.5.2, 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; Kepe 1997; Cousins 2004; Pollard et al. 2004). Under the new 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.

**Table 7. A summary of the key functions of local government and traditional leadership with regard to NRM and the environment**

| <b>Local Government</b>                               |  |
|---|--|
| <b>Statute</b>  | <b>Detail</b>  |
| Constitution  | (1) The objects of local government are to-<br>(a) provide democratic & accountable government for local communities;<br>(b) ensure the provision of services to communities in a sustainable manner;<br>(c) promote social and economic development;<br>(d) promote a safe and healthy environment; and<br>(e) encourage the involvement of communities and community organisations in the matters of local government.   |
| <b>S 4(2) Roles and responsibilities (MSysA 2000)</b> | The council of a municipality... has the duty to: <ul style="list-style-type: none"> <li>• provide, without favour or prejudice, democratic and accountable government;</li> <li>• encourage the involvement of the local community;</li> <li>• strive to ensure that municipal services are provided to the local community in a financially and environmentally sustainable manner;</li> </ul>   |
| <b>Executive and legislative authority S 11(2)</b>    | ...promote a safe and healthy environment in the municipality:   |
| <b>Chapter 8</b>                                      | Municipal services must be ..(d) be environmentally sustainable;   |
| <b>Traditional leadership</b>                         |  |
| <b>Statute</b>  | <b>Detail</b>  |
| <b>Functions of traditional councils S 35 4. (1)</b>  | Traditional council can act as a land administration committee (S 21(4) of CLRA 2004);<br>A traditional councils functions: <ul style="list-style-type: none"> <li>• Administering affairs of the traditional community in accordance with customs and tradition;</li> <li>• assisting, supporting and guiding traditional leaders in the performance of their functions;</li> <li>• supporting municipalities in the identification of community needs;</li> <li>• facilitating the involvement of the traditional community in the development or amendment of the integrated development plan of a municipality in whose area that</li> </ul> |

|   |  |
|---|--|
|   | <p>community resides;</p> <ul style="list-style-type: none"> <li>• recommending,...., appropriate interventions to government that will contribute to development and service delivery within the area of jurisdiction of the traditional council;</li> <li>• participating in the development of policy and legislation at local level;</li> <li>• participating in development programmes of municipalities and of provincial &amp; national spheres of government;</li> <li>• promoting the ideals of co-operative governance, integrated development planning, sustainable development and service delivery;</li> <li>• promoting indigenous knowledge systems for sustainable development and disaster management;</li> <li>• alerting any relevant municipality to any hazard or calamity that threatens the area of jurisdiction</li> </ul> <p>sharing information and co-operating with other traditional councils<br/>performing the functions conferred by customary law<sup>23</sup>, customs and statutory</p> |
| 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);   |

Having noted this, both structures are an important and integral part of ensuring that the constitutional and 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. These have been detailed earlier and include the IDP (with the SDF, LUMS, EMP), WSDP.

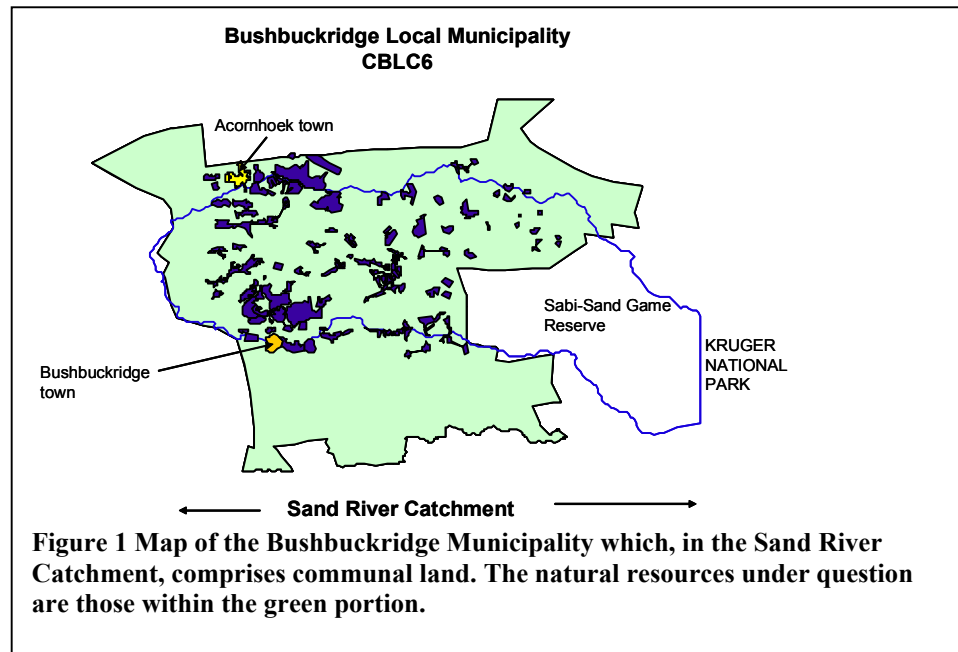
Although LG does not have powers of authority, they interface with NRM as a mediator and representative of the community, as does the TA. In the case of contested tree harvesting for example, (see Appendix Y), LG and/or traditional leader would more easily represent concerns to the local DEAT, DWAF or SAPS office (Steps 1b- 1c). They could also mediate questions as to who is part of the community in communal lands and hence who may have rights of access (see Step 3). Currently, what is far less clear is the role of the TA in terms of granting permission to use NR's (as long as this is compliant). It would appear that until the requirements of CLRA are fulfilled (see Appendix Y), the existing communal law still applies through IPILRA. In Bushbuckridge this would vest authority in the TA's who presumably would undertake this in consultation with LG, as required by the constitution and the TLGFA of 2003 (see Table 7).

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<sup>23</sup> Not defined in the TLGFA 2003

## 7. Scenarios

**Scenario 1. Trees and small plants and animals from the rangelands around a village are being increasingly harvested without knowledge/ permission of the village residents. The local community relies on these NR for their livelihoods. At times the harvesters are armed.**



### ***Under which act(s)/ legislation does their use and management fall?***

The diversity of resources, together with the issue of property rights means that the legislative responsibility for<sup>24</sup> the control, management and enforcement is dispersed throughout government, (mainly between DEAT, D.Agric. and DWAF), as well as with the users themselves. As discussed earlier, the protection and management of individual resources is dealt with under a suite of statutes including NEMA, NWA, NFA, ECA and CARA and national and provincial ordinances.

