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**GOVERNING BIODIVERSITY CONSERVATION AND SUSTAINABLE LIVELIHOODS IN
THE MUTALE RIVER – AN ANALYSIS OF INTERPLAY BETWEEN LAWS, POLICIES,
INSTITUTIONS AND ACTORS**

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1. Introduction

The governance of biodiversity conservation is highly complex. Not only is there a need to account for a wide range of sectors and interests, such as agriculture, households, conservation, tourism, energy and mining; there is also a need to account for a range of governance scales. In any one given area, numerous laws and policies intersect. Such instruments might encompass local customary norms, provincial and national legislation, as well as international treaties. Institutions and actors with the capacity to influence decision-making processes are also wide and varied. Additionally, for various reasons, those that may have a legitimate interest in making decisions are not afforded the opportunity to do so. A major challenge in understanding governance issues related to biodiversity conservation and sustainable livelihoods is therefore to understand the complex interplay between the various laws and policies related to biodiversity conservation. However, understanding the complex interplay between these instruments only provides part of the picture. Additionally, a crucial question to be addressed is whether the applicable laws and policies have been implemented. Examining implementation raises a further myriad of complex issues that largely centre on institutions and actors, which either formally or informally have a role in the process by which commitments are, or are not, translated into practice.

This report seeks to examine the interplay between law, policy, institutions and actors within the context of the Mutale River Basin in South Africa. More specifically, the research focuses on three different governance arrangements that have been put in place within the river basin in order to conserve biodiversity, namely Makuya Park, a provincial nature reserve connected to the Kruger National Park, Lake Fundudzi, a sacred site, and the UNESCO Vhembe Biosphere Reserve. The report firstly identifies the challenges faced by these three conservation areas. Secondly, a review of the current law and policy architecture applicable to each area is undertaken, as well as an assessment of some of the difficulties associated with the implementation of that architecture. Thirdly, the report continues with the theme of implementation, by examining the role of institutions and actors. This is done by, using actor network analysis to examine the relationship between actors and institutions. The report goes on to draw from the study of the main challenges, law and policy architecture, and institutions and actors in order to ascertain the main governance challenges to balancing biodiversity conservation with sustainable livelihoods within the case study area. In addition, the report suggests possible strategies and recommendations for overcoming the aforementioned governance challenges.

The major challenge facing the governance of protected areas is not in itself the quality or quantity of legislation of policy; it is the implementation of these laws and policies. Any approach wishing to understand the lack of success in many of the world’s protected areas must therefore begin by analysing the processes through which law and policy are implemented. In this respect, while there are in principal differences in levels of potential enforcement between law and policy, in practice both of these forms of influencing behaviour are usually left in the hands of the same organisations. In the case of protected areas these are usually the park authorities, departments of the environment and state or county authorities. The complexities of modern political systems often result in decisions, both legal and policy-orientated, being moved along from the political sphere into the administrative sphere. There are a number of reasons for this process, such as the limited detailed knowledge of specific issues, the wish to defuse sensitive political conflicts by leaving their resolution to the implementation process etc. The dispersion of political decision-making makes it more difficult, however, for us to know exactly who is responsible for the policies initiated in their municipality. The process also creates confusion between the politicians who are responsible for making laws and decisions that determine policy, and the civil servants who are responsible for implementing them. The result is that which Moe (Moe 1984) has called unstructured delegation, a state of affairs in which lines of responsibility become blurred.

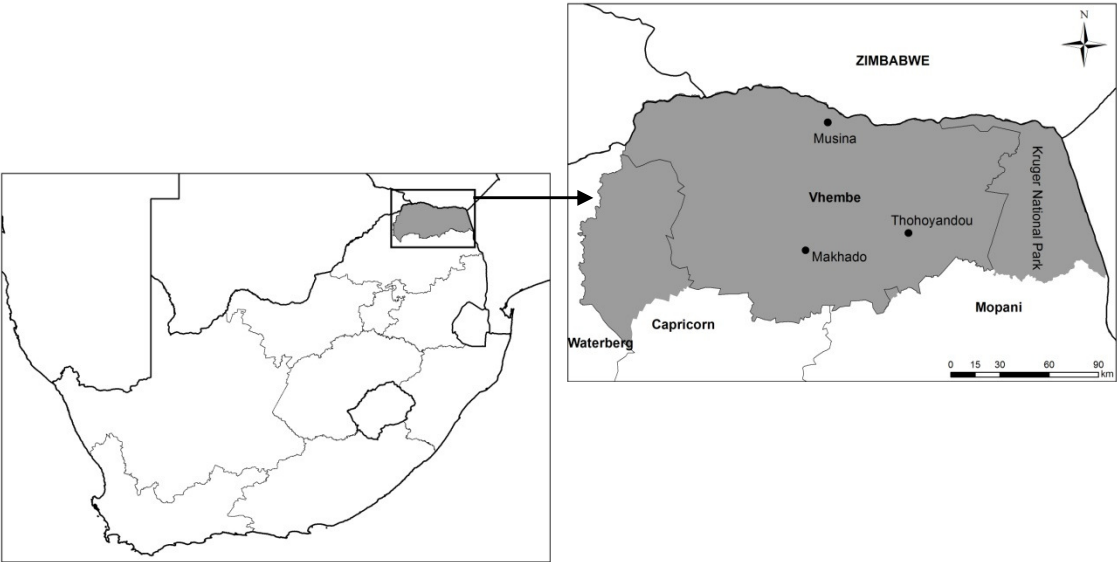


Figure 1: Map showing the case study area in South Africa

2. The Case Study Area

2.1 Context

South Africa is one of the most biologically diverse countries globally (NSBA, 2004; King et al., 2005), and like other biodiverse regions of the world, is experiencing rapid and widespread biodiversity loss due, predominantly, to development-related ecosystem conversion (Reyers et al., 2001). Widespread concern over global biodiversity decline, and its impact on human wellbeing, has prompted national and international agreements to halt these alarming trends (Reyers and McGeoch, 2007). Most notably, Section 24 of the Constitution of South Africa (RSA, 1996) provides citizens of South Africa with the right to an environment that is not harmful to health and wellbeing, and stipulates that the environment will be protected for future generations by reasonable legislative means. Additionally, in 2005, South Africa signed the Convention on Biological Diversity (CBD), ‘to achieve, by 2010, a significant reduction in the current rate of biodiversity loss at the global, regional and national levels’ (CBD, 2010; Mace et al., 2010). CBD is being implemented through several national laws and policies that are discussed in the following sections. Ensuring that the objectives and commitments contained in the abovementioned law policy framework are translated into practice is an immense task. Numerous challenges exist in ensuring that laws and policies are implemented in an equitable and legitimate manner that is acceptable to all stakeholders (Rampedi and Moshibudi, 2005). Rampedi and Moshibudi (2005) maintain that, “the challenge at times is compounded by perceptions of the stakeholders regarding conservation priorities”. Moreover, Kotze and du Plessis (2006) caution that environmental governance in South Africa is “characterised by serious fragmentation that manifests in legislation, policies, government tools, processes, structures and procedures”. Two key areas of focus are therefore important to consider in the context of implementation, namely stakeholder interactions (represented through actor networks), and the law and policy architecture. These two areas constitute the primary focus of this study. However, before considering these issues in more detail, the report firstly considers the key challenges facing Vhembe Biosphere Reserve, Makuya Park and Lake Fundudzi.

2.2 The Mutale River in Limpopo Province, South Africa

The Mutale River valley lies within the bigger Vhembe District of the Limpopo province in the far north-eastern corner of South Africa where it borders with Zimbabwe and Mozambique (figure 2).

