

**Legal governance of the commons in
promoting social-ecological resilience in
transfrontier conservation areas in South
Africa**

CLA Machaka

 **orcid.org/0000-0002-1282-9292**

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Promoter: Prof WJ Du Plessis

Co-Promoter: Prof W Du Plessis

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Student number: 24711357

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ABSTRACT

Transfrontier conservation Areas (hereafter TFCAs) are defined as areas or components of large ecological regions that straddle the boundaries of two or more countries, encompassing one or more protected areas, as well as multiple resource use areas. This study discusses the South African side of three selected TFCAs namely the Kgalagadi, the Greater Mapungubwe and the Great Limpopo. Within the South African side of these TFCAs, there are Contract Parks, which are parcels of land that are owned by local community groups and private entities in the area. The Contract Parks are as a result of contractual agreements to jointly manage the land between the government through its representative South African National Parks and the land owners. The communities in the Contract Parks are reportedly experiencing various challenges. The Contract Parks within the TFCAs can be regarded as commons as they consist of a broad set of resources, natural and cultural that many people share. The term commons usually refers to a common-pool resource that is managed by a defined community, based on rules devised from their customs. The communities within these commons are facing challenges in relation to the limited recognition of local community members of the possible contribution they can make in governing the commons, human-wildlife conflict, and climate change impacts in the form floods and droughts which have an impact on natural resources within these areas. The TFCAs in terms of which the commons are located, as social-ecological systems consist of areas in which human beings and nature interact. The actions of the community, as resource users may therefore have an impact on whether or not social-ecological resilience within the TFCAs is enabled. Social-ecological resilience refers to the capacity of a linked social-ecological system to adapt, absorb and transform in the face of disturbance and still maintain functions through the cooperation of all resource stakeholders including local communities. The link between TFCAs as commons and as a social-ecological system may necessitate a different form of governance that was initially anticipated when the TFCAs were established. This study will determine how adaptive governance links to social-ecological resilience. This is done by analysing the legal system governing the

commons in the selected TFCAs which includes management documents for the commons, park management plans, AU and SADC law and South African law and policies. To determine whether this legal system recognises the commons contains provisions recognising social-ecological resilience and adaptive governance. It is provided that the AU and SADC law do not provide for a commons as such, but contain provisions within them that South African law can apply to the commons. Further it is gathered that the South African law and management plans recognise provisions that apply to the commons and social-ecological resilience and adaptive governance. However, these provisions are found fragmented across the law. For this reason, the study's principal recommendation is the amendment of NEMPAA which is the main legislation that applies to the South African side which contains the commons, to have clear provisions recognising adaptive governance with respect to the commons.

Keywords: South Africa, commons, transfrontier conservation areas, social-ecological resilience, adaptive governance, KTFCA, GLTFCA, GMTFCA

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LIST OF ABBREVIATIONS

AMCEN	African Ministerial Conference on the Environment
AU	African Union
CBNRM	Community- Based Natural Resource Management
COP	Conference of the Parties
CPA Act	Communal Property Association Act
CPA	Communal Property Association
CPRs	Common-Pool Resources
DEAT	Department of Environmental Affairs and Tourism
EBA	Ecosystem-Based Adaptation
EIP	Environmental Implementation Plan
EMCAs	Environmental Management Ccooperation Agreements
EMP	Environmental Management Plan
GEF	Global Environment Facility
GLTFCA	Great Limpopo Transfrontier Conservation Area
GMTFCA	Greater Mapungubwe Transfrontier Conservation Area
IGRFA	Intergovernmental Relations Framework Act 13 of 2005
IPILRA	Interim Protection of Informal Rights Act 31 of 1996
JMB	Joint Management Board
JPMP	Joint Park Management Plan

KNP	Kruger National Park
KTFC	Kgalagadi Transfrontier Conservation Area
LEMA	Limpopo Environmental Management Act
MNCA	Mpumalanga enacted the Mpumalanga Nature Conservation Act
NBF	National Biodiversity Framework
NBSAP	National Biodiversity Strategy and Action Plan
NCNCA	Northern Cape Nature Conservation Act
NEMA	National Environmental Management Act 107 of 1998
NEMBA	National Environmental Management Biodiversity Act 10 of 2004
NEMPAA	National Environmental Management Protected Areas Act 57 of 2003
NFA	National Forest Act
NPAES	National Protected Areas Expansion Strategy for South Africa
PAF	Park Advisory Forum
PELJ	Potchefstroom Electronic Journal
PNR	Provincial Nature Reserve
RBS	Regional Biodiversity Strategy
SADC	South African Development Community
SAJELP	South African Journal of Environmental Law and Policy
SAM	Strategic Adaptive Management
SANBI	South African National Biodiversity Institute

SANParks	South African National Parks
SBZ	Strategy on Buffer Zones for National Parks
SO	Strategic Objective
SWI	Shared Watercourse Institutions
TEM	Transworld Energy and Mineral Resources
TFCA	Transfrontier Conservation Area
TLGFA	Traditional Leadership and Governance Framework Act
TTC	Trilateral Technical Committee

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CHAPTER 1: Introduction

1.1 Introduction

South Africa has joined the global initiative to protect transboundary resources through the establishment of a number of transfrontier conservation areas (hereafter TFCAs) within its borders.¹ According to the Southern African Development Community's (hereafter SADC) *Protocol on Wildlife Conservation and Law Enforcement*, a TFCA is defined as "the area or component of a large ecological region that straddles the boundaries of two or more countries, encompassing one or more protected areas as well as multiple resource use areas."² South Africa hosts six TFCAs, namely the Kgalagadi TFCA between South Africa and Botswana,³ the Greater Mapungubwe TFCA between South Africa, Botswana and Zimbabwe,⁴ the Great Limpopo TFCA between South Africa, Mozambique and Zimbabwe,⁵ the Lubombo TFCA between Mozambique,

¹ Sinthumule *Land Use Change* 4. Sinthumule states that: "TFCAs have a long history that dates back to the creation of the first TFCA in 1934 between Canada and the United States and Canada known as the Waterton-Glacier National Park." See also Malan *Improved Decision-Making processes for the Transfrontier Conservation Areas of Southern Africa* 21. Malan states that "the Waterton-Glacier National Park is a combination of the Glacier National Park of Montana and the Waterton Lakes National Park of Southern Alberta. The objective of establishing the TFCA was to promote good and peaceful relationships between Canada and the United States."

² *Southern African Development Community Protocol on Wildlife Conservation and Law Enforcement*, 1999.