The various sectoral policies also place certain responsibilities on Local Government who are representatives of the community and who act as channels through which problems are

<sup>24</sup> (1) The objects of local government are-

- (a) to provide democratic and accountable government for local communities;
- (b) to ensure the provision of services to communities in a sustainable manner;
- (c) to promote social and economic development;
- (d) to promote a safe and healthy environment; and
- (e) to encourage the involvement of communities and community organisations in the matters of local

government.

identified and resolved<sup>25</sup>. Similarly, traditional leadership can offer the same conduits in communal areas.

***Whose trees and fauna are these?***

In the case of communal land, the state is the trustee. It holds title and people have rights to use and occupy parts of this land. Presumably, the natural resources are also state property and similarly people have rights to use these resources according to certain rules and norms including national statutes and provincial ordinances. Local level rules are recognized as customary, indigenous or informal rules.

***Under what conditions can harvesting occur?***

It appears that this is a grey area in many respects. Departmental officials are clear that species that are protected under national or provincial ordinances require a permit to be harvested (see Appendix Y). What is far less clear is what the conditions are for use of the remaining resources. Within the forestry directorate of DWAF, there is some contestation that whilst forests have received adequate protection, woodlands have not.

As mentioned previously, prior to 1994 all harvesting would have taken place through the issuing of a permit through the magistrates office and effected through the chiefs. Theoretically, under the new CLRA (2004), this would fall under the jurisdiction of the newly-established and registered Land Administration Committee which must have defined and adopted community rules (including common property rules). However, this process has been criticized for a range of reasons including the fact that the establishment of these LACs is a lengthy and expensive procedure and they are therefore unlikely to be established in the foreseeable future. In reality therefore, it seems that IPILRA is the only formal system that acknowledges property rights and the governance of natural resources under common-property regimes.

***Who sets the rules<sup>26</sup> presently (i.e. until the Act is operationalised) and who can/ should facilitate this?***

Neither representatives from the DEAT national office nor the Provincial office were clear on who sets the rules for NRM within communal land. They were clear however on which species are protected. On the other hand, although somewhat divergent in their responses, local government councilors in general felt that it was their business to allocate land and in some cases, to determine these rules. However, Local Government is neither empowered nor would it be appropriate to do so (W. Ovens, B. Cousins, pers. comm.). Villagers' responses varied but in general people acknowledged that this was the chiefs' jurisdiction but that his powers had waned (see Pollard et al. 2003; Shackleton et al. 1995 IISD). They were unsure as to who was empowered to do so now. It seems in fact that currently, the most important statute albeit interim, is IPILRA (1996) which attempts to provide protection for informal rights to land. This would be repealed once transfer of land takes place.

***Where do residents turn to for assistance to stop transgressions? i.e. whose responsibility is it***

In dialogue with a number of persons the following emerged:

Varying responses:

DEAT national

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<sup>25</sup> S19(1) of MStA (1998)

<sup>26</sup> This would involved identifying the spatial boundaries of the resource, the spatial boundaries of the users/ beneficiaries, timing and quantity of use.

- resource protection falls under the Province and under Ordinances of the Province. In the case of transgressions, the community should turn to the local Provincial authority. They were very clear that this is not a Local Government function. National Government is concerned with policy development and they can offer training but the Provinces are required by law to intervene when transgressions occur
- LG needs to have an EMP before development can proceed
- There was a lack of clarity with respect to LUMS: who should do this and what the connection would be vis-à-vis resource protection. Respondents were unsure where the authority for LOCAL LEVEL resource governance actually lies.

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noted that there are no provincial ordinances and currently policy is lacking

- As far as the respondent knew, MPB has the responsibility of resource protection in communal areas as well as the proclaimed reserves.

**Scenario 2: Public works is improving the road network in rural areas. In doing so they mine sand, leaving large dongas. The erosion from these continues into valuable land and people lose livestock and report other problems associated with this.**

In the event of a municipality wanting to upgrade its existing roads or develop new roads a number of important procedures have to be met. These were discussed in Part A. A number of important issues are raised here and a route map is provided for involving concerned citizens in ensuring environmental compliance (see Appendix Y).

#### ***When is an EIA required?***

All forms of road development require an EIA: new roads, upgrading and changes to existing roads. The EIA process is an important stage for the public to voice concerns and be involved in reducing potentially harmful practices. The EIA must contain a report on how the public was consulted and it must incorporate suggestions into the environmental management plan that is used to regulate/guide the contractor.

#### ***What other forms of regulation and control are there?***

Although the EIA is the main instrument for ensuring environmental compliance there are a number of other checks and balances.

1. The Record of Decisions prepared by the various Departments in response to the project proposal needs to be compliant with the principles set out in NEMA and the provincial Environmental Implementation Management Plan (EIMP),
2. Road projects need to be part of the IDP and hence in line with provincial environmental management plans
3. The Certificate of Closure (issued by the Provincial Department of Minerals and Energy) compels contractors to rehabilitate borrow pits.
4. The NWA clearly spells out what conditions apply when a river is disturbed

#### ***Who is affected by the legislation?***

All parties involved in the development of roads are affected by the applicable laws: Provincial Department of Public Works, Local government, DEAT, Limpopo Roads Agency (LRA), Provincial Department of Minerals and Energy, contractors, consulting engineers, environmental consultants and the public. In addition to this, Traditional Leaders have an important role to play in communal areas where location and land allocation for roads needs to be negotiated.

#### ***Who carries the responsibility and cost of rehabilitation?***



Rehabilitation should be a process included in the contract and since the Limpopo Road Agency is responsible for drafting of the contract it must ensure adequate steps for rehabilitation are taken. Once the Certificate of Closure (CoC) has been issued by the Department of Minerals and Energy any issues of subsequent rehabilitation become the responsibility of the LRA. DEAT has an important coordinating role to play as a conduit for communication and for regulating and monitoring the activities of the Department of Public Works, LRA, and contractors.

**Scenario 3: Sand mining in communal land is a lucrative business for entrepreneurs who normally have to pay for sand. Many come from far a field to mine sand for commercial gain and leave degraded environments with added risk of soil erosion**

***Is there any law controlling their practice?***

All laws applying to natural resource use apply in communal land. Since sand mining is seen as small scale mining it is an activity that falls under the jurisdiction of the Dept of Minerals and energy. Licences need to be applied for from this department (see Appendix Z).

The Minerals Act (50 of 1991) regulates the extraction of minerals from the ground. Sand Mining is taken to be a small scale mining activity. In terms of the Deeds Registries Act of 1937 a mining right might be separated from the ownership of land. This means that rights to minerals must be held under separate title to land ownership. The Minerals Act requires that a holder of a mining right must obtain a mining authorisation in order to mine on the land in question. Regardless of who owns land permission is required from the minister of Minerals and Energy to exercise the right to mine.