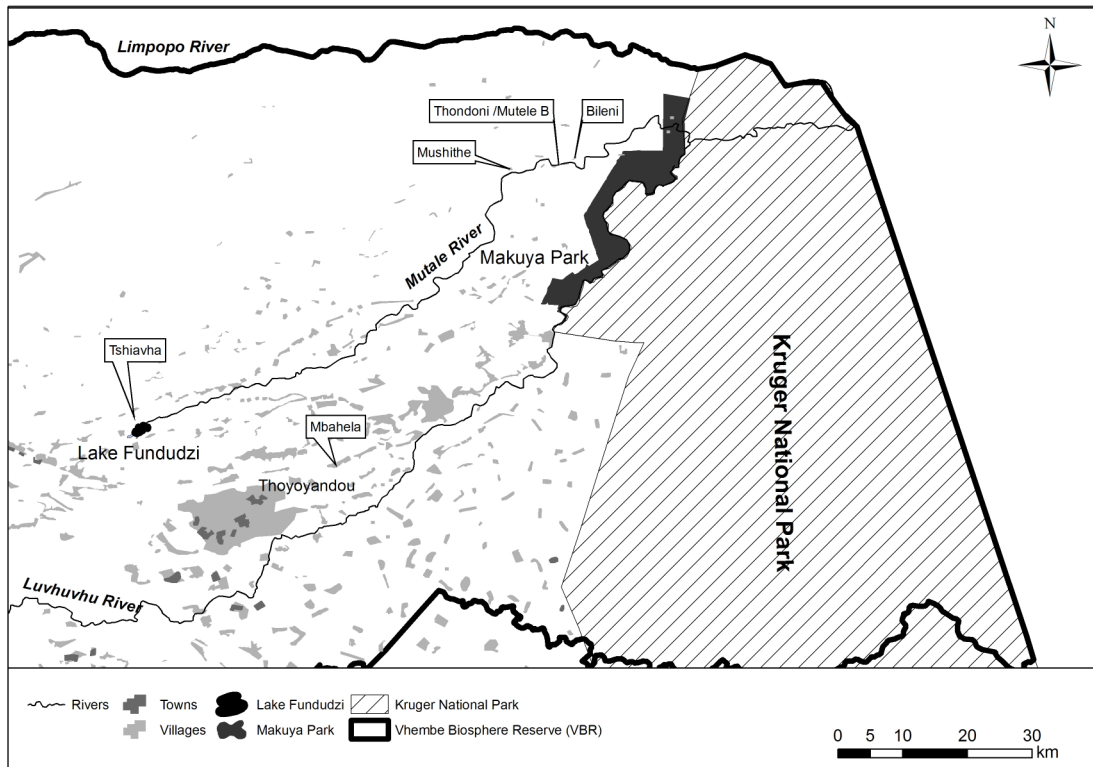


Figure 2: Map depicting the Mutale River Basin with the surrounding villages and towns connecting the protected areas

Historically, this valley formed part of VhaVenda, a former black “homeland” under the South African apartheid regime [Lahiff, 1997]. The Mutale River finds its origin on the eastern side of the Entabeni and Vondo forests. The river re-emerges from Lake Fundudzi as a spring where it then confluences with the Luvuvhu further eastwards in the steep Lanner Gorge and approximately 200km further passes through the Kruger National Park to join the Limpopo River at Crook’s Corner on the Mozambiquean border (Lahiff, 1997, State of the Rivers Report, 2001, Claassen et al., 2005).

2.3 Vhembe Biosphere Reserve (VBR)

In terms of biodiversity management, the whole of the Mutale basin forms part of the bigger conservation area of the recently declared (2009) Vhembe Biosphere Reserve (VBR) (UN News Centre, 2009). The VBR is one of six ecosystems in South Africa (and the third to have been established in the Province) (Zoutnet, 2010). The biosphere is internationally recognised by the Man and Biosphere Programme (MAB) of UNESCO, which aims to promote and demonstrate a balance between people and nature (UNESCO, 2010). The reserve includes various protected areas (e.g., the northern part of Kruger National Park, Mapungubwe

National Park which is also a well known World Heritage Site, several Provincial Natures Reserves (e.g., Nwanedi Nature Reserve, Makuya Nature Reserve), two centres recognised for their biodiversity and endemism (Soutpansberg and Blouberg) as well as the Makgabeng Plateau with over 1000 rock art sites (LEDET, 2008). Portions of the Limpopo-Shashe- and the Greater Limpopo Transfrontier Conservation Areas (GLTFCA) are also included in the VBR (LEDET, 2008). In terms of local and district municipal areas, the whole Vhembe Municipal District as well as the Blouberg region of the Capricorn District of the Limpopo Province form part of the VBR (figure 3).

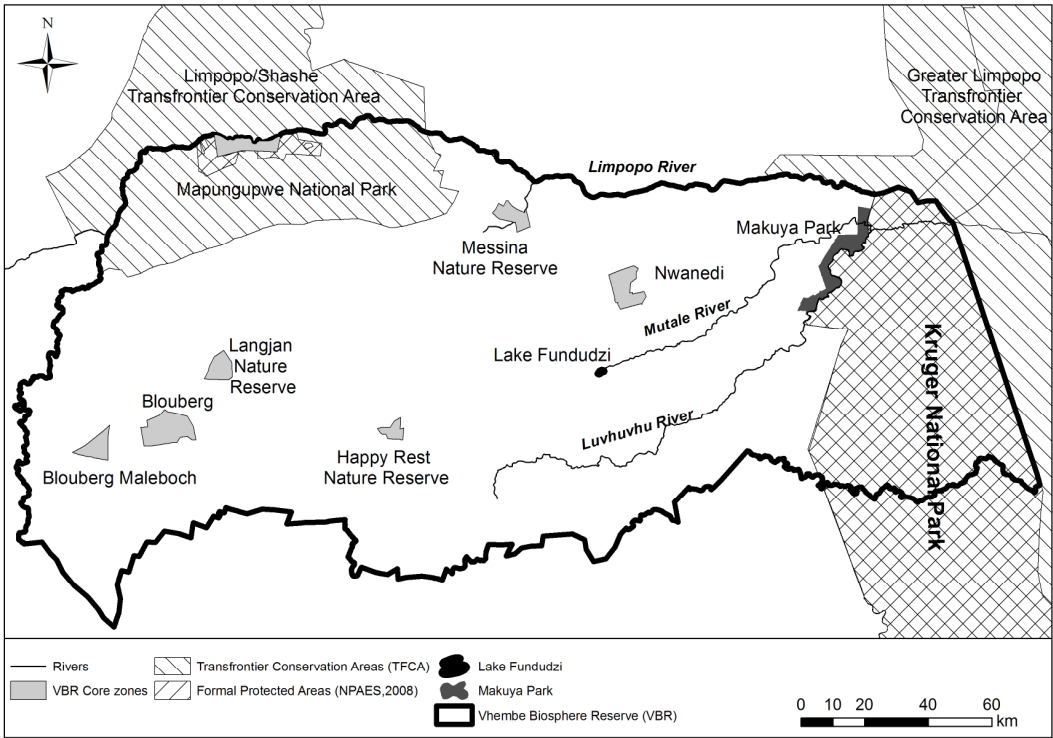


Figure 3: Vhembe Biosphere Reserve indicating core zones, formal protected areas and TFCAs

While the Vhembe Biosphere Reserve is renowned for its eco-tourism, local as well as international hunting concessions and cultural tourism, the area is also under immense pressure due to a rapidly growing population (Reyers, 2004). This is further exacerbated by a high unemployment rate and associated poverty, causing an over-exploitation of natural resources for food, energy, medicinal plants and other livelihood items (LEDET, 2008).

2.4 Makuya Nature Reserve

Limpopo Province has 21 reserves, most of which have been formally declared and have co-management agreements signed by all stakeholders which define the terms of environmental management, access and benefits.

Makuya Park is a provincial nature reserve comprising 18 000 hectares. The park is situated on high ground, overlooking the Luvuvhu River in the far north-western side of Kruger National Park, with which it shares a fenceless border, allowing wildlife to roam freely between the two parks.

The history of the park dates back to the late 1980s, when the village of Nkotswi, under the leadership of Chief Makuya, was moved to make way for the establishment of a “wildlife park” (Lahiff, 1997). Prior to its establishment, the land was used for cattle grazing, collection of grass for thatch roofs, hunting, and fishing along the Levhuvhu and Mutale Rivers (Lahiff, 1997, Koale Investments cited in Whande, 2007). Whande (2007) reports that the park was set up after the three chiefs, Mutele, Makuya and Mphaphuli each “donated” different portions of their land to the former VhaVenda homeland government for conservation. In return, the chiefs received monetary compensation of R2 per hectare for land rental on an annual basis (Whande, 2007). Establishment of the park had far reaching consequences. Local people blamed the chiefs for selling land in order for it to become a protected area (Whande, 2007). This and associated restrictions on the use of livelihood resources shaped local perceptions of protected areas and conservation.

Makuya Park was originally managed by Venda Tourism (part of the parastatal Venda Development Corporation) (Lahiff, 1997), but was later taken over by the Department of Local Economic Development, Environment and Tourism (LEDET). With the formation of a new provincial administration in 1994 (following the ending of the apartheid era), there was a new approach to the management of wildlife reserves (Lahiff, 1997). The then newly created LEDET embraced the principle of community participation in the management of nature reserves and other amenities under its control (Lahiff, 1997). As part of this newly created structure, local communities were allowed direct involvement in the management of such amenities (Lahiff, 1997). This gave birth to the Makuya Park Forum in 1995, consisting of representatives of the Department, and civic and tribal authorities in the vicinity of the Park (Lahiff, 1997). The Forum was established as a mechanism for community participation in the management of the park.

There is currently a strategic partnership between LEDET, Limpopo Tourism and Parks (LTP) and the traditional authorities of Makuya, Mutele and Mphaphuli. Through this

strategic partnership, the community continues to receive royalties from the government (R5 per annum) for lease of the land and the Provincial Government has managed the park with some level of strategic co-management with the rightful owners of the area through the Makuya Park Forum, established in 1995 (Lahiff, 1997). Other benefits to the community have been the shares from hunting concession profits, meat, and managed access and livelihood resources from the area as well as recreation and preferred employment, training and community development.