³ https://www.environment.gov.za/projectsprogrammes/transfrontier_conservation_areas states that: "The Kgalagadi TFCA is made up of South Africa's Kalahari Gemsbok National Park and Botswana's Gemsbok National Park. The bilateral agreement leading to the establishment of Kgalagadi TFCA was signed in 1999 between Botswana's Department of Wildlife and National Parks and South African National Parks, and the park was officially opened in May 2000."

⁴ https://www.environment.gov.za/projectsprogrammes/transfrontier_conservation_areas states that: "The Greater Mapungubwe TFCA is situated at the confluence of the Shashe and Limpopo Rivers, the Greater Mapungubwe Transfrontier Conservation Area measures 5,909 km² and encompasses areas in Botswana, South Africa and Zimbabwe. A Memorandum of Understanding towards the establishment of the TFCA was signed in 2006, and an interim coordinator appointed. The reserve adopted its official name in 2009, changing from Limpopo/Shashe to the Greater Mapungubwe TFCA."

⁵ https://www.environment.gov.za/projectsprogrammes/transfrontier_conservation_areas states that: "The Great Limpopo TFCA began with a meeting between President Joaquim Chissano of Mozambique and the president of the World Wide Fund For Nature (South Africa) in 1990. In 1991 the Mozambican government used funds made available by the Global Environment Facility (GEF) for feasibility studies toward the implementation of a TFCA pilot project. The 1992 Peace Accord in Mozambique and the South African democratic elections of 1994 paved the way for the political processes to proceed towards making this idea a reality. Feasibility studies initiated by the World Bank culminated in a pilot project that was launched with GEF funding in 1996. This process led to the signing of trilateral agreement in Skuza, South Africa on 10 November 2000 by Minister Helder Muteia, Minister of Agriculture and Rural Development in Mozambique; Minister Valli Moosa, Minister

Swaziland and South Africa,⁶ the Richtersveld TFCA between South Africa and Namibia,⁷ and the Maloti-Drakensberg TFCA between South Africa and Lesotho.⁸ Some of the driving forces for the establishment of the TFCAs are their potential to promote the economic development of impoverished local communities living adjacent to the TFCAs,⁹ tourism,¹⁰ and improving sustainable resource management.¹¹ Lubbe¹² states that "sustainable environmental governance is central to the accomplishment of sustainable resource management. Successful environmental governance requires an integrated and structured process of decision making and the actual implementation of decisions."¹³ The thesis will focus on the Kgalagadi TFCA (hereafter KTFCA), the Great Limpopo TFCA (hereafter GLTFCA) and the Greater Mapungubwe TFCA (hereafter GMTFCA).

of Environmental Affairs and Tourism in South Africa, and Minister Francisco Nhema, Minister of Environment and Tourism in Zimbabwe. The Skukuza Agreement signalled the three nations' intent to establish and develop a transfrontier park and surrounding conservation area, at that time called Gaza-Kruger-Gonarezhou. Finally, on 9 December 2002, the heads of state of Mozambique, South Africa and Zimbabwe signed an international treaty at Xai-Xai, Mozambique to establish the Great Limpopo Transfrontier Park."

⁶ https://www.environment.gov.za/projectsprogrammes/transfrontier_coservation_areas provides that: "the Lubombo Transfrontier Conservation Area spans an area of 10,029 km² and borders Swaziland, Mozambique and South Africa. It is one of the most striking areas of biodiversity and lies in the Maputo land Centre of Endemism that includes five Ramsar sites: Ndumo Game Reserve, the Kosi Bay System, Lake Sibaya, the Turtle Beaches and Coral Reefs of Tonga land and Lake St Lucia (Africa's largest estuary)."

⁷ https://www.environment.gov.za/projectsprogrammes/transfrontier_coservation_areas states: "The Richtersveld TFCA, measures 5 920 km² and spans some of the most spectacular arid and desert mountain scenery in southern Africa. It includes the /Ai/Ais Hot Springs Game Park in Namibia and the Richtersveld Park in South Africa. On 17 August 2001 the South Africa's Minister of Environmental Affairs and Tourism, Valli Moosa, and his Namibian counterpart, Minister of Environment and Tourism Philemon Malima, signed a memorandum of understanding that paves the way for the establishment of a transfrontier conservation park (TFCP) in the Ai-Ais-Richtersveld area."

⁸ https://www.environment.gov.za/projectsprogrammes/transfrontier_coservation_areas provides that: "The Maloti-Drakensberg TFCA and Development Area covers 14 740 km² of the mountains that straddle the north-eastern border between Lesotho and South Africa. It comprises a transboundary World Heritage Site, the Maloti-Drakensberg Park, composed of the Sehlathebe National Park in Lesotho and the uKhahlamba Drakensberg National Park in South Africa. The Memorandum of Understanding towards the establishment of the Maloti-Drakensberg TFCA was signed on 11 June 2001."

⁹ Wolmer 2003 *Journal of Southern African Studies* 264. See also Sinthumule *Land Use Change* 3. See also Jones *Transboundary Conservation in Southern Africa* 3.

¹⁰ Wolmer 2003 *Journal of Southern African Studies* 264. See also Sinthumule *Land Use Change* 3. See also Jones *Transboundary Conservation in Southern Africa* 3.

¹¹ Lubbe *Straddling Borders and Legal Regimes* 127. See also Hamilton *et al Transborder Protected Area Cooperation* 3.

¹² Lubbe *Straddling Borders and Legal Regimes* 127. See also Hamilton *et al Transborder Protected Area Cooperation* 3.

¹³ Lubbe *Straddling Borders and Legal Regimes* 127. See also Katerere "Review of the Legal and Policy Framework for Transboundary Natural Resource management in Southern Africa" 17.

1.2 Challenges within the selected TFCAs

The communities in and around the TFCAs are reportedly experiencing various challenges, such as inter-community conflict, governance issues, non-recognition of the contribution that the local community members can make to these TFCAs, and the impact of climate change on their livelihoods and on the protected area itself, amongst others.

On the South African side of the KTFCA, there is reportedly intra-group conflict among the Khomani San community members and Mier community members.¹⁴ The Khomani San today, due in large part of their history of forced removal and separation are not a homogenous society but a collection of different people brought together to institute a land claim.¹⁵ The two communities were successful in the claim and as part of the land restitution programme were awarded land within the KTFCA. The KTFCA functions as a joint 'Contract Park' and is jointly managed by South African National Parks (hereafter SANParks) as the principal conservation authority, and the Khomani San and Mier communities through a Joint Management Board (hereafter JMB).¹⁶ The two communities were also awarded land adjacent to the KTFCA as part of the land restitution programme.¹⁷

The intra-group conflict springs from different views the so-called Traditionalists and the Modern San over the utilisation of land.¹⁸ The Traditionalists want the land to be used for traditional purposes such as hunting, the gathering of medicinal and food plants, and their cultural connection to land, such as walks and rituals. In contrast, the Modern San want the land to be used for livestock and housing.¹⁹ The Traditionalists are of the opinion that "specific pieces of land should be protected to preserve their

¹⁴ Thondhlana *et al* 2011 *Environmental Research Letters* 6-7.