Also relevant is the NEMA. If the removal of sand from communal lands results in environmental degradation and erosion communities are entitled to invoke NEMA as their rights to a healthy environment are infringed upon.

## PART D: Discussion

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Whilst policy and laws may well have changed in South Africa in a pro-environmental way, achieving an integrated approach to natural resource management remains a challenge. This is because integration still relies heavily on principles espoused in the Constitution rather than in truly integrated practice. The diversity of institutional competencies coupled with the range of regulatory tools for land-use management, highlight the complexities of the integration challenge. Thus, in reality, the notion of integration (not only IWRM) rests heavily on the principle of co-operative governance and stakeholder participation as elaborated in the Constitution. This means ***designing action 'down' from the Constitution*** to achieve integration for sustainability. At the same time this needs to be complemented by ***implementing 'up' from the local realities of a catchment***.

Whether this happens or not depends on contextual factors. The real implementation of policies starts with what people do in their daily lives within a particular context. Civilians, water management institutions, government departments, and private enterprise all have an effect, sometimes simultaneously, on how a policy takes shape within the dynamic social, cultural economic and political reality. How can plans and practices that are not policy and legislation compliant be challenged? How can responsible bodies be held accountable if fundamental principles are not evident in their actions?

In the past there was a much greater control and regulation by national departments on how water and other resources were managed. However, the new dispensation calls for integration between policies and governance institutions, as well as a more 'bottom-up' approach, and we have witnessed the difficult nature of transforming from a very authoritarian and autocratic approach to a democratic orientation. Supporting various stakeholders to be part of natural resource management is time consuming, requiring the investment of considerable resources. Also, we found that practices are often informed by institutional momentum (the tendency to continue doing things 'the old way') and that the incorporation of new legislative principles does not happen without due consideration and effort on the part of managers and practitioners.

Although the legislative environment can be described as 'enabling' leaving much to be filled in by local planning and implementation, it is clear about particular roles, powers and responsibilities. These are binding in the eyes of the law but are only likely to be enforced if institutions and individuals are held accountable. There needs to be recourse to law and the judicial system where transgressions of the law take place. A harmonised approach to policy is well supported in theory but what happens if organs of state and other institutions do not function co-operatively? What is the capacity of affected departments and what are the indicators and accountability measures? These are all issues that need to be taken up and resolved by the new legal paradigm.

For example, to what extent are deviations from the Constitution and NEMA likely to be reported to the DG and the CEC? The reality is that civil society has little or no experience of involvement in such legal issues and, in the SRC, where levels of literacy are low, the challenge is likely to be greater. Also, it is not only the poor and marginalised that have difficulty in participating in the legal reform. Preliminary evidence indicates that the judicial system will need to catch up with legal reform in the water sector.

Asynchronous development of legislation and the promulgation of amendments also hamper attempts to harmonise policy. The ever-evolving legislative environment presents challenges for practitioners, especially when amendments to legislation are frequent. Integrating the old with the new is also a problem since laws put in place before 1994 are valid until repealed.

In the case of natural resource management it is important that the different departments work towards the same goals without undermining or contradicting each other. It is important that they do not receive "mixed messages" from each other. One of the main strategies for harmonising environmental legislation has been to integrate and consolidate. This has been attempted with NEMA as overarching for a number of other environmental laws. But this does not solve integration responsibilities at the catchment level. As we have shown, a suite of legislation can apply to a particular area (zone) for example: NEMA, NFA, ECA, NWA, CARA, and provincial ordinances. The question arises as to how these legislative instruments are to be integrated and who is responsibility for this? Clearly the development of practice that is line with policy is an evolving and reflexive process that will take time to implement at a local level.

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## **Appendix 1**

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### **Route maps for implementing an integrated approach**

This Appendix contain 'route maps' for negotiating an integrated approach for the implementation of an integrated approach to policy and legislation implementation in the SRC.

The route maps are:

**Figure W**

Route map for checking that the Ecological Reserve is achieved and possible steps for remediation.

**Figure X**

Route map of various questions, regulatory steps and potential actions associated with municipal roads development projects in the SRC

**Figure Y**

Route map of various questions, regulatory steps and potential actions in a scenario of contestations to the harvesting of trees in communal lands

**Figure Z**

Route map of various questions, regulatory steps and potential actions associated with sand mining on communal land.