However, the park has not been formally declared, and no co-management agreement exists, which leads to major challenges in effecting a balance between biodiversity conservation and sustainable livelihoods. A further major challenge related to Makuya Park is the tainted history of displacement and the community belief that their chiefs wanted to “make a profit”. This perception has contributed to the mistrust of the communities in conservation and protected areas. Added to this is the fact that unequal portions of land were “donated” by the chiefs, and therefore benefit sharing is not equal. A strong interface therefore exists between the formal law and policy environment, and the role of institutions and actors. This is discussed further in the subsequent sections.

2.5 Lake Fundudzi

Lake Fundudzi is a unique inland fresh water lake found in the upper reaches of the Mutale River in the Soutpansberg region of the Vhembe District in Limpopo Province. The 3km long lake at 865m above sea level has a surface area of 144 hectares, and a maximum depth of 27m. According to Van der Waal (1997), Lake Fundudzi is the only true natural inland lake in the interior of South Africa based on the 1987 definition of Schwoerbel that defines lakes as “standing water bodies without direct connection to the sea”. Van der Waal (1997) further reports that the lake is one of only a very few lakes in the world formed by a landslide. The others include Lake Tarli Karng in Australia and two in Africa: Lake Bujuku and Lake Ruwezori (Van der Waal, 1997).

While the Lake is therefore unique from a natural standpoint, Fundudzi is better known for its cultural and spiritual significance to the local Vhavenda people of the area. Lake Fundudzi is a place of worship to the Tshiavha clan (Department of Agriculture, 2002, 2002), one of five independent chiefs surrounding the lake, under the rule of King Tshivase. The Tshiavha people believe that the lake is inhabited by the ancestral spirits of the Vhatavhatsindi people

(Stayt 1968 cited by Van der Waal, 1997) and even today, no foreign people are allowed to visit the lake without prior permission from *Gota* (local headman) of Netshiavha (Bernard, 2003).

In spite of the restricted access, in 1995 a road was built from Tshiheni down to the lake and up towards one of the villages on the southern side allowing vehicles to drive there without any restriction (Van der Waal, 1997). Khorombi (2000) tells that today, access to the lake is possible from four different villages.

Van der Waal (1997) reports that the lake is threatened by an increased rate of sedimentation due to anthropogenic activities. He is further of the opinion that Lake Fundudzi deserves “national and international conservation status” and that it could “become a valuable ethno- and eco-tourist attraction” if managed and protected properly (Van der Waal, 1997). He concludes that the real challenge would be to develop the potential of the area by involving the local community in the eco-tourism potential, while at the same time ensuring the required protection to the lake and its surroundings so as not to disrupt or threaten the traditional ceremonies and rituals (Van der Waal, 1997). Godfrey (2003) highlights the intricate network of actors and interest groups associated with the Lake. Apart from the already listed challenges, he explains the diverse internal views and interests: “the valleys’ youth view the lake as a source for recreation; rural women view its environs as a source of drinking water and fuel wood; men for grazing and subsistence farming; [and] landless families as potential area for re-settlement”. The adoption of a more westernised and modern lifestyle and the increasing number of access roads to the lake, are also threatening this valuable heritage site (Khorombi, 2000). Another interesting point that Khorombi (2000) makes is the fact that although the lake is surrounded by five independent chiefs, only the Tshiavha people have a direct claim to the lake. Their custodianship and religious customs are accepted by the other chiefs but in future these chiefs might decide to adopt activities affecting the lake negatively and without legal status the Tshiavha people will have no way of questioning their decision (Khorombi, 2000).

3. The Law and Policy Architecture

3.1 South Africa's legal system

South Africa has a federal system of government that consists of national, provincial and local spheres of government (Joubert, 2004). In addition, the Constitution formally recognizes the role of traditional leadership in society, and the system allows traditional leaders and customary law to be used as a way to govern the society (RSA, 1996). A key principle of the government system, enshrined in Sections 40-41, "co-operative governance" among national, provincial, local government, and traditional leaders (RSA, 1996). The South African Constitution recognizes the role of traditional leadership according to customary law (Sections 211-212, RSA, 1996). The Constitution allows courts to apply customary law whenever applicable, and defines the role of traditional leadership as "an institution at local level on matters affecting local communities" (RSA, 1996). As a mechanism to facilitate use of traditional system, the House of Traditional Leaders is established at national, provincial and local level, while traditional councils exist at community level (GCIS, 2003).

In terms of South Africa's law, the legal system was significantly transformed as part of the broader post-apartheid reforms in the 1990s (Joubert, 2004; Du Bois, 2007; Du Plessis, 1999). However, many of the laws unrelated to apartheid continue to be rooted in the "Old Authorities", as adapted from both Roman-Dutch, and English legal traditions. The influence of English law is most pronounced in areas of public, corporate and mercantile law, as well as criminal law procedures. Roman-Dutch law has predominantly influenced private law, e.g. law of persons, property, and succession.

3.2 Law and policy related to biodiversity conservation

In 2004 South Africa carried out its first comprehensive assessment of the status of biodiversity throughout the country. Amongst its findings the so-called *National Spatial Biodiversity Assessment* (NSBA, 2005) identified a number of priority areas for conservation, including finer scale planning, expansion of protected areas, and integrating "biodiversity-compatible development" and resource management across the landscape.' The *National Spatial Biodiversity Assessment* also singled out river ecosystems as areas in need of greater protection, noting that they were both poorly conserved and under most pressure. Based on the findings of the *National Spatial Biodiversity Assessment*, the *National Biodiversity*

Strategy and Action Plan (NBSAP, 2005) was developed in order to set out strategic objectives, outcomes and activities needed to achieve the overarching goal, which is to “conserve and manage terrestrial and aquatic biodiversity to ensure sustainable and equitable benefits to the people of South Africa, now and in the future”. Five core objectives were identified in the *National Biodiversity Strategy and Action Plan*, namely i) to provide an enabling policy and legislative framework that integrates biodiversity management objectives into the economy, ii) enhanced institutional effectiveness and efficiency to ensure good governance in the biodiversity sector, iii) integrated terrestrial and aquatic management across the country to minimize the impacts of threatening processes on biodiversity, enhance ecosystem services and improve social and economic security, iv) enhanced human development and well-being through sustainable use of biological resources and equitable sharing of benefits, and v) a network of conservation areas to conserve a representative sample of biodiversity and maintain key ecological processes across the landscape and seascape.

The *National Biodiversity Strategy and Action Plan* is complemented by the *National Biodiversity Framework* (NBF, 2007). The *National Biodiversity Framework* aims to focus attention on the most urgent strategies and actions under the *National Biodiversity Strategy and Action Plan*, and identifies the necessary roles and responsibilities of key stakeholders in implementing those actions. A number of key targets – to be achieved by 2012 and that should be aligned with the *National Biodiversity Strategy and Action Plan* – are set out in its framework document. Amongst the priority actions are the objectives to, i) integrate biodiversity considerations in land-use planning and decision-making, ii) develop a regulatory framework for access and benefit sharing, iii) establish a national programme to build capacity of local government, iii) establish pilot projects to explore mechanisms for integration national resources management at the district and local levels, iv) develop provincial spatial biodiversity plans and publish bioregional plans, v) implement cross-sector policy objectives for conservation of inland water biodiversity and incorporate biodiversity conservation objectives in the work of catchment management agencies, and vi) implement the protected areas expansion strategy and strengthen the stewardship programme. The latter objective is supported by the *National Protected Area Expansion Strategy* (NPAES, 2008), which uses two factors – importance and urgency - to identify areas appropriate for protected areas status. Importance relates to whether the area contributes to meeting thresholds for ecosystems, maintaining ecological processes or climate change resilience; urgency is

evaluated on the basis of the extent to which spatial options for meeting protected area targets still exist.

South Africa's Constitution (RSA, 1996) provides the basis upon which laws related to biodiversity conservation have evolved. Most notably, the Constitution provides that,

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

Following adoption of the Constitution, the National Environmental Management Act (NEMA, 1998) was adopted in 1998. The latter act sets out principles for decision-making on environmental matters, establishes institutions for co-operative environmental governance, provides for certain procedures to co-ordinate state functions related to the environment, and introduces a range of provisions related to administration and enforcement. In relation to Biodiversity, NEMA is supplemented by the National Environmental Management: Biodiversity Act (NEMBA, 2004), which pursuant to Section 2, was adopted in 2004 in order to, “protect species and ecosystems that warrant national protection; ensure the sustainable use of indigenous biological resources; provide for the fair and equitable sharing of benefits arising from bioprospecting involving indigenous biological resources; and establish the South African National Biodiversity Institute”. Moreover, the National Environmental Management: Protected Areas Act (NEMPA, 2004) complements the previously instruments by providing a system whereby protected areas are declared and managed. In terms of environment-related legislation, both the Water Act (1998) and the Forest Act (1998) also contain provisions related to the conservation of biodiversity. Within the context of the Mutale River Basin, national laws are also complemented by a host of provincial legislation, such as the 2003 Limpopo Environmental Management Act (LEA, 2003).