¹⁵ Thondhlana *et al* 2011 *Environmental Research Letters* 6.

¹⁶ See para 3.3.1 below.

¹⁷ See para 3.3.1 below.

¹⁸ See para 3.3.2 below.

¹⁹ Thondhlana *et al* 2011 *Environmental Research Letters* 6. Thondhlana *et al* state that "the traditionalist group wishes that the original agreement according to which land was designated for specific pieces of livestock, traditional use and wildlife farming, stand." See also Thondhlana *Dryland Conservation Areas* 148.

heritage and that livestock destroys culturally important plant species such as medicinal plants."²⁰

An additional challenge occurring in the KTFCA is reportedly the absence of indicators of good governance, namely accountability and the perception of benefit sharing among the San and Mier communities.²¹ According to the interviews conducted by Thondhlana *et al*/ regarding accountability, "a majority of the Khomani San claims that leaders of the Communal Property Association (hereafter CPA)²² generally made decisions relating to the Contract Park in the KTFCA without informing the community members and only told them what was going to happen."²³ It is also reported that many members of the Khomani San community have no knowledge of the financial reports relating to their income-generating activities in the KTFCA.²⁴

With respect to the Mier community, it is reported that "very few of the community members are aware of the existence of the Contract Park in the KTFCA, game farms and how these land parcels are governed."²⁵ The few households who know about the existence of the Contract Park, do not know the amount of "conservation-related income generated from the park and the game farms."²⁶ Further, "there is also a general lack of interest by the Khomani San and Mier communities to participate in conservation-related meetings as incentives are low or non-existent at the household level and so cannot compensate for curtailed resource use."²⁷ The Khomani San claim that the absence of incentives has driven them to unsustainable resource use practices due to this mismanagement. Illegal harvesting of the protected *Camel Thorn* tree species to sell to tourists in the KTFCA is one example.²⁸

²⁰ Thondhlana et al 2011 *Environmental Research Letters* 6. See also Thondhlana *Dryland Conservation Areas* 148.

²¹ See para 3.3 below.

²² See para 3.3 below.

²³ See para 3.3 below.

²⁴ See para 3.3 below.

²⁵ See para 3.3 below.

²⁶ See para 3.3 below.

²⁷ See para 3.3 below.

²⁸ See para 3.3 below. Also see Bocchino "Rural people in South African Transfrontier Conservation Areas" 308.

Furthermore, according to the Kalahari Gemsbok Park National Plan that manages activities on the South African side of the KTFCA, a major challenge is in the form of human-wildlife conflict²⁹ and climate change impacts in the form of droughts and flooding.³⁰ It is foreseen that these impacts will have an impact on plant and animal health. In addition, "these extreme weather events could also have a significant impact on tourist experience, visitor numbers, tourism products and infrastructure, since the tourism industry is quite fragile and dependent on the environmental state of the region."³¹

The GLTFCA is also experiencing its own challenges that impact on its governance and social-ecological resilience. Similar to the case in the KTFCA on the South African side of the GLTFCA there is a Contract Park that is in existence as a result of the restitution of land awarded to the Makuleke community in this area.³² As is the case in the KTFCA, SANParks and the Makuleke CPA jointly manage this area in terms of a JMB.³³ However, based on interviews conducted by Maluleke in the area, "there appears to be challenges regarding access to information as the majority of the community members generally have minimal knowledge of the agreement between SANParks and the Makuleke CPA over the governance of their land, as well as the relationship between the Makuleke community and SANParks regarding the Contract Park."³⁴ Also, there are reported challenges around accountability because based on interviews "a majority of the community members indicated that they did not meaningfully participate in the choice of community projects, as these projects were only presented to them after the JMB had ratified the decision taken on the kind of projects that the community would

²⁹ Section 5.2.6 of the Kalahari Park Management Plan, 2016-2026 states that: "over time there has been an increase in the contact between visitors and animals, due to access and availability of food to animals directly in the form of littering or enticing animals to come closer to them or in indirectly in the form of leaving food unattended. This has resulted in some animals particularly baboons and monkeys, being habituated and subsequently losing their fear of humans. This situation has also resulted in these animals acting aggressively to get their food directly from humans or from their storage facilities thereby causing damage in some cases to both humans and property. The human induced problem listed above has also caused other avian species, for example glossy starlings *Lamprotornis nitens* and hornbills *Tockus* becoming a nuisance at rest camps and picnic spots, where they have become bold enough to raid food from plates while humans are dining."

³⁰ Section 5.2.6 of the Kalahari Park Management Plan, 2016-2026.

³¹ Section 5.2.6 of the Kalahari Park Management Plan, 2016-2026.

³² See para 3.4 below.

³³ See para 3.4 below.

³⁴ See para 3.4 below.

undertake on their land."³⁵ These include concession contracts with private companies that the community had to conclude, and only a few had an opportunity to decide with whom the Makuleke community would conclude the agreement.³⁶ An additional challenge occurring in the GLTFCA is the exclusion of the Makuleke community members and members of the JMB, from the decision-making of the Transfrontier Park in the area, even though their land is included on the South African side of the GLTFCA's Contact Park.³⁷

According to Anthony,³⁸ "human-wildlife conflict is also common among the local communities living on the South African side of the GLTFCA. This is evident through the movement of animals, mostly lions, leopards and hyenas out of the GLTFCA to find easy prey by feeding off the livestock belonging to the local communities living adjacent to the GLTFCA."³⁹ Elephants cause problems when they move outside the GLTFCA to eat Marula fruits or crops, grown by local communities.⁴⁰ This damage caused by wildlife in the GLTFCA represents a very real and tangible threat to the social-ecological resilience in terms of crop and livestock losses as well as property damage in the area.⁴¹ In response to these attacks, the communities in the area have started killing wildlife, and this has led to a decline in the population of carnivores in the area."⁴²

Other challenges in the GLTFCA relate to climate change such as rising temperatures, shifts in seasonal weather patterns and water shortages,⁴³ contrasted with floods and persistent drought leading to wildlife and domestic animal deaths.⁴⁴

³⁵ See para 3.4 below.

³⁶ See para 3.4 below.

³⁷ Maluleke *Rethinking Protected Area Co-management* 148. Also see Bocchino "Rural people in South African Transfrontier Conservation Areas" 300.

³⁸ Anthony *et al* "Conflict in Limpopo Province, South-Africa" 230-237. Also see Petterson *Conservation for Development* 13; Bocchino "Rural people in South African Transfrontier Conservation Areas" 308.