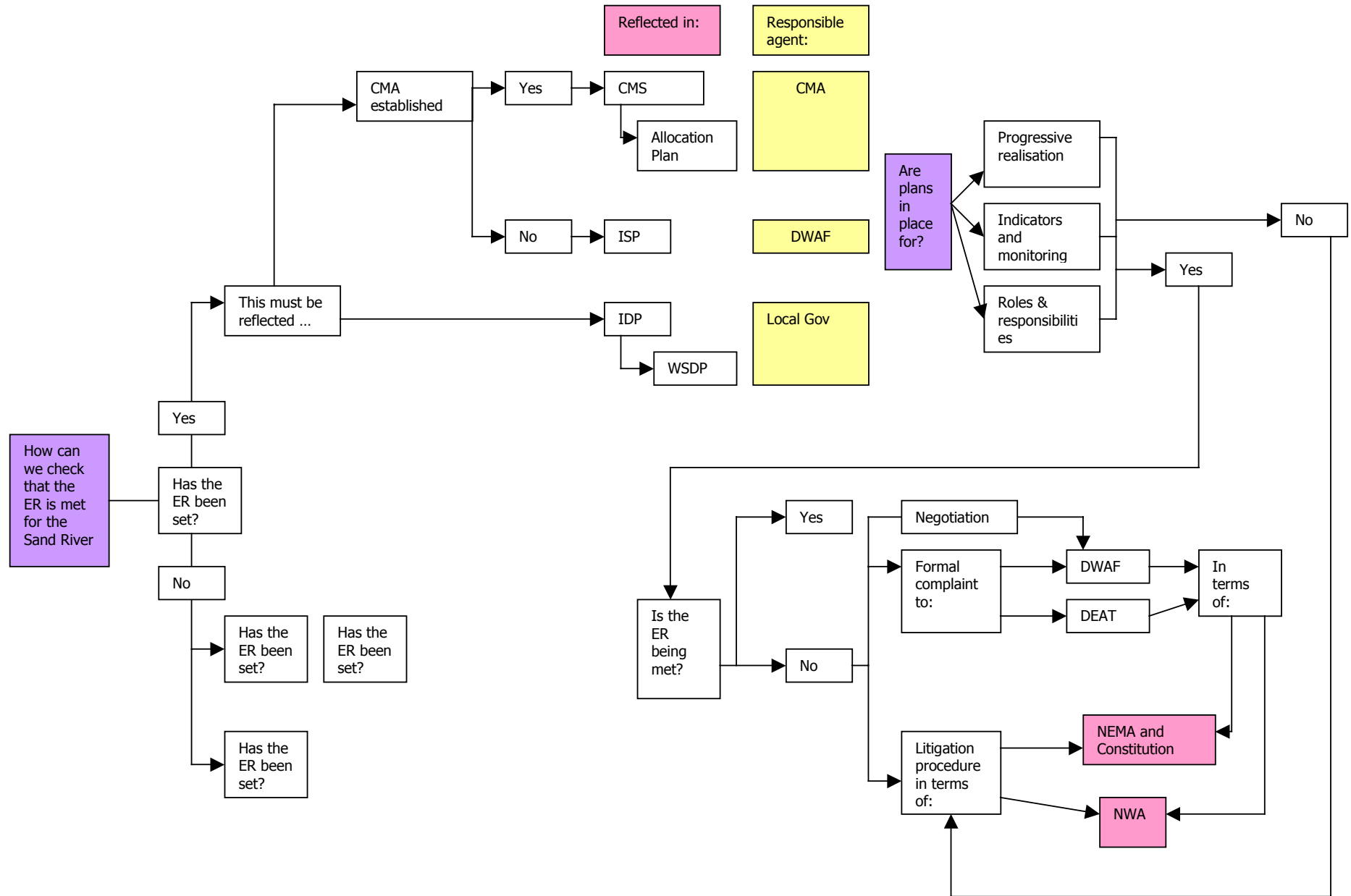


Figure W Route map for checking that the Ecological Reserve is achieved and possible steps for remediation. ER=ecological reserve; ISP =Internal Strategic Perspective; CMS=Catchment Management Strategy; IDP= Integrated Development Plan; WSDP=Water Services Development Plan; NWRS=National Water Resources Strategy



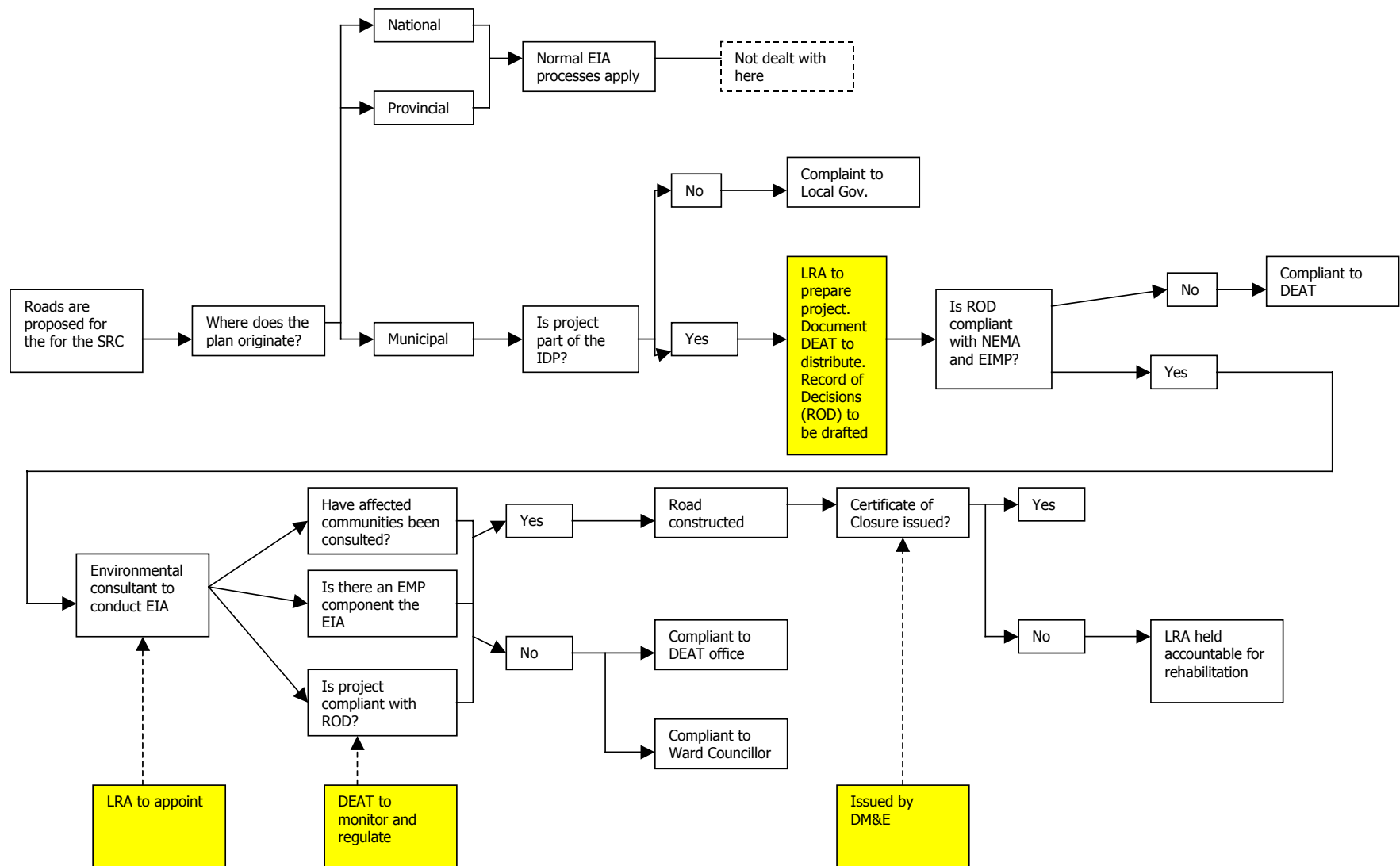


Figure X. Route map of various questions, regulatory steps and potential actions associated with **municipal** roads development projects in the SRC. LG =local government; DEAT=Dept of Environment and Tourism, LRA=Limpopo Roads Agency, EMP=Environmental Management Plan