In addition to the abovementioned laws and policy, a range of programmes and initiatives – too extensive to comprehensively cover in this report - are in place. One example is the Peoples and Parks Programme, which was established as a result of the World Parks Congress

held in Durban 2003 (IUCN, 2003). The objective of the programme, administered by the Department of Environmental Affairs, is threefold, namely to (i) strengthen park management and create buffer zones around Protected Areas; (ii) provide compensation or substitution for loss of access to resources; and (iii) encourage socio-economic development among communities living next to Protected Areas (DEA, 2010). During the 4th National People and Parks Conference, a number of challenges in implementing the programme were highlighted by delegates, including lack of resources to support community representatives and initiatives, the slow speed of land reform processes, the need for equal partnerships in co-management arrangements, a lack of job creation and beneficiation, and the need for greater communication between government departments and communities related to decisions taken affecting the peoples and park programme (DEA, 2010). These challenges are given more detailed attention with respect to the case study area throughout the following sections of the report.

3.3 Implementation challenges

After a decade of democracy, South Africa has an excellent national policy and legislative framework in place. Although this framework is still being developed and fine-tuned, significant progress has been made in establishing an enabling environment to achieve the goals of economic growth, equity, poverty alleviation, service delivery, participation and co-operative governance. This framework includes biodiversity-related policy and legislation. There is now an urgent need for implementation, especially by provincial and local spheres of government (NBSAP, 2005)

Despite the myriad of legislation that has been adopted to regulate South Africa's environment, major challenges remain. Silima (2007) highlights a range of issues including overlapping areas of responsibility amongst sectors, weak capacity of those developing law, a failure to engage the full range of legitimate stakeholders, a fragmentation of laws relating to particular issues, and contested competencies between national, provincial and local governments. A fragmentation of laws relating to the environment, leading to responsibility being divided between different government departments and different levels (local to national), has also been highlighted as causing difficulties in terms of interpretation and enforcement (Silima, 2007).

The purpose of this section is to examine some of these issues around implementation within the specific context of the case study area. The section therefore examines implementation issues related to Makuya Park, Lake Fundudzi and the Vhembe Biosphere Reserve individually, before offering some more general conclusions.

3.3.1 Makuya Park

An obvious question to ask in relation to Makuya is why the park has not been formally declared under either national or provincial law. In terms of protected areas, NEMPA (2004) encompasses (a) special nature reserves, national parks, nature reserves (including wilderness areas) and protected environments; (b) world heritage sites; (c) marine protected areas; (d) specially protected forest areas, forest nature reserves and forest wilderness areas; and (e) mountain catchment areas. However, while all these protected areas technically fall under the scope of NEMPA, with respect to protected area management, the Act mainly deals with the first category, namely special nature reserves, national parks, nature reserves, and protected environments with the other areas falling under different legal regimes.

As a provincial park, Makuya would appear to align most closely with a “nature reserve”, which, according to Section 23, can be declared by the Minister or MEC in order to,

- (a) supplement the system of national parks in South Africa;
- (b) to protect the area if the area –
 - (i) has significant natural features or biodiversity;
 - (ii) is of scientific, cultural, historical or archaeological interest; or
 - (iii) is in need of long-term protection for maintenance of its biodiversity or for the provision of environmental goods and services;
- (c) to provide for a sustainable flow of natural products and services to meet the needs of the local community;
- (d) to enable the continuation of such traditional consumptive uses as are sustainable;
or
- (e) to provide for nature-based recreation and tourism opportunities (Section 23).

In accordance with Section 23(1) of NEMPA, the Minister or MEC may declare an area as a nature reserve by notice in the official *Gazette*. Additionally, at the provincial level, Section

15 of the Limpopo Environmental Act (LEA, 2003) stipulates that the MEC may declare an area as a provincial park by notice in the provincial Gazette. Pursuant to Schedule 1 of the Limpopo Environmental Act, such a park may be declared in order to “protect an area because of its natural landscapes, indigenous fauna and flora and biotic communities”, “to propagate scarce and endangered species of fauna and flora”; and “sustainably utilise the area for scientific, education and eco-tourism purposes.” There are therefore a range of legal provisions by which Makuya may seek legal status as a protected area.

However, as of October 2010, despite having been managed as a provincial park, Makuya has not been officially declared a protected area under NEMPA or the Limpopo Environmental Act. While declaring Makuya as a protected area under NEMPA is seen by provincial government as a major priority, the declaration process has proved problematic. Whilst the key reasons for this are discussed in the next section, a number of “legal” challenges to declaration exist.

Pursuant to Section 32 of NEMPA, a range of procedural requirements must be satisfied before a protected area can be declared. At the provincial level, the MEC must consult (a) the Minister and other national organs affected by the proposed declaration; (b) provincial and municipal organs potentially affected; and (c) any lawful occupier of potentially affected land. In addition, under Section 33 of the Act both the National Minister and MEC must follow a process of public participation set out in the Act, which includes publishing details of the potential declaration, sending copies of the proposed declaration to each owner of the land potentially affected, and allowing potentially affected members of the public to submit written opinions as to the declaration. Section 33 also stipulates that the Minister or MEC must provide for oral representations where the proposed declaration will affect the rights or interests of a local community, and consideration must be given to all representations or objections received or presented. The Section goes on to stipulate that land held in trust by the State or an organ of state for a community or other beneficiary, may be declared *only* with the concurrence of the trustee and the community involved.

In addition, prior to the initiation of the abovementioned procedural process, the land must be *vested* in the rightful owner, or owners, of the land. Land reform has proved to be a complex issue in South Africa. Lahiff (2008, p.1) observes that,

“[a]fter 14 years of democracy in South Africa, there is agreement across the political and social spectrum that the state’s programme of land reform is in severe difficulties. Almost since its inception, the programme has been criticised for failing to reach its targets or deliver on its multiple objectives of historical redress, redistribution of wealth and opportunities, and economic growth. Particular weaknesses – highlighted by its political supporters and opponents alike – include the slow pace of land redistribution, the failure to impact significantly on the land tenure systems prevailing on commercial farms and in the communal areas, and the widespread perception that what redistribution of land has taken place has not been translated into improvements in agricultural productivity or livelihood benefits for the majority of participants”.

With respect to Makuya, the Department of Rural Development and Land Reform should formally hold title to the land, although the three communities, e.g., Makuya, Mutele and Mphaphuli – under both traditional and formal legal systems - have certain rights to access and use the land. However, as of October 2010, efforts are still ongoing to ensure that ownership of Makuya Park is vested in the Department of Rural Development and Land Reform . Before Makuya can be vested, the Department of Rural Development and Land Reform must obtain a so-called “Item 28 Certificate” from the Ministry of Rural Development and Land Reform (RSA, Constitution, Section 28(1), which provides sufficient evidence of who has rightful ownership of the land. The latter process remains outstanding.

As can be seen from the above, the process by which Parks can be formally declared under NEMPA involves a complex process that requires not only that the land be vested in the appropriate owners, but also that the public are provided with an opportunity to air, and have their opinions considered, prior to a park receiving any official status. Whilst such a complex process of designation and participation no doubt leads to greater legitimacy, it also raises the risk of delays in securing formal status for a park, which in turn can endanger environmental and community interests. The latter will be the case even more so, where there are power asymmetries amongst competing stakeholder interest. This issue is therefore considered further in the next section when the various actors and institutions involved in the use, management and development of Makuya are analyzed.

A further legal issue to consider here is whether conservation areas are afforded any interim protection prior to being formally declared, which is an issue that may prove crucial in light of

long delays in the formal process. NEMPA would appear to allow for such a situation in limited circumstances, based on the definition of “nature reserve”. Under Section 1 of NEMPA a “nature reserve” is defined as, “an area declared, *or regarded as having been declared* [emphasis added]”. Section 23(5) of NEMPA goes on to stipulate that an area that was a nature reserve immediately before the Act took effect must be regarded as having been declared as such. The question therefore arises whether Makuya, having been managed as a provincial park before the introduction of NEMPA, could be “regarded as having been declared”, and therefore subject to the provisions of the Act when it took effect. However, while the wording of NEMPA may invite some ambiguity, it would appear to be difficult to argue that Makuya could be regarded as having been declared. Firstly, under the Limpopo Environmental Act a process for declaration has been set out but to date never followed for Makuya. Secondly, the provincial government of Limpopo is currently in the process of declaring Makuya as a nature reserve under NEMPA, which would imply that a similar process has not been fully completed in the past.

From a practical standpoint, the fact that Makuya has not formally been declared under either NEMPA or the Limpopo Environmental Act has had implications for the development of mining operations in the area. The Tshikondeni Coal mine, running adjacent to the park’s boundary, commenced operations in 1984 (Kumba Resources and SRK Consulting, 2010). More recently, a mine shaft has been sunk in Makuya Park (Kruger, 2010). While the mining activities related to Makuya are discussed below in terms of the actors and institutions involved, it is worth noting the legal environment in which such activities operate. Pursuant to the Mineral and Petroleum Resources Development Act (MPRDA, 2002), the Department of Minerals Resources has responsibilities both to regulate mining, and promote its development. The MPRDA was amended in 2009. In terms of the MPRDA Amendment Act and the NEMA Amendment Act, efforts have been made to streamline the mining and environmental authorisation processes. Under these amendments, applicants for mining related rights have to follow the environmental authorisation application procedure under NEMA, while the authorisation is then granted by the Minister of Mineral Resources (Funke, 2009) However, while there is now a legal basis for these two processes to coincide, in practice this does not take place (although it should have started in October 2010). The processes under NEMA and MPRDA are still followed separately. Also, the listed activities as they pertain to mining activities in the NEMA regulations are not yet in force (Nortje, 2011).