³⁹ Anthony *et al* "Conflict in Limpopo Province, South-Africa" 230-237. See also Petterson *Conservation for Development* 13.

⁴⁰ Anthony *et al* "Conflict in Limpopo Province, South-Africa" 230-237. See also Petterson *Conservation for Development* 13.

⁴¹ Anthony *et al* "Conflict in Limpopo Province, South-Africa" 230-237. See also Petterson *Conservation for Development* 13.

⁴² Anthony *et al* "Conflict in Limpopo Province, South-Africa" 230-237. See also Petterson *Conservation for Development* 13.

⁴³ See <https://www.giz.de/en/downloads/giz2015-en-sadc-tfca-factsheet.pdf>.

⁴⁴ See <https://www.giz.de/en/downloads/giz2015-en-sadc-tfca-factsheet.pdf>.

The Greater Mapungubwe Transfrontier Conservation Area (hereafter GMTFCA) is also experiencing challenges that impact on governance and social-ecological resilience. On the South African side of the GMTFCA, there is a 'Contract Park' as a result of a contractual agreement between farm owners and SANParks, in terms of which some of the farmland in this area is leased for conservation purposes to SANParks.⁴⁵ As a result of conservation and farming occurring side by side in the same area, there is conflict between conservationists and irrigation farmers over land use in the area.⁴⁶ Commercial irrigation and conservation are two land-use types which are reportedly incompatible.⁴⁷ This is intensified by farmer-wildlife conflict, especially due to elephants causing damage to irrigation farms in the area.⁴⁸ The irrigation farmers have complained that SANParks does not maintain the fence along the Botswana-South African border, and as a result, elephants coming from Botswana and Zimbabwe cause damage to irrigation farms.⁴⁹ They also have not received compensation for the damage.⁵⁰ SANParks reportedly claims that it is maintaining the Park fences regularly and that the elephants come from Botswana through the Limpopo River since the veterinary fences are no longer maintained.⁵¹

An additional challenge is the loss of livelihood and housing for farmworkers, who make up the local communities who work and live on farms adjacent to the GMTFCA.⁵² In the Mapungubwe area, farmworkers depend entirely on commercial irrigation farmers as their primary employers.⁵³ The game farms and the national park do not have that

⁴⁵ See para 3.5 below. Sinthumule *Land Use Change* 149 states that "the current Mapungubwe National Park is a fragmented landscape with a number of commercial irrigation farms that are within the park."

⁴⁶ See para 3.5 below.

⁴⁷ See para 3.5 below.

⁴⁸ See para 3.5 below. Also see Bocchino "Rural people in South African Transfrontier Conservation Areas" 308.

⁴⁹ See para 3.5 below.

⁵⁰ See para 3.5 below.

⁵¹ See para 3.5 below.

⁵² See para 3.5 below.

⁵³ Sinthumule *Land Use Change* 149. Also see Bocchino "Rural people in South African Transfrontier Conservation Areas" 293.

many employment opportunities.⁵⁴ The sale of the farms to expand the GMTFCA in the area may directly affect the workers, resulting in job losses and loss of income.⁵⁵

According to interviews conducted by Sinthumule,⁵⁶ "the farmworkers who reside permanently in Mapungubwe are unaware of the GMTFCA and consequently do not attend meetings held by the Trilateral Technical Ccommittee (hereafter TTC) of the GMTFCA."⁵⁷ The farmworkers' lack of knowledge and participation over the GMTFCA shows that community members – who are important stakeholders and have a direct interest in the resources within the GMTFCA – have largely been ignored in the process of its establishment.⁵⁸ Some members of the communities do not have representatives in the meetings of the Trilateral Technical Committee of the GMTFCA, whereas private landowners do. This limits the ability of local communities to influence decision-making in the establishment of the GMTFCA."⁵⁹

Furthermore, according to the Mapungubwe Park National and World Heritage Site Management Plan, that manages activities within the South African side of the GMTFCA, other challenges include climate change impacts in the form of droughts and flooding.⁶⁰ Similar to the KTFCA and GLTFCA, these impacts will have an impact on plant and animal health. In addition, extreme weather events could have a major negative on tourism "since the tourism industry is quite fragile and dependent on the environmental state of the region."⁶¹

The challenges that are occurring among the local communities in the GMTFCA seem to include the exclusion of local communities in the governance structure, farmer-wildlife conflict and climate change-related challenges, amongst others.

⁵⁴ Sinthumule *Land Use Change* 130.

⁵⁵ Sinthumule *Land Use Change* 130.

⁵⁶ See para 3.5 below.

⁵⁷ See para 3.5 below.

⁵⁸ See para 3.5 below. Also see Bocchino "Rural people in South African Transfrontier Conservation Areas" 301.

⁵⁹ See para 3.5 below.

⁶⁰ Section 10.8.11 of the Mapungubwe Park Management Plan, 2019-2029.

⁶¹ Section 10.8.11 of the Mapungubwe Park Management Plan, 2019-2029.

1.3 Commons

The Contract Parks within the TFCAs can be regarded as commons as they consist of a broad set of resources, natural and cultural that many people share.⁶² The term 'commons' usually refers to a common-pool resource (land) that "is managed by a defined community of commoners in terms of self-determined norms, practices and traditions that commoners themselves devise for governing the commons."⁶³ In a commons, there is collective action on the part of the community that manages land to establish their own rules over how their land is governed.⁶⁴ A commons usually have "boundaries, rules, social norms and sanctions against free riders⁶⁵ or unauthorised users to ensure that they do not benefit from the resources."⁶⁶

According to Hess *et al*,⁶⁷ "commons analysts often find it necessary to differentiate between a commons as a resource or resource system and a commons as a property rights regime." Ostrom⁶⁸ defines common-pool resources (hereafter CPRs) as "natural resources with several attributes. Firstly, it is costly to exclude individuals from using the resource through physical barriers or legal instruments. Secondly, the benefits consumed by one individual subtract the benefits that area has available to others."⁶⁹ Further, "national, regional or local governments, communal groups, private individuals or corporations can all be 'owners' of a common-pool resource."⁷⁰

With regard to the first attribute of CPRs, Hess *et al*⁷¹ argue that, "unless effective instrumental mechanisms are established to exclude non-authorised or non-contributing beneficiaries from appropriating CPRs, free riding (that is access to by unauthorised users to the CPRs) can be expected." In terms of the second attribute Ostrom states

⁶² See paras 3.3, 3.4 and 3.5 below.

⁶³ See para 2.2 below.

⁶⁴ See para 2.2 below.

⁶⁵ See para 2.2 below.