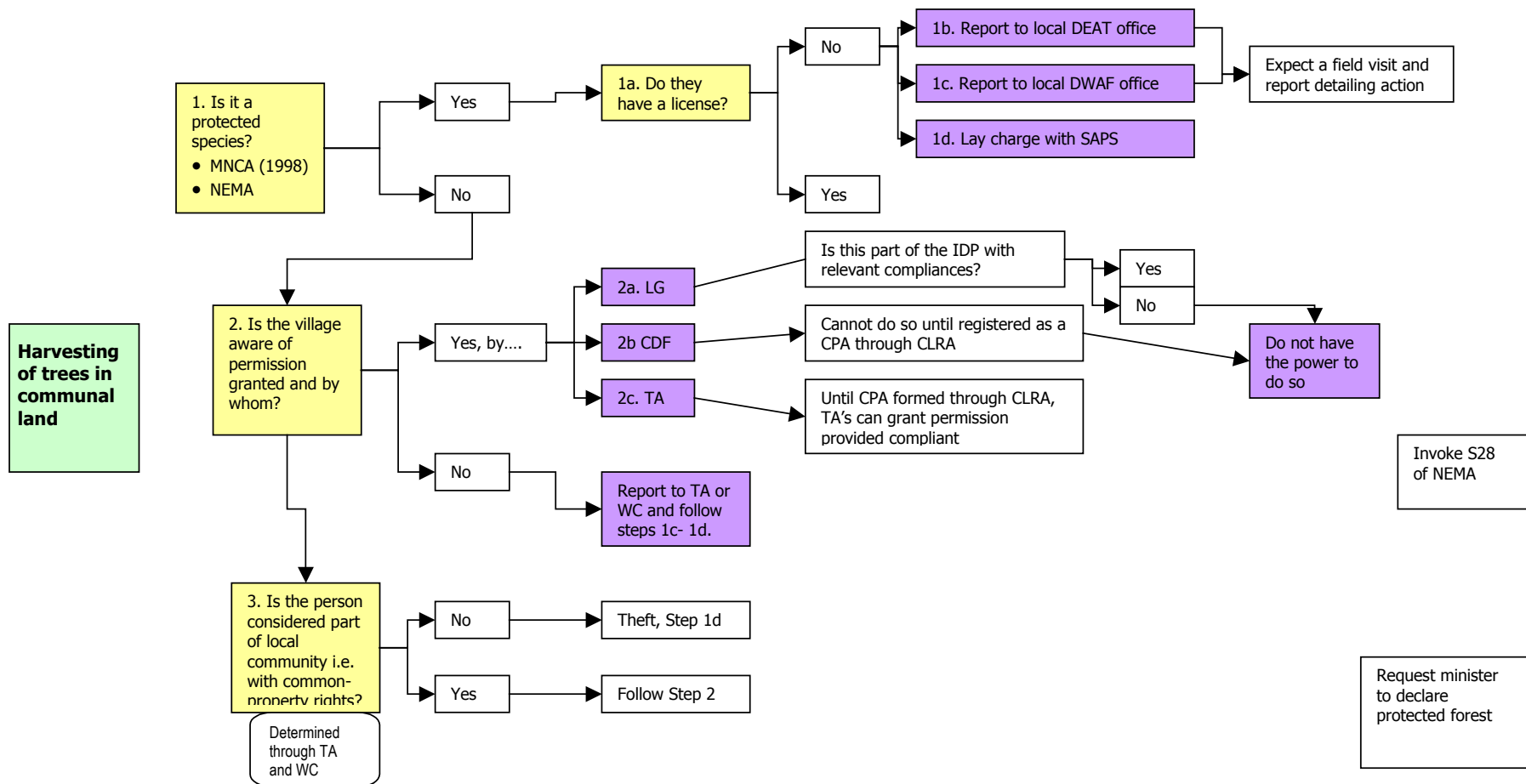


Figure Y: Rote map of various questions, regulatory steps and potential actions in a scenario of contestations to the harvesting of trees in communal lands. LG= Local Government; TA = tribal authority (represented by headman, chief); CDF = Community development forum; DEAT = Dept. of Environmental Affairs (provincial or local); DWAF = Dept. Water affairs and Forestry (refers to Forestry division); MNCA = Mpumalanga Nature Conservation Act;

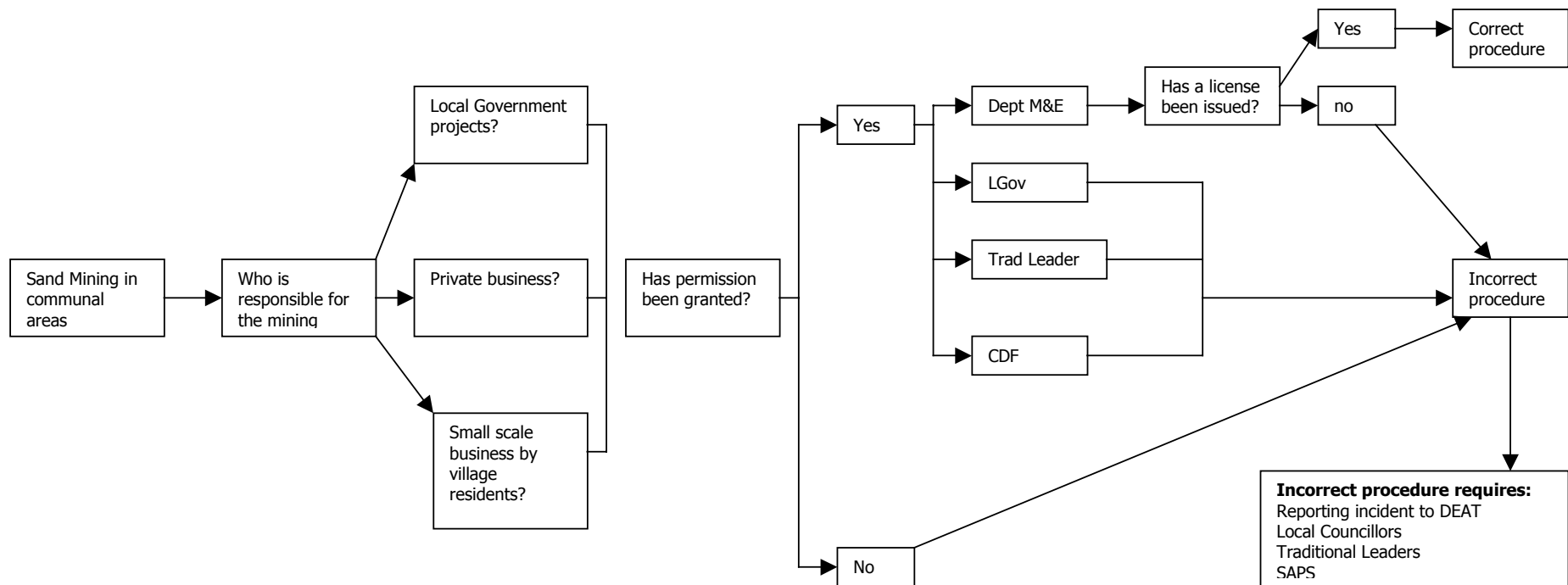


Figure Z. Route map of various questions, regulatory steps and potential actions associated with **sand mining on communal land**. LG =local government; DEAT=Dept of Environment and Tourism, TA = Traditional Authority, DME= Dept of Minerals and Energy, CDF= Community Development Forum, SAPS = South African Police Service