A major addition to the legal framework for protected areas, introduced by NEMPA, was the setting out of certain principles and standards for the management of protected areas. Section 38 provides that the Minister or relevant provincial MEC must assign the management of protected areas to a management authority. Such an authority is broadly defined in Section 1(1) as, “a suitable person, organisation or organ of state”. A further notable addition in Section 19 of NEMPA is the requirement that each management authority prepare and submit a “comprehensive management plan” to the Minister or MEC for approval within 12 months of being appointed. According to Section 39(3), in the preparation of such a plan, the management authority must consult with, “municipalities, other organs of state, local communities and other affected parties which have an interest in the area”. The Act also sets out mandatory and discretionary contents for the plan. In terms of mandatory content, Section 41(2) provides that the plan must include (a) the terms and conditions of any applicable biodiversity management plan; (b) a co-ordinated policy framework; (c) such planning measures, controls and performance criteria as may be prescribed; (d) a programme for the implementation of the plan and its costing; (e) procedures for publication participation; (f) where appropriate the implementation of community-based natural resources management; (g) a zoning of the area indicating what activities may take place in different sections of the area, and the conservation objectives of those sections. In terms of discretionary content, the management plan may contain provisions related to (a) the development of economic opportunities within or adjacent to the protected area in terms of the integrated development frameworks; and (b) the development of local management capacity and knowledge exchange. However, the fact that Makuya is not formally declared as a nature reserve means that the impetus to strengthen the management framework for the park is lacking.

A further important addition contained in NEMPA concerns the “co-management” of protected areas. Pursuant to Section 42(2) of NEMPA, the management authority may enter into an agreement with another state organ, a local community, an individual or other party in order to co-manage an area, or regulate human activities that affect the environment in the area. In accordance with Section 42(2), such an agreement might provide for (a) the delegation of powers by the management to the other party to the agreement; (b) the apportionment of any income generated from the management of the protected area or any other form of benefit sharing between the parties; (c) the use of biological resources in the area; (d) access to the area; (e) occupation of the protected areas or parts thereof; (f) development of economic opportunities within and adjacent to the protected area; (g)

development of local management capacity and knowledge exchange; and (h) financial and other support to ensure effective administration and implementation of the co-management agreement. According to Section 42(3), a co-management agreement must provide for the harmonization and integration of the management of cultural heritage resources in the protected area by the management authority; and must be consistent with the provisions of the Protected Areas Act. The provisions under NEMPA are also supplemented by various policies, such the National Co-management Framework and the People's and Park Programme noted above.

The above analysis demonstrates that NEMPA provides a sound enabling environment for ensuring that protected areas are managed and developed in an equitable and legitimate manner. Such an environment might not be crucial where the stakeholders of a particular park are a relatively homogenous group with clearly agreed shared values and interests; however, in the case of a stakeholder group with a range of competing interests, the need for a robust platform that can clearly articulate, and reconcile rights and obligations becomes imperative. Keeping this point in mind, the nature of the stakeholder dynamic within the context of Makuya will be further explored in Section 4.

3.3.2 Lake Fundudzi

Theoretically, Lake Fundudzi could fall under NEMPA or the National Heritage Resources Act (NHRA, 1999). As noted above, under Section 23(2)(ii) nature reserves may be declared if they seek to protect an area that is of cultural interest. The unique natural and cultural characteristics of Lake Fundudzi have already been highlighted. In order to be declared a nature reserve Lake Fundudzi would have to satisfy the conditions outlined above. Alternatively, or additionally, Lake Fundudzi could be declared a heritage site, pursuant to the National Heritage Resources Act, (1999). As with NEMPA, the National Heritage Resources Act sets out a national system for heritage sites, and lays down general principles and standards for protection and management.

Under Section 3, the scope of the Act covers, *inter alia*,

- (a) places, buildings, structures and equipment of cultural significance;

- (b) places to which oral traditions are attached or which are associated with living heritage;
- (c) historical settlements and townscapes;
- (d) landscapes and natural features of cultural significance;
- (e) geological sites of scientific and cultural importance;
- (f) archaeological and paleontological sites;
- (g) graves and burial grounds;
- (h) sites of significance relating to the history of slavery in South Africa;
- (i) and certain moveable objects, such as decorative or fine art.

A place or object can be deemed as part of the national estate on the basis of,

- (a) its importance in the community, or pattern of South Africa's history;
- (b) its possession of uncommon, rare or endangered aspects of South Africa's natural or cultural heritage;
- (c) its potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage;
- (d) its importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places or objects;
- (e) its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group;
- (f) its importance in demonstrating a high degree of creative or technical achievement at a particular period;
- (g) its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons;
- (h) its strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa; and
- (i) sites of significance relating to the history of slavery in South Africa.

Pursuant to Section 27, responsibility for the nomination of heritage sites rests with SAHRA, provincial heritage resources agencies, or individuals, depending on the significance of the resource in question. Under Section 27(8), the heritage resources agency in question must, prior to declaring a site under the Act, notify (a) the owner; (b) the mortgage holder, the occupier and any other person with a registered interest in the

property; (c) all conservation bodies which have registered an interest in the geographical area. Pursuant to Section 28, SAHRA or the provincial heritage resources authority, where appropriate, may by notice in the National or Provincial Gazette, designate as a protected area, *inter alia*, “such area of land surrounding a provincial heritage sites as is reasonably necessary to ensure the protection and reasonable enjoyment of such site, or to protect the view of and from such site.”

Once declared, heritage areas are afforded specific protection under the Act. Such protection includes, *inter alia*, the obligation on any person undertaking certain developments, e.g., infrastructure, to notify the responsible heritage resources authority and furnish it with details of the planned project (see Section 38). Where the provincial authority has reason to believe that heritage resources will be affected by a proposed development, it can request an impact assessment report be submitted. On the basis of the impact assessment report, the heritage resources authority can then decide whether or not the development can go ahead, and where appropriate, impose limitation or conditions on the development.

Although Lake Funduzi is the focus of a rich heritage of ceremonial rituals and myths amongst the local Vhavenda community, “it did not receive the protection it deserves in the previous dispensation”, says Silima (2007). Lake Fundudzi has not been formally declared as a national or world heritage site yet (LEDET, 2010), therefore leaving it without any legal status and mostly unprotected; although certain customary rules pertain to the lake. For example, customary rules around access to the lake are quite strict. People from outside the village are seen as ignorant of the power and sacredness of the lake. Because of this perception as well as the customary cultural formalities when approaching the lake, people from outside are advised to seek the permission of the Chief before attempting to go to the lake. Once this permission has been granted, the person will be accompanied by a designated villager to the Lake. These precautions are said to be for the protection of the outsiders from so-called “bad things that can happen” such as people disappearing and people being attacked by unknown spirits. These precautions however also serve as a protection mechanism for the lake itself from human interference and destruction. Another example of how customary rules can protect the lake is through control over the use of the lake. The custodian and guardian of Lake Fundudzi, Chief Netshiavha has strict measures in place over the use of the lake by the villagers. Villagers are taught from a young age to revere the lake and make use

of its resources with the utmost respect. Everyday activities such as fishing by the men and the boys and the washing of clothes by the women and girls are permitted though. Lastly and probably the most effective way of protecting the lake is by the perpetuation of the local myths and legends of the lake and the ancestors that reside there. The myths and legends speak of ancestors who reside in the water and the caves surrounding the lake. These ancestors are seen as the protectors of the Lake, its people and also the VhaVhaVenda culture and as such are said to go to any lengths to fulfill this role.

The lake has been listed as a heritage site (Sinden, 1999) and formed part of the National Register of Protected Areas in South Africa according to Wahl and Naude (1996) both cited in the Limpopo State of the Environment Report of 2004. Some of the government officials from LEDET (2010) also seem to think that heritage sites, whether declared or undeclared, will be protected in terms of the National Heritage Resources Act (NHRA, 1999).

In a recent report, Sefoleng (2008) explains that the initial submission for the grading and nomination of Lake Fundudzi as a National Heritage Site (Grade 1) focused mainly on the unique geological properties of the site. This therefore only highlighted the physical attributes of the area and did not mention the cultural and more intangible significance of the lake and its surroundings. After various consultative meetings, also with the South African Heritage Resources Agency (SAHRA) the submission has been strengthened with relevant information and will be re-submitted for consideration by the SAHRA council members.