⁶⁶ See para 2.2 below.

⁶⁷ Hess *et al* *Understanding Knowledge as a Commons* 5.

⁶⁸ Ostrom *et al* 1999 *Science* 278. See also Ostrom and Hess *Private and Common Property Rights* 8. See also Ostrom *Governing the Commons* 30; Ostrom, Gardner and Walker *Rules, Games and Common-pool Resources*; Feeny *et al* "The tragedy of the Commons: twenty-two years later" 1-19.

⁶⁹ Ostrom *et al* 1999 *Science* 278. See also Ostrom and Hess *Private and Common Property Rights* 8. See also Ostrom *Governing the Commons* 30; Ostrom, Gardner and Walker *Rules, Games and Common-pool Resources*; Feeny *et al* "The tragedy of the commons: twenty-two years later" 1-19.

⁷⁰ See para 2.4 below.

⁷¹ Hess and Ostrom "Ideas, Artifacts, and Facilities: Information as A Common-Pool Resource" 116.

that "due to their nature of subtractability, CPRs are potentially subject to problems of congestion, overuse, pollution or degradation and potential destruction, unless harvesting or usage limits are devised and enforced."⁷² Common property regime, on the other hand, refers to the institutional arrangement for the cooperative use, management and ownership (maybe) of the resources.⁷³ They can be communal, mixed, or private.⁷⁴ The other form of property regime is that of open access it is a situation of non-property, where no one owns or regulates a resource, it is free and open to everyone and no one has a legal right to exclude anyone from using the resource.⁷⁵

The attributes of the commons also necessitate reference to the design principles that should be present to ensure social-ecological resilience in commons. Ostrom⁷⁶ developed eight design principles for the sustainable management of commons which are the following:

- (i) "clearly defined boundaries;
 - (ii) congruence between appropriation and provision rules and local conditions;
 - (iii) collective-choice arrangements allowing for the participation of most of the appropriators in the decision-making process;
 - (iv) effective monitoring by monitors who are part of or accountable to the appropriators;
 - (v) graduated sanctions for appropriators who do not respect community rules;
 - (vi) conflict resolution mechanisms that are cheap and easy to access;
 - (vii) minimal recognition of rights to organise (for example, by the government);
- and

⁷² Ostrom *Governing the Commons* 32. See also Ostrom and Hess *Private and Common Property Rights* 9.

⁷³ See para 2.2 below.

⁷⁴ See para 2.2 below.

⁷⁵ Ostrom and Hess *Private and Common Property Rights* 6–7.

⁷⁶ Ostrom *Governing the Commons* 90.

(viii) multiple layers of nested enterprises within larger networks."

Based on considerable research on commons, Ostrom suggests that "robust or longterm sustainable institutions are characterised by most of the design principles."⁷⁷ In addition to this, Ostrom⁷⁸ states that "fragile institutions tend to be characterised by only some of these design principles and failed institutions are characterised by very few of these principles." In this study, it will be investigated whether the design principles are present in the commons within the selected TFCAs discussed in this thesis.

1.4 Social-ecological resilience

Traditionally, communities in commons heavily relied on the abundant natural resources that surrounded them for their survival.⁷⁹ As a result, communities within Africa's commons generally appreciate the value of natural resources and have incorporated nature into their worldviews, belief systems and practices.⁸⁰ These communities developed practices that were directed towards enhancing ecosystem services and maintaining their social-ecological resilience, for example, customs that created small-scale disturbances like pulse hunting, where animals were heavily hunted during certain months and left to recover for the rest of the year.⁸¹

Social-ecological resilience finds its origins from the resilience theory.⁸² The resilience theory was introduced by Holling in the field of ecology as a result of predation studies that he carried out in the 1960s and early 1970s.⁸³ In his studies, Holling "discovered that ecosystems could flip between more than one stable state in that they were both complex and adaptive and thus characterised by surprise and inherent

⁷⁷ Ostrom *Governing the Commons* 90.

⁷⁸ Ostrom *Governing the Commons* 90.

⁷⁹ Fabricius *et al Resources and Rural Development* 3.

⁸⁰ Fabricius *et al Resources and Rural Development* 3.

⁸¹ Fabricius *et al Resources and Rural Development* 4.

⁸² See para 2.6 below.

⁸³ Holling *Resilience and Stability of Ecological Systems* 1–23. See also Humby 2014 *Seattle Journal of Environmental Law* 5; Folke *Resilience: The Emergence of a Perspective for Social-ecological Systems Analysis* 253-267.

unpredictability."⁸⁴ Based on his findings, Holling defined resilience as "the ability of a system to maintain its structure and patterns of behaviour in the face of disturbance."⁸⁵

Later on, the theory of resilience came to influence fields outside of ecology, particularly the social sciences.⁸⁶ The understanding of resilience was also broadened to reflect a greater appreciation that living systems are dynamic and continually developing, that global systems are changing rapidly and that returning to a previous state of equilibrium might not be a viable long-term strategy.⁸⁷ This means taking into account the numerous influences of both the human and natural world, which are inextricably linked.⁸⁸ This is the basis of the conceptual frameworks of coupled human and natural systems or socio-ecological systems.⁸⁹ The socio-ecological school of thought on resilience put a greater focus on renewal, regeneration, reorganisation, innovation, social learning and development following a disturbance as means to describe how systems move from one state to another.⁹⁰

Authors on social-ecological resilience have concluded that human activities that adversely affect ecological resilience, such as reduction of biodiversity and the exploitation of resources, as well as anthropogenic climate change, are increasingly causing regime shifts within the natural environment often to less desirable and degraded conditions.⁹¹

The selected TFCAs as social-ecological systems consist of areas in which human beings and nature interact.⁹² The actions of the community as resource users may therefore

⁸⁴ Holling *Resilience and Stability of Ecological Systems* 1–23. See also Humby 2014 *Seattle Journal of Environmental Law* 5; Folke *Resilience: The Emergence of a Perspective for Social–Ecological Systems Analysis* 253–267.

⁸⁵ Holling *Resilience and Stability of Ecological Systems* 1–23. See also Humby 2014 *Seattle Journal of Environmental Law* 5; Folke *Resilience: the emergence of a perspective for social–ecological systems analysis* 253–267.

⁸⁶ See para 2.6 below.

⁸⁷ See para 2.6 below.

⁸⁸ See para 2.6 below.

⁸⁹ See para 2.6 below.

⁹⁰ See para 2.6 below.

⁹¹ Folke et al 2004 *Annual Review of Ecology, Evolution, and Systematics* 557–581. See also Allen and Holling *Ecological Resilience, Biodiversity and Scale* 6–18.