## Appendix 2

### Summary of applicable & policy to natural resources use and management in the SRC

| Sector/Activity  | Legislative references National   | Responsible Dept.   |
|--|---|---|
| <b>General</b>   | The Constitution, Act 108 of 1996   | Office of the President   |
|  | POLICY: White Paper on Environmental Management (1998)  | DEAT  |
|  | NEMA Act 107 of 1998  | DEAT<br>National provides guidelines<br>Provincial competency to develop regional legislation to reflect national priorities (Under Schedule 6 of Constitution) |
| <b>Water</b>   | POLICY: White paper on National Water policy for South Africa (1997)                                      | DWAF  |
|  | NEMA Act 107 of 1998  | DEAT  |
|  | National Water Act, Act No. 36 of 1998  | Department of Water Affairs and Forestry  |
|  | Water Services Act, Act No 108 of 1997  | DWAF  |
| <b>Environment: Management and use Protection and conservation</b> | The Constitution, Act 108 of 1996   | Office of the President   |
|  | NEMA Act 107 of 1998  | DEAT  |
|  | POLICY: White Paper on Environmental Policy (1999)  | DEAT  |
|  | POLICY: White paper on Integrated Pollution and Waste Management for South Africa (2000)                  | DEAT  |
|  | Environmental Conservation Act, Act No. 73 of 1989, regulations and Amendment Bill                        | Department of Environmental Affairs and Tourism   |
|  | Conservation of Agricultural Resources Act, Act 43 of 1983  | Department of Agriculture   |
|  | National Forests Act, Act no. 84 of 1998  | Department of Water Affairs and Forestry  |
|  | POLICY: White Paper on the Conservation and Sustainable Use of South Africa's Biological Diversity (1997) | DEAT  |
|  | Bio-diversity Act   | DEAT  |
|  | Protected Areas Act 2002  | DEAT  |
|  | Air Quality Act   | DEAT  |
|  | Environment Conservation Amendment Act  | DEAT  |
|  | Mpumalanga Nature Conservation Act (Act 10 of 1998)   | DACE  |
|  | Atmospheric Pollution Prevention Act (act 45 of 1965)   | DEAT  |
|  | National Heritage Resources Act, Act No. 25 of 1999   | Department of Arts and Culture  |
| <b>Land</b>  | Municipal Systems Act, Act No 32 of 2000 and Municipal System Act Regulations 2001                        | Department of Provincial and Local Government   |
|  | Communal Land Rights Act  | Department of Land Affairs  |
|  | Traditional Leadership and Governance framework Bill 2003   | Department of Land Affairs  |
|  | Local Government Municipal Demarcation Act, Act 27  | DPLG  |

|                                      |  |  |
|--------------------------------------|--|--|
|                                      | of 1998  |  |
|                                      | Prevention of illegal and unlawful eviction occupation of land Act (19 of 1998)      | DALA   |
|                                      | The Extension of Security of Tenure Act (Act 62 of 1997) ESTA                        | DALA   |
|                                      | Communal Property Association Act , Act 28 of 1996                                   | DALA   |
|                                      | Land Reform Labour Tenants Act Act 3 of 1996   | DALA   |
|                                      | Provision of Certain Land for Settlement Act Act 126 of 1993                         | DALA   |
|                                      | The restitution of Land Rights Act , Act 22 of 1994                                  |  |
|                                      |  |  |
|                                      | Interim Protection of Informal Land Rights Act (IPILRA) Act 31 of 1996               |  |
|                                      | Upgrading of Land Tenure Rights Act Act 112 of 1991                                  |  |
| <b>Governance</b>                    | Municipal Structures Act, Act No 117 of 1998 and amendment                           | Department of Provincial and Local Government                          |
|                                      | Municipal Systems Act, Act No 32 of 2000 and Municipal System Act Regulations 2001   | Department of Provincial and Local Government                          |
|                                      | National Land Use Management Bill  | Department of Land Affairs   |
|                                      | Replaces the DFA (Act 67 Of 1995)  |  |
|                                      | POLICY: White paper on Local Government (1998)                                       | Department of Provincial and Local Government                          |
| <b>Development :Provincial</b>       | ISF integrated spatial framework   | Macro Policy and Strategy Unit Office of the Premier All Prov depts    |
|                                      | Provincial Growth and Development Strategy (PGDS)                                    | Macro Policy and Strategy Unit Office of the Premier All Prov depts    |
|                                      | Development Facilitation Act (DFA) Act 67 Of 1995                                    |  |
|                                      | POLICY: Draft White Paper on Planning and Development                                | DALA   |
| <b>Forests and Woodlands</b>         | POLICY: White paper on Forestry (1996)   | DWAF   |
|                                      | National Forests Act , Act 84 of 1998  | DWAF   |
| <b>Sanitation</b>                    | Water Services Act 1997  | DWAF   |
| <b>Agriculture</b>                   | POLICY: White Paper on Agriculture (1995)  | DoA<br>Agric is Provincial competency under schedule 6 of Constitution |
|                                      | Provincial Agricultural Development Bills (ACTS?)                                    | Provincial DoA   |
|                                      | POLICY: Land Distribution for Agricultural Development (LRAD)                        | DALA   |
|                                      | POLICY: Integration of environmental planning into land reform process (sept 2001)   | DALA   |
|                                      | Conservation of Agricultural Resources Act (Act 43 1983)                             | DALA   |
| <b>Roads</b>                         | National Land Transport Transition Act, Act No 22 of 2000                            | Department of Transport  |
|                                      | Environmental Conservation Act, Act No. 73 of 1989, regulations and Amendment Bill   | Department of Environmental Affairs and Tourism                        |
|                                      | POLICY: White Paper on National Transport Policy 1996                                | Department of Transport  |
|                                      | POLICY: Moving S A Agenda: A 20 Year Strategic Framework for Transport in S A (1999) | Department of Transport  |
| <b>Telecommunications</b>            |  |  |
| <b>LED</b>                           | National Small Business Act Act 102 of 1996  | Department of Trade and Industry                                       |
| <b>Health</b>                        | NEMA Act 107 of 1998   | DEAT   |
| <b>Waste management and disposal</b> |  |  |
|                                      | POLICY: The Integrated Pollution and Waste Management White Paper                    |  |
|                                      | Health Act (Act 63 of 1977)  |  |
|                                      | Environmental Conservation Act   | DEAT   |
| <b>Safety</b>                        |  |  |
|                                      | Occupational Health and Safety Act (act 85 of 1993)                                  | Dept of Health   |
| <b>Energy and Electrification</b>    | POLICY: White paper on Energy (1998)   | Dept of Mineral and Energy Affairs                                     |
| <b>Housing</b>                       | POLICY: Urban Development Framework  | Department of Housing  |
|                                      | POLICY: Rural Development Framework  | Department of Land Affairs   |