A clear example of the risks of not declaring sacred sites under applicable legislation can be seen in the case of Phiphidi waterfall – another VhaVhaVenda sacred site in Limpopo Province (Fihlani, 2010). The Phiphidi waterfall is an important place for rituals that are carried out by the elders of the Ramunangi clan (Sacred Land, 2008). VhaVenda culture claims that the so-called Holy Forest, Lake Fundudzi and various pools, groves and waterfalls form a system that has long been conserved; without them, VhaVenda people claim, rain will not fall and the land will become sick and die (Citypress, 2010). However, the falls have been threatened by a range of activities including the construction of roads, and the mining of a quarry above the falls. Most recently, a dispute has arisen over plans to build tourist accommodation within the vicinity of the falls, which is being carried out by Tshivhase Development Foundation Trust – run by a relative of VhaVenda Kind, Kennedy Tshivhase - without consultation with the communities (Citypress, 2010). In consultation with the

VhaVhaVenda royal family and the chiefs of the area, developers planned to build eight tourist chalets, a restaurant and bar at the head of the falls, which the elders claim is degrading the sacred site, polluting the river and angering spirits (Citypress, 2010). After a decision of the Limpopo High Court, the traditional custodians of Phiphidi waterfall were awarded an injunction to halt the construction of the tourism accommodation. However, the case clearly highlights the vulnerability of such sites that are not formally protected under provincial or national legislation, even though on paper such sites might fall within the scope of either NEMPA or the National Heritage Resources Act.

3.3.3 Vhembe Biosphere Reserve

While the Vhembe Biosphere Reserve has gained international recognition through the Man and Biosphere Programme of UNESCO, the lack of legal status for Biosphere Reserves in South Africa has been raised as a concern (SABR, 2008). A government position paper notes that, “BR’s represent large areas with high biodiversity features currently not under formal protection as indicated in the National Protected Areas Expansion Strategy Framework, but do not receive recognition for playing such a role” (NPAES, 2008). According to LEDET (2010), biosphere reserves have no legal standing in South Africa yet; only the core areas proclaimed as protected areas within the biosphere reserve have legal standing. During interviews one government official even stated that: “the most important piece of legislation in my point of view that indirectly protects a biosphere reserve is the Municipal Systems Amendment Act (MSAA, 2003). This act regulates spatial development frameworks and land use planning. Biosphere reserves are ideal tools to assist local agencies to plan land use. It would therefore be more important to get municipalities to buy into the biosphere zonation scheme and principles that will protect the biosphere in the longer term than the national legislation being enforced from the top”. While this is no doubt correct it also highlights the fragmentation of laws related to conservation areas.

While formal recognition of Biosphere Reserves has many advantages to the country and local area (e.g., substantial increase of land value in biosphere reserve areas, increased development opportunities with job creation, local involvement in planning and management of biodiversity and private sector contribution to conservation, education, health and research), biosphere status has no impact on the decision making processes of allowing mining or not (LEDET, 2010). EIA regulations are limited and often very site-specific, not taking into consideration the devastating impact on the greater ecosystem. Another key

challenge in this regard is the fact that the VBR is managed at the Provincial level, while mining permits are issued at the National level; the National Department of Environment (DEA) is therefore the only department who can question certain mining applications.

3.3.4 Conclusion

The analysis of legal challenges relating to Lake Fundudzi, Makuya Park and the UNESCO Vhembe Biosphere Reserve demonstrates that while a significant enabling environment for the protection of conservation areas in South Africa exists, difficulties remain in its implementation. Most significantly, the case of Lake Fundudzi and Makuya has shown that the process by which formal status is gained is a lengthy one. Additionally, such delays have led to notable threats within the case study area, ranging from developments in tourist infrastructure to mining. Moreover, despite all three sites being located in the case study area, the legal instruments under which they might be protected range from municipal planning laws, to NEMPA and the National Heritage Resources Act. This raises the question of whether there is a need for greater co-ordination between applicable laws at the local to the national level.

4. Actor Networks

4.1 Introduction

The concept of the actor-network, as expounded in Actor-Network Theory (ANT) incorporates inanimate entities into networks of influence, as ‘actants’. In this way ANT differs from most other forms of constructivist network analysis, and can perhaps be best described as *post-constructivist* (Asdal 2005). One of the leading figures of the approach is the French scholar Bruno Latour who has written extensively about what he considers an artificial dichotomy between nature and society, and of the necessity of reunion of these two (Latour 1999; Latour 2004). In this respect there are similarities with Foucault’s (Foucault 1980) discussion of the artificial division of space into ‘nature’ and ‘culture’ or ‘state’. These actants can be forms of technology (Latour 1997), (Callon 1999), (Latour 2005), or they could be hydro-electric power stations (Gooch, Almeida et al. 2008) (Gooch and Rieu-Clarke 2010). In this way actor-networks can include more than political networks, which tend to consist of policy subsystems comprised of actors and institutions. One of the central ideas of ANT is that we should not only look at human aspects of resource management, but that also non-human entities such as material objects, organisations and technology must be taken into

account, either as actors or in other roles. As a result both humans and non-humans are sometimes referred to as '*actants*'.

Protected areas governance systems comprise aspects of both the natural and social spheres and to be successful need to combine elements of both. While this is now commonly accepted, attempts to improve the governance of natural resources have often been hindered by the lack of suitable theoretical frameworks that can achieve this. Actor Network Theory (ANT) focuses on the relationships between the human and non-human (Latour 1999; Latour 1999), and may provide us with a way to include material entities such as dams, water pollution, wells etc into analyses of governance networks. An acceptance of the agency of non-human entities also allows us to look at laws and policies as actants, and to see them, not simply as the result of human interaction or as forces restricting and steering actions, but also as actants with the ability to influence human and other behaviour in a wider field. While ANT is not a unitary theory it provides us with insights into how many of the problems faced by the governance of protected areas are the result of our inability to perceive the complex interactions between human and non-human entities (Latour 1993) and to the dichotomy of human (law, policy, participation, socio-economic forces etc) and non-human (rivers, lakes, animals etc) aspects. By looking at the relationships between these, we can accept that non-human entities can perform as actors (Callon, Law et al. 1986) and must be included into analyses of natural resource governance and its institutions.

This section is structured as follows: Makuy Park, Lake Fundudzi and the Vhembe Biosphere reserve are each discussed separately. Each of these areas is characterised as an actant with a focus on specific characteristics that make them important to the actors they engage with and the recognition that each of them is an important contributor to the power dynamics in the Mutale River Basin. The actor network within which each of these actants exists is then explored more fully with a focus on relationships, and issues that characterise the management of each of these three areas. The end of the section focuses on the overlap of the three actor networks, before these are diagrammatically represented. Unless otherwise referenced, the section below is based on semi-structured interviews that were held with respondents from the National Department of Environmental Affairs, Provincial Limpopo Department for Economic Development, Environment and Tourism, Limpopo Tourism and Parks, Local Limpopo Department for Economic Development, Environment and Tourism and the Vhembe Biosphere Committee.

4.2 Makuya Park

The first actant to be discussed is Makuya Park. As already mentioned, Makuya Park forms part of the area that constitutes the Kruger National Park. Makuya Park was established under the VhaVenda Homeland regime on the basis of the Makuya, Mutele and Mphaphuli communities giving up land to the state for conservation purposes in return for accruing benefits in return. Under the current government these benefits amount to money paid to the traditional authorities on a yearly basis (based on a calculation of R 5/hectare) and royalties that are the result of hunting concessions that are granted to the community annually. The practice of granting hunting concessions has been suspended until a co-management agreement is in place between the Limpopo Economic Development, Environment and Tourism (LEDET) Department, Limpopo Parks and Tourism (LTP), the Kruger National Park management authority and the communities in question.

The hunting issue in Makuya Park is tainted by political tensions. There is uncertainty around how the earnings from hunting are distributed amongst the community members by members of the traditional authority. This has led to violent protest by the community members because of the benefits not trickling down to community members. In addition, there are tensions between Kruger National Park management and provincial authorities regarding how the hunting is managed within Makuya Park and the implications of this for Kruger National Park. Furthermore, as noted previously, mining interests are present within the park, which increases the diversity in stakeholder interests.

Makuya Park is managed jointly by LEDET and LTP. However, the management of Makuya Park is not clear-cut and is a complicated process fraught with a number of problems. Under the Biodiversity and Conservation Chief Directorate, the Protected Area Directorate has the purpose of ensuring the establishment and regulation of protected areas. This includes the development and management of protected areas policies, legislation, regulations, norms and standards; the declaration of private, state and nature reserves; facilitation of the vesting process; monitoring and evaluating the compliance of protected area management agencies and preserving and managing an area to promote the sustainable utilization of resources and conservation. The LTP has the mandate of promoting, fostering and growing tourism within Limpopo Province. While its main focus falls on involving communities in developments within the tourism industry, it also aims to ensure that nature reserves and protected areas are

developed, promoted, managed and conserved effectively. There appears to be some confusion about which functions LEDET is supposed to carry out and which responsibilities LTP has, as these responsibilities are continually shifting due to restructuring processes. This confusion becomes evident when looking at the formal roles and responsibilities of LEDET and LTP as both actors have been given responsibility for protected area management and conservation (LEDET's Protected Areas Directorate), as well as tourism management (LEDET's Tourism Directorate) (LEDET, 2010; LTP, 2010).