⁹² See para 2.6 below.

have an impact on whether or not social-ecological resilience within the TFCAs is enabled. As stated in the Kalahari National Gemsbok Park's Park Management Plan:⁹³

Protected areas are increasingly viewed as complex social-ecological systems. The social-ecological coupling acknowledges multiple interactions that take place between people and natural landscapes – even fenced-off protected areas are influenced by external social issues. These systems are regarded as complex because the results of interactions between the social and ecological components, as well as between components within each of these sub-systems, are often unpredictable.

The link between TFCAs as commons and as a social-ecological system may necessitate a different form of governance that was initially anticipated when the TFCAs were established. This study will determine how adaptive governance links to social-ecological resilience.

Adaptive governance, a polycentric form of governance extends the ambit of governance across multiple, overlapping levels of control such as government, local community, civil society and private sector, and is regarded to be able to facilitate resilience in social-ecological systems.⁹⁴ Furthermore, how would it relate then to the TFCAs under discussion? In other words – it is multiple layers – the governance structures of TFCAs is multi-layered in that national, provincial, local government, the private sector, civil society as well as communities are all involved in the governance of TFCAs and need to facilitate resilience in the TFCAs as social-ecological systems.

1.5 Legal framework pertaining to adaptive governance in the TFCAs

TFCAs straddle the boundaries of more than one country, and as such, it is a regional phenomenon. South Africa is a member of the African Union and the South African Development Community (SADC). As such South Africa is obliged to conform to the

⁹³ Section 3.2 of the Kalahari Gemsbok National Park Management Plan of 2016-2026 (hereafter Kalahari Park Management Plan).

⁹⁴ See para 2.6.3 above.

conventions and protocols of these institutions and have to harmonise its legislation in accordance with the protocols.⁹⁵

The African Union documents, namely the *African Charter on Human and Peoples' Rights* (hereafter *African Charter*)⁹⁶ and the *Revised Convention on the Conservation of Nature and Natural Resources* (hereafter *Revised African Convention*) make provision for biodiversity conservation.⁹⁷ The *SADC Protocol on Wildlife Conservation and Law Enforcement*⁹⁸ provides for the conservation and sustainable use of wildlife resources, excluding forestry and fishery resources, while the *SADC Protocol on Forestry*⁹⁹ regulates all activities relating to the development, conservation, sustainable management and utilisation of all types of forests, trees and trade in forest products in the region. The *SADC Protocol Tourism, SADC Protocol on Environmental Management and Sustainable Development*,¹⁰⁰ *SADC Regional Biodiversity Strategy*¹⁰¹ and the *SADC*

⁹⁵ Nicholson 2008 *Fundamina* 51. Also see Ruppel "Regional Economic Communities and Human Rights in East and Southern Africa" 280; Ferreira 2010 *THRHR* 608-628.

⁹⁶ *African Charter*, 1981. South Africa signed and ratified the *African Charter* on 1996-07-09.

⁹⁷ *Revised African Convention*, 2003. See <https://www.au.int/web/sites/default/files/treaties/7782-sl> [Accessed 20 June 2018]. South Africa signed it on "2012-04-18, ratified on 2013-04-23 and deposited on 2013-05-15. The *Revised African Convention* is now in force since the 29th of March 2003." Lubbe *A Legal Framework for transfrontier biodiversity conservation* 133 states that: "after Recognising that the *African Convention* was out of date with modern developments in environmental law, a revision was required. Agencies involved in this revision were, *inter alia*, the United Nations Environment Programme, the International Union for Conservation of Nature and Natural Resources and the Organisation for African Unity. A draft revised African Convention of Nature and Natural Resources was presented at the Fifth Inter-Agency Meeting in 2002. On July 11 another version of the revision was laid to table in Maputo, Mozambique and subsequently adopted. "To date 42 states have signed and 16 have ratified it and 16 states have deposited. The *Revised African Convention* entered into force 30 days after the deposit the 15th instrument of ratification <http://www.africaunion>."

⁹⁸ See <http://www.sadc.int/about-sadc/overview/sa-protocols/> states that: "the *SADC Protocol on Wildlife Conservation and Law Enforcement* South Africa signed it on 1999-08-14, entered into force on 2003-10-30 and adopted in Maputo Mozambique."

⁹⁹ See <http://www.sadc.int/about-sadc/overview/sa-protocols/> states that: "the *SADC Protocol on Forestry* South Africa signed it on 2002-08-03, entered into force on 2009-07-17 and adopted in Luanda, Angola."

¹⁰⁰ See https://pmg.org.za/files/190305SADC_Enviro_Protocol.pptx: "the *SADC Protocol on Environmental Management and Sustainable Development* was signed by President Zuma on 2014-08-18. The Protocol has not entered into force as yet. In terms of South Africa ratifying the Protocol, the ratification process of the *SADC Protocol on Environmental Management* must be approved by Parliament in terms of section 231(2) of the Constitution following national stakeholder consultations. The Protocol was presented to the National Assembly on 23 August 2018, which approved the Protocol."

¹⁰¹ See http://www.wcs-ahead.org/documents/sadc_strategy.pdf.

*Regional Biodiversity Action Plan*¹⁰² provide for a framework for cooperation towards sustaining biodiversity in the region.

1.5.1 National framework

TFCAs are established and governed in terms of the *National Environmental Management: Protected Areas Act* 57 of 2003 (hereafter NEMPAA), and forms the framework legislation for protected areas in South Africa.¹⁰³ It is based on section 24 of the *Constitution of the Republic of South Africa*, 1996 (hereafter Constitution)¹⁰⁴ that provides for the environmental right. The *National Environmental Management Act* 107 of 1998 (hereafter NEMA)¹⁰⁵ provides principles of environmental management that apply to all organs of state that make decisions that may affect the environment, while the *National Environmental Management: Biodiversity Act* 10 of 2004 (hereafter NEMBA)¹⁰⁶ deals with biodiversity conservation and protection. The *National Forest Act* (hereafter NFA)¹⁰⁷ deals with the sustainable management and protection of forests. None of these laws, however, address adaptive governance within TFCAs as such.¹⁰⁸

The *Communal Property Associations Act* 28 of 1996 (hereafter CPA Act) established the CPAs that govern some of the areas adjacent to the selected TFCAs and will also be investigated to determine whether it addresses adaptive governance.

¹⁰² SADC Regional Biodiversity Action Plan, 2013

¹⁰³ The NEMPAA is the main instrument regulating protected areas within South Africa. In terms of the NEMPAA protected areas include amongst others, "national parks, nature reserves, world heritage sites and mountain catchment areas. The NEMPAA is applicable to the selected TFCAs (on the South African side) discussed in this thesis, as they are home to a various forms of protected areas. "The South African side of the KTFCA contains Kalahari Gemsbok National Park. See also, Paterson 2010 *SALJ* 510 which states that: "South African side of the GLTFCA contains Kruger National Park; Paterson 2010 *SALJ* 510 states that: on the South African side of the GMTFCA there is Mapungubwe National Park and Venetia Limpopo Nature Reserve."