|                               |   |  |
|-------------------------------|---|--|
|                               | National Housing Act, Act No 107 1997   | Department of Housing  |
| <b>Institutional capacity</b> | POLICY: White Paper on Education (1995)   | Department of Education  |
| <b>Tourism</b>                | POLICY: White Paper on Tourism (1996)   | DEAT   |
| <b>Mining</b>                 |   |  |
|                               | The Mineral's Act   | Dept of Minerals and Energy  |
| <b>Other</b>                  | Integrated Sustainable Rural Development Strategy (ISRDS)                         | Office of the President  |
|                               | Growth, Employment and Redistribution Policy (GEAR)                               | All gov depts  |
|                               | Local Agenda 21   | Department of Agriculture and Environmental Affairs and Department of Traditional and Local Government Affairs |
|                               | Millennium Development Goals  |  |
|                               | SADC Protocol on Tourism, Wildlife, conservation and law enforcement              | SADC member states   |
|                               | SADC protocol on shared water courses   | SADC member states   |
|                               | World Heritage Convention   | UNESCO 1972 Ratified by SA in 1997   |
|                               | Convention on Biological Diversity (CBD)  | Rio . 1992<br>Signed by SA in 1993 , ratified in 1995  |
|                               | Convention to combat desertification (CCD)  | Rio 1992<br>Signed by SA in 1995 ratified in 1997  |
|                               | Convention on Trade in Endangered Species of Wildlife and Fauna and Flora (Cites) | Rio1992  |
|                               | Convention on Wetlands of International Importance (RAMSAR)                       | RAMSAR 1971<br>SA signed in 1971 ratified in 1975  |
|                               | International Covenant on Civil and Political Rights                              | UN Rights Committee  |
|                               | UNESCO 'Man and Biosphere' Programme  | UNESCO   |

# Statutory principles that support environmental planning

## Environmental principles in the Constitution

The South African Constitution is underpinned by a number of principles that have important bearing on the governance and management of natural resources. It is from these principles that various legislative instruments that govern resources management are derived. The relevant principles are equity, the right to a healthy environment, :

### **Section 9: Equality**

*1. Everyone is equal before the law and has the right to equal protection and benefit of the law*

This means that if that all people are able to use the laws of the country if they feel that they are being exploited or placed in a situation where their livelihoods are being threatened by external or internal factors. This clause has an important integrating function in that its point of departure is equality of all people. When applied to the context of the SRC it means that the government has an obligation to ensure that natural resources are accessed equitably and fairly.

### **Section 24: Environment**

*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 generation, through reasonable legislative 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*

This environmental clause is important because it captures a number of principles that are reflected in specific laws and legislation that deal with the use of and access to natural resources. It is the responsibility of each sector of government to give specific meaning to this clause through the development of specific laws /Acts.

### **Section 25: Property**

*(4) 9a) The public interest includes the nation's commitment to land reform, and to reforms to bring about equitable access to all of South Africa's natural resources*

This means that all South Africans should work towards achieving a more equitable sharing of the country's natural resources. This sharing does not only refer to the present but also implies that we must protect our natural resources so that we can share them with future generations. Special attention needs to be given to access to land and land ownership.

### **Section 27: Health care, food water and social security**

*(1) Everyone has the right to have access to-*

*(b) sufficient food and water*



This section recognises access to food and water as a basic human right. It therefore provides a grounding for harmonising and integration of all laws that deal with water and food production. This is especially important for local level legislation and regulation promulgated in the SRC as rural communities living Zone B generally grow their own food and rely on the surrounding environment to support them in terms of their immediate needs for water, food, land, and shelter.

### ***Section 32: Access to information***

*(1) Everyone has the right of access to –  
(a) any information held by the state; and  
(b) any information that is held by another person and that is required for the exercise or protection of any rights*

This means that all information, data, facts and figures kept by the state are available for citizens to inspect. Ultimately the public needs to be consulted when it comes to developments, plans and strategies that affect and involve them (see section on Integrated Development Plans and Catchment Management Strategies) . Using public participation as an integrator and mediator of catchment scale planning and implementation of policy is aimed at achieving more equitable and sustainable natural resources management. The development of public platforms and public entities such as CMA's, CMF's and committees represent an attempt to integrate a broad spectrum of resources users into decision making processes.

### ***Section 38: Enforcement of rights***

Anyone listed in this section has the right to approach a competent court, alleging that a right in the Bill of Rights has been infringed or threatened, and the court may grant appropriate relief, including a declaration of rights.

This means that everyone has the right to take a complaint regarding the infringement or threatening of a human right to court. Therefore inhabitants of a catchment need to be clear as to what their rights are so that they can make sure that their rights are not abused in any way.

These six sections of the Constitution provide principles that are an important point of departure for the development of laws/Acts that apply to natural resources and natural resources management within a catchment. Since these principles are in the Bill of Rights they can be expected to be articulated by the various pieces of legislation promulgated by the various departments of government. In this sense these principles are an important integrating tools in that they should be evident within all various pieces o government legislation.