A further important aspect of Limpopo Provincial Government's role in Makuya is that managed is considered to be undertaken "on behalf of the communities" until a time when provincial government considers that the communities have sufficient knowledge and financial means to do so by themselves.

Whilst the declaration of Makuya Park has been given a high priority by provincial government. Makuya Park is not being managed in a way that completely aligns with LEDET management objectives for a number of reasons. Some of the reasons given are mismanagement, lack of interest, people not doing their work and lack of staff to deal with the declaration process.

The envisaged co-management agreement between LEDET, LTP, Kruger National Park management and the communities living adjacent to Makuya Park, for which the drafting and consultation process has not yet started, is meant to involve the communities in the management of Makuya Park and will necessitate financial contributions from the communities. This agreement will not only cover biodiversity conservation but will also include provision for a business plan to be drafted. Communities will be represented by the Limpopo provincial forum of communities and the co-management agreement will be based on guidelines that were developed at the national level. A complicating factor is that the communities living adjacent to Makuya Park have previously refused to sign such an agreement.

Given the above range of issues, it is no surprise that the day-to-day management of Makuya Park has been described as *ad hoc* crisis management. This situation is confounded by there being no management plan in place. Other factors that play an important part here are a serious lack of scientific capacity in LEDET, a lack of resources and the fact that young

people are appointed at positions at which they are not willing to start at the bottom and obtain field experience from older more experienced employees (e.g park rangers).

A further complicating factor in terms of the management of Makuya Park, which impacts a number of relationships, is the hunting concessions that LEDET (in consultation with the Department of Land Affairs, communities and Kruger National Park management) until recently awarded to the Makuya, Mutele and Mphaphuli communities on an annual basis. Kruger National Park management used to set the quota for what could be hunted and in what quantities but this practice has led to some tension with LEDET. LEDET was of the opinion that the Kruger National Park management was imposing the quotas on them and that they did not have much of a say in the process, partly because of not having the scientific capacity to verify the scientific accuracy of the quotas.

It also appears that the income from the hunting, which was supposed to benefit community members, instead was never distributed further by the traditional councils. Hunting revenue can be quite significant. In 2008, Makuya had a quota of 5 elephants and 10 buffaloes – trophy fees for such animals range from €12,650 to €35,400. There also seems to be a highly unequal distribution of benefits between the three communities. This has negatively impacted the relationship between the provincial government agencies and the communities' traditional leadership, and has also led to violent unrest by the communities. LEDET has suspended the practice of awarding hunting concessions until a co-management agreement is in place. There is therefore a need for a more structured relationship between LEDET and Kruger National Park management.

In addition to the hunting issue, mining in Makuya Park is also a controversial issue which affects many relationships. Tshikondeni Mine has recently sunk a shaft in Makuya Park and has been able to do so because Makuya Park is not an official protected area. A big factor here is that mining, more so than conservation, is a provider of livelihoods for the communities living adjacent to Makuya Park and that community members wanted the mining to go ahead. It is expected that the shaft in Makuya Park will provide jobs to community members for approximately the next 20 years. In addition, mining is currently of considerable political and economic importance in South Africa and mining rights are often awarded at the expense of environmental considerations.

The Greater Limpopo Transfrontier Park¹ (GLTP) and the Greater Limpopo Transfrontier Conservation Area (GLTCA) are likely to have an impact on Makuya Park because they would require Makuya Park to have certain conditions in place. Makuya Park in turn would contribute positively to the water quality of the rivers running through the GLTP and GLTCA.

The actor network of which Makuya Park forms part is a very complex one, characterised by a number of opposing actors and issues between them. In particular there are disagreements about the management of Makuya Park in terms of hunting concessions, benefit sharing and mining activities. There are also problems within LEDET as it is not able to perform its functions properly in terms of drawing up management plans and carrying through the vesting process. This is complicated by the lack of clarity around its responsibilities and those of LTP regarding Makuya Park.

4.3 Lake Fundudzi

Lake Fundudzi is the second actant to be discussed. The lake has been identified as a provincial heritage site but has not yet been declared. It therefore has no legal status. There are also issues around perceived communal “ownership” of the Lake.

The South African Heritage Resources Agency (SAHRA) is responsible for the process of declaring Lake Fundudzi as a provincial heritage site. SAHRA is the national administrative body responsible for the protection of South Africa’s cultural heritage and was established under the National Heritage Resources Act, No 25 of 1999 (SAHRA, 2010). According to the Act, local and provincial authorities that are closest to the community should manage heritage resources as part of their planning process (SAHRA, 2010), by promoting education and

¹The Great Limpopo Transfrontier Park (GLTP) was proclaimed with the signing of an international treaty at Xai-Xai, Mozambique by the heads of state of Mozambique, South Africa and Zimbabwe on 9 December 2002. The GLTP will link the Limpopo National Park in Mozambique, Kruger National Park in South Africa, Gonarezhou National Park, the Manjinji Pan Sanctuary and Malipati Safari Area in Zimbabwe, as well as two areas between Kruger and Gonarezhou, namely the Sengwe communal land in Zimbabwe and the Makuleke region in South Africa into one huge conservation area of 35 000 km². Several projects to support the development of the GLTP are currently taking place. In addition, the establishment of the GLTP is the first phase in the establishment of a bigger transfrontier conservation area (GLTCA) which will measure almost 100 000 km². The GLTCA will include Banhine and Zinave National Parks, the Massingir and Corumana areas and interlinking regions in Mozambique, as well as various privately and state-owned conservation areas in South Africa and Zimbabwe that border the GLTP. The final delineation of the area will be determined by way of broadly consultative processes, which have already started (SANParks, 2011).

training to encourage public involvement in the identification of heritage resources, with the recording of living heritage associated with heritage and oral history a crucial element, because much of the past is undocumented (SAHRA, 2010).

It appears that problems around stakeholder consultation and the weakness of the Limpopo branch of SAHRA, which is both understaffed and underfunded, are stalling the process of declaring Lake Fundudzi as a provincial heritage site. As noted previously, legal status for Lake Fundudzi would mean a greater level of legal protection from developments in the area. Currently the lake's ecological status is under threat due to agricultural practices around the lake.

Another important actor in the Lake Fundudzi Actor Network is Chief Netshiavha of the Tshiavha community who believes that the lake belongs to his community. This has implications for tourism developments, such as an interpretative centre, that LEDET is planning around the lake. There is apparently also another Chief whose community lives on the banks of Lake Fundudzi and who seems somewhat more open to proposed development around the lake.

The case of Lake Fundudzi seems to be a bit less complicated than that of Makuya Park. It would appear the Chief Netshiavha in particular has strong views about the future of the lake, and that these do not correspond with LEDET's plans for development. This is causing a stalemate in terms of possible opportunities for tourism around Lake Fundudzi. There also seems to be little progress on enhancing the lake's status to become a provincial heritage site, which would give it a greater level of protection from development-related threats to its ecological integrity.

4.4 Vhembe Biosphere Reserve

The UNESCO Vhembe biosphere reserve, aimed at creating a very large conservation area over and above a handful of nature reserves, is made up of a patchwork of different properties. Some are nature reserves, others are managed as nature reserves (without legal status) and others are other types of private properties. The National Department of Environmental Affairs' (DEA) Stewardship Programme is one possible way of incentivising private landowners in the biosphere (through tax incentives) to declare their land as a nature reserve. This programme is not yet active in the Limpopo Province. The reserve is managed

by both LEDET and the Vhembe Biosphere Committee, who are responsible for raising awareness amongst the communities living in the biosphere about this area's significance and the need to conserve it. These two management parties also aim to involve communities as much as possible in conservation and tourism efforts in the biosphere. Big threats to the future of the biosphere include possible mining and other developments.

The Vhembe Biosphere reserve consists of a number of properties, 40 of which are nature reserves in the "core zone" of the biosphere, which is not very big. It appears, however, that 50% of these 40 reserves has not been officially proclaimed, which deprives LEDET and landowners of the necessary legal status they need to ward off possible developments in the biosphere. Mining in particular seems to be a considerable threat, especially in the biosphere's "transition zone" and "buffer zone", which has no legal protection. The Vhembe biosphere reserve also faces other problems, including poverty and low rainfall. The implementation of biosphere reserves in South Africa is apparently far behind that in other countries, and much still needs to be done to make this concept work.