¹⁰⁴ *Constitution of the Republic of South Africa*, 1996.

¹⁰⁵ The NEMA is regarded South Africa's environmental framework legislation.

¹⁰⁶ The NEMBA "regulates the various resources found on land, as well as wildlife and forestry within the selected TFCAs which falls within the ambit of biodiversity. The objective of the NEMBA is to provide for the management and conservation of South Africa's biodiversity within the framework established by the NEMA. An additional objective of the NEMBA is the protection of species and ecosystems that warrant national protection."

¹⁰⁷ 84 of 1998 (NFA).The NFA regulates the protection of all forms of forests and trees within the country.

¹⁰⁸ See paras 4.3 and 4.4 below.

It seems uncertain whether the South African legal system governing the commons addresses social-ecological resilience. There is, therefore, a need to determine whether the South African legal system governing the commons within its TFCAs can enable social-ecological resilience through adaptive governance.

1.6 Problem Statement

Based on the challenges occurring in the selected TFCAs outlined in the preceding paragraphs, and the analysis of documents that constitute the South African legal system governing its TFCAs, it is suggested that as a problem of the study that currently, TFCAs are founded on legal frameworks that are not grounded in commons and resilience theory.¹⁰⁹ Hence to solve this problem, it is advanced that the elements of commons, social-legal resilience and adaptive governance may provide necessary approaches to governing TFCAs.

1.7 Research Question

This leads to the research question whether the South African legal system governing the commons within its TFCAs can enable social-ecological resilience through adaptive governance?

1.8 Aim and Objectives

The main aim of this study is to determine whether the South African legal framework governing the commons within its TFCAs addresses social-ecological resilience through adaptive governance. In order to reach the aim, further, sub-objectives are formulated:

- (a) To develop a theoretical foundation for the commons, social-ecological resilience and adaptive governance.
- (b) To analyse the constitutive documents, and subsequent management plans in the TFCAs to establish whether they recognise the commons and social-ecological resilience.

¹⁰⁹ See para 1.1 above read with Chapters 3 and 4 below.

- (c) To analyse African regional law and the South African legislation that pertains to the commons and social-ecological resilience.
- (d) To draw conclusions from the legal analyses informed by the factual situation in the selected TFCAs, and to provide recommendations concerning the legal measures necessary to foster social-ecological resilience in the commons in TFCAs through adaptive governance.

1.9 Research methodology

To answer the research question, this thesis employs a legal analytical research design through a desktop study.¹¹⁰ This entails an analysis of the theoretical background of the commons and social-ecological resilience using legal and non-legal sources from disciplines such as ecology and geography, thereby exhibiting the relationship between these concepts.¹¹¹ The thesis undertakes a desktop case study of the South African side of three selected TFCAs, namely the KTFCA, GLTFCA and GMTFCA. The three TFCAs discussed in this thesis have been specifically selected as they are hampered by challenges in the form of governance, human-wildlife conflict, land use conflict, environmental degradation and climate change-related problems which may have an impact on the commons and social-ecological resilience in these areas.¹¹² It was not possible to conduct an empirical study in the selected TFCAs,¹¹³ and therefore this study relies on empirical research that was undertaken by other researchers.

In an attempt to resolve the challenges occurring in the selected TFCAs, this study is based on non-legal sources to develop principles and elements constituting the commons and social-ecological resilience in order to assess the governing documents of the commons in selected TFCAs and regional, sub-regional and national law to determine whether the commons and social-ecological resilience are recognised within the legal framework that govern the commons in TFCAs.¹¹⁴ In analysing the various

¹¹⁰ Venter *Legal Research* 37-45.

¹¹¹ Chapter 2 below.

¹¹² See paras 1.2.1, 1.2.2 and 1.2.3 above.

¹¹³ Due to a lack of funding and non-award of bursaries to non-South Africans, as well as the personal circumstances of the student.

¹¹⁴ Chapters 2, 3, 4 and 5 below.

laws and governing documents, the study also consults authoritative material, which includes academic journals and other legal and non-legal scholarly writings.

The African Union and SADC law analysed in this thesis do not constitute a commons or address social-ecological resilience. However, the language in these documents can be related to some of these principles and elements. It is an academic exercise to determine how the South African legal framework could refer to the principles and elements of the commons and social-ecological resilience that appear in these documents. The study uses the analysis of the theory and legal frameworks to propose recommendations that can promote social-ecological resilience in the TFCAs as commons.

In this study, chapter two provides a theoretical background to of the concepts of commons, social-ecological resilience and adaptive governance.

Chapter three determines which areas within the KTFCA, GLTFCA and GMTFCA on the South African side can be regarded as commons and provides an analysis of the relevant governance documents and management plans that pertain to the commons against the principles and elements of the commons and social-ecological resilience framework distilled in Chapter two.

Chapter four provides an analysis of the African regional sub-regional law and South African law based on the elements of the commons framework and social-ecological resilience distilled in Chapter two.

Chapter five concludes the study and makes recommendations with regard to how the South African legal system governing the commons within its TFCAs can enable social-ecological resilience through adaptive governance.

CHAPTER 2: Theoretical background: Commons, social-ecological resilience and adaptive governance

2.1 Introduction

This chapter aims to develop a theoretical foundation for the commons, social-ecological resilience and adaptive governance. In doing so, this chapter will firstly discuss the origins of the concept of common-pool resources, common property regimes and the commons, based on the work of various scholars in this regard. After that, the theoretical foundations of social-ecological resilience and adaptive governance in the discipline of ecology will be analysed. This analysis is important as it links with the research question how can the South African legal system facilitate the governance of the commons in TFCAs to enable social-ecological resilience through adaptive governance?

2.2 Clarification of the concepts

Conceptual confusion and conflicting usage pertaining to theoretical terms applied to commons reportedly persist in the literature.¹¹⁵ Ostrom *et al* ¹¹⁶ state that, "the three basic confusions need to be untangled in the debate on the theory of commons. The source of this confusion relates to the differences among, common-pool resources, common property regime and commons."¹¹⁷ It is therefore necessary that clear definitions of these concepts be presented initially and used consistently in the thesis.

2.2.1 Common-pool resources

Ostrom¹¹⁸ defines 'common-pool resources' (hereafter CPRs), as "natural resources with the following attributes: firstly, that they share with public goods the difficulty of developing physical or institutional means of excluding beneficiaries from resource use."