## **Environmental principles in NEMA**

1. Environmental management must place people and their needs at the forefront of it's concern, and serve their physical, psychological, developmental, cultural and social interests equitably.
2. Development must be socially, environmentally and economically sustainable. This means that the following things must be considered before a development goes ahead:
  - that the disturbance of ecosystems and loss of biological diversity are avoided, or, where they cannot be altogether avoided, are minimised and remedied;
  - that pollution and degradation of the environment are avoided, or, where they cannot be altogether avoided, are minimised and remedied;
  - that the disturbance of landscapes and sites that constitute the nation's cultural heritage is avoided, or where it cannot be altogether avoided, is minimised and remedied;

- that waste is avoided, or where it cannot be altogether avoided, minimised and re-used or recycled where possible and otherwise disposed of in a responsible manner;
  - that the use and exploitation of non-renewable natural resources is responsible and equitable, and takes into account the consequences of the depletion of the resource;
  - that the development, use and exploitation of renewable resources and the ecosystems of which they are part do not exceed the level beyond which their integrity is jeopardised;
  - that a risk-averse and cautious approach is applied, which takes into account the limits of current knowledge about the consequences of decisions and actions; and
  - that negative impacts on the environment and on people's environmental rights be anticipated and prevented, and where they cannot be altogether prevented, are minimised and remedied.
3. Environmental management must be integrated, acknowledging that all elements of the environment are linked and interrelated, and it must take into account the effects of decisions on all aspects of the environment and all people in the environment by pursuing the selection of the best practicable environmental option.
  4. Environmental justice must be pursued so that adverse environmental impacts shall not be distributed in such a manner as to unfairly discriminate against any person, particularly vulnerable and disadvantaged persons.
  5. Equitable access to environmental resources, benefits and services to meet basic human needs and ensure human well-being must be pursued and special measures may be taken to ensure access thereto by categories of persons disadvantaged by unfair discrimination.
  6. Responsibility for the environmental health and safety consequences of a policy, programme, project, product, process, service or activity exists throughout its life cycle.
  7. The participation of all interested and affected parties in environmental governance must be promoted, and all people must have the opportunity to develop the understanding, skills and capacity necessary for achieving equitable and effective participation, and participation by vulnerable and disadvantaged persons must be ensured.
  8. Decisions must take into account the interests, needs and values of all interested and affected parties, and this includes recognizing all forms of knowledge, including traditional and ordinary knowledge.
  9. Community well-being and empowerment must be promoted through environmental education, the raising of environmental awareness, the sharing of knowledge and experience and other appropriate means.
  10. The social, economic and environmental impacts of activities, including disadvantages and benefits, must be considered, assessed and evaluated, and decisions must be appropriate in the light of such consideration and assessment.
  11. The right of workers to refuse work that is harmful to human health or the environment and to be informed of dangers must be respected and protected.
  12. Decisions must be taken in an open and transparent manner, and access to information must be provided in accordance with the law.
  13. There must be intergovernmental co-ordination and harmonisation of policies, legislation and actions relating to the environment.
  14. Actual or potential conflicts of interest between organs of state should be resolved through conflict resolution procedures.
  15. Global and international responsibilities relating to the environment must be discharged in the national interest.
  16. The environment is held in public trust for the people. The beneficial use of environmental resources must serve the public interest and the environment must be protected as the people's common heritage.

These principles form a national and provincial guide for environmental management. NEMA calls for their articulation at a national and provincial level in environmental implementation plans (EIMP's) and environmental management plans (EMP's)(see later).

## **The environmental principles in the NWP**

### **The key principals, which guide water management in South Africa are that:**

- 1) The status of the nation's water resources as an indivisible national asset will be confirmed and formalised.
- 2) National government will act as the custodian of the nation's water resources and its powers in this regard will be exercised as a public trust.
- 3) All water in the cycle whether on land, underground or in surface channels, falling on, flowing through or infiltrating between such systems, will be treated as part of the common resource and to the extent required to meet the broad objectives of water resource management, will be subject to common approaches.
- 4) Only that water required to meet basic human needs and maintain environmental sustainability will be guaranteed as a right. This will be known as the Reserve.
- 5) In shared river basins, Government will be empowered to give priority over other uses to ensure that the legitimate requirements of neighbouring countries can be met.
- 6) All other water users will be recognized only if they are beneficial in the public interest.
- 7) These other water users will be subject to a system of allocation that promotes use, which is optimal for the achievement of equitable and sustainable economic and social development.
- 8) The new system of allocation will take into consideration the investments made by the user in infrastructure for water use.
- 9) The new system of allocation will be implemented in a phased manner, beginning in water management areas, which are already under stress. This system of allocation will use water pricing, limited term allocations and other administrative mechanisms to bring supply and demand into balance in a manner which is beneficial in the public interest.
- 10) The riparian system of allocation, in which the right to use water is tied to the ownership of land along rivers, will effectively be abolished. Transitional arrangements will, over time, ensure an orderly, efficient and gradual shift in water use allocation as and when necessary.
- 11) Water use allocations will no longer be permanent, but will be given for a reasonable period, and provision will be made to enable the transfer or trade of these rights between users, with Ministerial consent.
- 12) To promote the efficient use of water, the policy will be to charge users for the full financial costs of providing access to water, including infrastructure development and catchment management activities. This will be done on an equitable basis and according to the realistic reasonable programme, which has already been begun.
- 13) All water use, wherever in the water cycle it occurs, will be subject to a catchment management charge, which will cover actual costs, incurred.
- 14) All water use, wherever in the water cycle it occurs, will be subject to a resource conservation charge where there are competing beneficial uses or where such use significantly affects other users
- 15) The use of rivers and other water resources to dispose of wastes will also be made subject to catchment management charge which will cover actual costs, and a resource conservation charge where there are competing beneficial uses for such use and/or significantly affects other users.
- 16) To promote equitable access to water for disadvantaged groups for productive purposes such as agriculture, some or all of these charges may be waived for a determined period where this is necessary for them to be able to begin to use the resource.
- 17) To promote equitable access to water for basic human needs, provision will also be made for some or all of these charges to be waived.
- 18) All major water use sectors must develop a water use, conservation and protection policy, and regulations will be introduced to ensure compliance with the policy in key areas.
- 19) In the long term, since water does not recognise political boundaries whether national or international, its management will be carried out in regional or catchment water management areas (which will coincide either with natural river catchment, group of catchments, sub catchments or areas with linked supply systems with common socio-economic interests)

recognising that conflicting interests will intensify the need for national management and supervision and that the policy of subsidiarity does not interfere with the need for a national and international perspective on water use.

- 20) Provision will be made for the phased establishment of catchment management agencies, subject to national authority, to undertake water resources management in these water management areas.
- 21) Provision may be made to allow for the functions of the development and operation of the national water infrastructure which links regional catchments and systems, to be transferred to a public utility established for that purpose.

### **Environmental principles in the White Paper on South African Land Policy**

- tenure systems must comply with the Constitution's commitment to human rights and equality
- a rights-based approach that recognises existing rights must be adopted.