LEDET has numerous functions in terms of managing the Vhembe Biosphere Reserve, which is still in its infancy. It is likely to borrow from the Waterberg and Kruger to Canyon biospheres in the Limpopo Province and learn from their successes and mistakes. LEDET will probably produce an Environmental Management Framework (EMF) for the biosphere reserve (as was done for the other biosphere reserves), which will subsequently be incorporated in municipal Integrated Development Plans (IDPs), so that the existence of the biosphere reserve can be taken into account when new developments are considered. This links to one of the advantages of having the biosphere reserve, which is to better enable LEDET to become involved in proposed developments in the area and to intervene if these should impact on the biosphere reserve too negatively. The idea behind this is to promote integrated development efforts and for the Vhembe Biosphere Committee to act as an interested and affected party that has a say when it comes to proposed developments. A further advantage of the biosphere reserve is the possibility of more job opportunities as a result of an increased focus on cultural and eco-tourism, as well as bioprospecting. The latter activity would involve getting traditional healers to make use of biodiversity in their products and to possibly market these. LEDET is therefore trying to raise awareness about the biosphere among communities, and is also interacting with the respective municipalities in the area to enable them to also engage in awareness raising activities. One of the problems that

LEDET faces is lack of budget to become more involved in the implementation side of the biosphere e.g. putting up water tanks or solar panels to benefit the communities living there. LEDET is planning to apply for some funding to give towards the biosphere reserves in the Limpopo Province.

Another key actor in relation to the Vhembe Biosphere Reserve is the Vhembe Biosphere Committee, which is constituted by the Department of Environmental Affairs and consists of a group of stakeholders. This committee, made up of individuals on a voluntary basis, aims to raise funds for the biosphere reserve and works towards the integration of the natural environment and cultural assets of the people to jointly promote the sustainable utilization of the area. There is also a focus on empowering local communities to take responsibility for the development and conservation functions of the areas in which they live and on creating partnerships between local communities, private sector and government, in order to share knowledge and co-operate in the use of its natural resources. Eventually the committee will be registered as a Section 21 company. The chairperson of the committee believes that involving the people who live in the biosphere in conservation efforts is the only way to make a success of conservation. In particular, it appears that various traditional leaders in the area have bought into the idea of the biosphere reserve, which is key to getting community support and buy-in. A big challenge the Biosphere Committee faces is lack of funding and its members not being able to contribute to it fulltime.

The Vhembe Biosphere Reserve actor network consists of a loose conglomeration of actors and properties who collectively are meant to better control the development that goes on in the area. The Biosphere seems to be suffering from some teething problems, but overall its two main proponents LEDET and the Vhembe Biosphere Committee seem to be taking the responsibility of engaging with and involving stakeholders and communities in the activities of the biosphere reserve very seriously.

4.5 Commonalities between the three actor networks

All three of these actor networks have a common denominator in the form of LEDET that is involved to differing degrees in the management of all three case study areas. The Department of Environmental Affairs (DEA) at the national level is responsible for advising LEDET and monitoring LEDET's activities and implementation efforts as well as their compliance with existing legislation. DEA is responsible for the overall conceptualisation and oversight of

programmes such as the People and Parks Programme and biosphere committees, but does not get involved in management support at the provincial level. This is often a problem for LEDET, which, as already stated, is understaffed and underfunded. Furthermore, DEA allocates money to each province, whereupon the provincial treasury decides how to distribute that money between its different provincial departments. Health and education are usually priorities, and usually receive more funding than the environment.

The relationship between provincial and national government therefore seems to be a complicated one, with national government dispensing funding and providing an oversight and monitoring function, but not lending enough support to provincial government institutions, even though they really seem to require it.

5. Strategies and Recommendations

The above analysis demonstrates that there are multiple challenges in ensuring that conservation areas within the Mutale River case study area serve the dual purpose of biodiversity conservation and sustaining livelihoods. The analysis has also shown that there is a strong connection between the law and policy architecture and the relevant actors networks; with both being dependent upon one other. The “perfect” law and policy architecture will not be implemented unless it is sensitive to the dynamics between key stakeholder groups and interests. Similarly, actor networks will not be able to develop shared agendas without there being an equitable and legitimate law and policy framework in place by which competing interests can be reconciled.

More specifically the analysis has indicated a number of issues where the existing law and policy architecture, and its implementation (through actors and institutions) might be strengthened.

At present Makuya Park, Lake Fundudzi and the UNESCO Vhembe Biosphere all suffer from not having formal status under any national law, either NEMPA or the National Heritage Resources Act. As the analysis shows, there are multiple reasons for the lack of legal status. Within the case of the UNESCO Vhembe Biosphere Reserve, the reserve *per se* falls out with the criteria of established protected areas under NEMPA. In the cases of Makuya and Lake Fundudzi, both satisfy the criteria for NEMPA, and the Lake would also fall under the National Heritage Resources Act. However, it has been shown that competing interests, lack

of capacity in provincial government, and a complex legal process are the root causes by which these sites have not been afforded legal status.

The lack of legal status is a serious concern. Evidence shows that without formal declaration, threats from tourist development and mining are omnipresent. Additionally, the lack of legal arrangements between the range of stakeholders within Makuya Park has led to mistrust, tensions and claims of inequitable benefit sharing. Past practices and conflicts amongst Makuya stakeholders make the process of establishing an agreement based on principles of community based natural resources management difficult.

Two key relationships must be addressed for Makuya to be managed in an equitable and legitimate manner. Firstly, a co-management agreement must be established, which pursuant to NEMPA, provides an effective balance between the communities, traditional authorities and government. The need for such an arrangement is not in dispute, but the analysis of actor networks demonstrates that the drive towards agreement has been delayed due to resistance from the communities. For this resistance to be overcome, expectations over who will benefit from the park, and how, must be reconciled. Fundamental to this process will be to establish a transparent and equitable mechanism by which benefits from the park filter down to the *entire* community. Brokering such agreement may require third party intervention, which is able to reconcile competing expectations from government, traditional authorities and the communities. A further important aspect of this process will be to manage expectations concerning the benefits that might accrue from community based management of the park.

Another key relationship that must be managed is between Makuya and the Kruger National Park. As noted in the actor network analysis, different policies – especially relating to hunting – have led to tensions between Kruger and Makuya management authorities. The lack of a clear memorandum of understanding between Kruger and Makuya raises the risk of such tensions. Addressing the issues will be difficult, whilst hunting is permitted in the Makuya Park. Given that there is no fence between the two parks, trying to manage opposing policies, is inevitably likely to lead to difficulties. If Makuya is promoted, as being part of the Kruger National Park, and the Greater Limpopo Transfrontier Conservation Area, the justification for having opposing policies on hunting becomes even more problematic. While at a minimum, a clear memorandum of understanding between Kruger and Makuya is needed, aligning Makuya more closely with Kruger might lead to greater benefits in terms of additional

funding, scientific and technical assistance, raised profile, and so forth. Such advantages would have to be outweighed against the loss of hunting concession revenue.

A clear recommendation for Makuya Park and Lake Fundudzi is that they should be formally declared as a matter of urgency. However, as the analysis has shown, power asymmetries amongst key stakeholders, and a complex legal process, means that such a process is still likely to be lengthy even if prioritized – as Makuya has been in LEDET. How therefore can the process be strengthened? One option would appear to be by raising the profile of the protected areas to national and even international status. Makuya is adjacent to the Kruger National Park, and forms part of the GLTFCA, accentuating these facts may help accelerate the process of declaration. Similarly, a question could be raised over whether Lake Fundudzi might be afforded some international recognition, for example, as a UNESCO World Heritage Site. Clearly, there are a number of unique characteristics of the Lake, which could be the basis for building a case around.

A further recommendation would be to strengthen the legal protection afforded to conservation areas that are in the process of being formally declared – this would be especially important given that formal declaration is such a lengthy process. One way in which such legal protection could be strengthened, would be to clearly include areas such as Makuya in the category of “an area ... regarded as having been declared”, under Section 1 of NEMPA. However, the latter process should not be seen as a means to circumvent the lengthy but crucial process by which the relevant land is vested with the rightful owners, and stakeholders are consulted. A better option might therefore be to provide *interim* legal protection to areas that are in the process of gaining formal status under the relevant legislation. Such protection could provide a moratorium on activities that would threaten the conservation of the area, at least until the formal process of declaration has been undertaken.

In addition, the analysis of Lake Fundudzi, Makuya Park and the Vhembe Biosphere Reserve has demonstrated that, whilst these areas all constitute conservation areas within the Mutale River Basin, the existing and potential governance frameworks applicable to them vary. The Vhembe Biosphere Reserve is even by its title called a “reserve” and has received international status through UNESCO. However, the Biosphere does not receive any protection – in its own right - under NEMPA. The only protection that is afforded to it comes from the “core areas” that have already been declared under NEMPA, the National Heritage

Resources Act, or other relevant legislation. It may be that, because the Vhembe Biosphere Reserve fall outside these legal instruments, the profile of the reserve suffers. For example, more advertising, signage, active campaigns, etc would certainly help raise the profile of the Biosphere Reserve, but to date the attention placed on the Reserve has been limited. In the case of Lake Fundudzi, the site could potentially fall under the National Heritage Resources Act or NEMPA, but currently has not been formally declared under either. Similarly, Makuya could fall under NEMPA or the Limpopo Environmental Management Act, but has not been declared under either. This therefore raises the question of whether a adopting more coherent national legal framework for “conservation areas” might help streamline a number of interrelated declaration process. Ultimately, greater coherency might also shorten the lengthy process of declaring an area protected, and ensure that certain areas do not fall through the cracks.

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