¹¹⁵ Sibhatu *An Institutional Approach to Appropriation and Provision in the Commons* 12. Also see Ostrom and Hess *Private and Common Property Rights* 6.

¹¹⁶ Ostrom and Hess *Private and Common Property Rights* 5-10.

¹¹⁷ Ostrom and Hess *Private and Common Property Rights* 5-10.

¹¹⁸ Ostrom *et al* 1999 *Science* 278. See also Ostrom and Hess *Private and Common Property Rights* 8. Also see Ostrom *Governing the Commons* 30. Ostrom, Gardner and Walker *Rules Games and Common-pool Resources*; Feeny *et al* "The tragedy of the Commons: Twenty-two years later" 1 –19.

Du Plessis¹¹⁹ states that "excludability is about the control of access."¹²⁰ The difficulty of exclusion implies that means should be devised to prevent a free-rider problem; that is, to keep unauthorised users from benefiting from the resource."¹²¹ Secondly, "the products or resource units from CPRs share with private goods the attribute that one person's consumption subtracts from the quantity available to others."¹²² Du Plessis¹²³ states that "subtractability implies that the exploitation of the resource by one user affects the ability of the other users to exploit the resource."¹²⁴ As such, "CPRs are subject to problems of congestion, overuse and potential destruction, unless harvesting or use limits are devised and enforced."¹²⁵ It can therefore be gathered that "CPRs refer to the physical qualities of a natural resource and not to the social institution human beings have attached to them."¹²⁶

2.2.2 Common property regime

McKean¹²⁷ defines a common property regime as "a particular property rights arrangement in which a group of resource users share rights and duties toward a resource." These terms refer to social institutions and not to any inherent natural or physical qualities of the resource.¹²⁸ This institutional arrangement pertains to the cooperative (shared, joint, collective) use, management and sometimes ownership of natural resources.¹²⁹ As such a common property regime may be what is required for the management of common-pool resources.¹³⁰

¹¹⁹ Du Plessis 2011 *PELJ* 59.

¹²⁰ Du Plessis 2011 *PELJ* 59.

¹²¹ Du Plessis 2011 *PELJ* 59.

¹²² Ostrom and Hess *Private and Common Property Rights* 9.

¹²³ Du Plessis 2011 *PELJ* 59.

¹²⁴ Du Plessis 2011 *PELJ* 59.

¹²⁵ Ostrom and Hess *Private and Common Property Rights* 9.

¹²⁶ McKean *Common Property* 6.

¹²⁷ McKean *Common Property* 1.

¹²⁸ McKean *Common Property* 8.

¹²⁹ McKean *Common Property* 8.

¹³⁰ McKean *Common Property* 8.

2.2.3 Commons

Weston *et al*¹³¹ define commons as "a governance system for using and protecting all the creations of nature and society that we inherit jointly and freely and that is held in trust for future generations." A commons typically consists of non-state resources that are controlled and managed by a community of commoners, directly or by the delegation of authority.¹³² These community governed resources are known as CPRs.¹³³ According to Bollier,¹³⁴ "we speak of commons when the CPRs are governed by a community according to a set of social protocols. At times these social protocols are written down in agreement form between commoners that sets out the principles of governance for the commons in question."¹³⁵

The focus of this thesis will be on the concept of commons as the three case studies discussed in Chapter 1, pertain to CPRs that is land that is owned by identified commoners in these areas and which is governed subject to the social protocols that are devised by them.¹³⁶

2.3 Background to the commons

Concerning the commons, the origins of the concept of the 'commons' will be discussed firstly, whereafter the concept of the tragedy of the commons and criticism against the use of this concept, state centred policies, the evolution of the common-pool resource theory and the governance of common-pool resources are discussed.

2.3.1 Origins of the commons

The concept of the commons is believed to have developed in early England as a necessary part of the agrarian economy.¹³⁷ There is historical evidence that as early as 688, English settlements used an open field system of agriculture that involved rotation

¹³¹ Weston and Bollier *Green Governance* 124.

¹³² Wijdekop "A Human Right to Commons" 7.

¹³³ Wijdekop "A Human Right to Commons" 7. See 2.2.1 above.

¹³⁴ Bollier *Think Like a Commoner* 15. Also see Wijdekop "A Human Right to Commons" 8.

¹³⁵ Wijdekop "A Human Right to Commons" 8.

¹³⁶ See Chapter 1 and 3 for a detailed discussion on this

¹³⁷ Butler 1982 *William and Mary Law Review* 853.

in the use of common fields, meadows and pastures.¹³⁸ A typical commons village in medieval England entailed two hundred to five hundred inhabitants; it was usually seigneurial with a Lord and manor, but at times it consisted entirely of free tenants (villagers) without the presence of a Lord.¹³⁹ The land was subdivided into arable (cultivated) and non-arable portions.¹⁴⁰ The arable land consisted of two or more large fields, in which various crops were planted, and some fields were left to lay fallow and were used as temporary pasture land.¹⁴¹ The arable land was subdivided into numerous narrow and irregular strips separated from one another by mounds, furrows or other slight markers.¹⁴² The common or non-arable wasteland comprised of grazing meadows, untilled strips between the grassland beside roads leading to open fields, uncleared lands or courtyards around which houses were built.¹⁴³

The commons were of great economic importance for the grazing of livestock as well as providing peat, firewood and timber and other products.¹⁴⁴ The entire village was responsible for managing the commons; the villagers devised rules for land use in the commons directed towards environmental protection.¹⁴⁵ Stinting was the most popular method of protecting the commons.¹⁴⁶ It involved rationing the number of livestock that villagers could graze in the commons.¹⁴⁷ The villagers were not able to add additional livestock as the community appointed shepherds who were responsible for herding the livestock.¹⁴⁸ Other restrictions in the commons entailed: (a) prohibiting trampling by livestock; (b) removal of straw and compost; (c) removal of weeds and (d) burying of animals dying of infectious diseases deep down in the commons.¹⁴⁹ Further, the commons were regularly inspected by the villagers and occasionally by a delegation from a manorial court.¹⁵⁰ Lords could be presented to a manorial court and fined for

¹³⁸ Butler 1982 *William and Mary Law Review* 853.

¹³⁹ Allen "Agriculture during the Industrial Revolution" 99-100.

¹⁴⁰ Allen "Agriculture during the Industrial Revolution" 99-100.

¹⁴¹ Allen "Agriculture during the Industrial Revolution" 99-100.

¹⁴² Allen "Agriculture during the Industrial Revolution" 99-100.

¹⁴³ Donahue "The English Ecological System" 61.

¹⁴⁴ Donahue "The English Ecological System" 61.

¹⁴⁵ Levine 1986 *Journal of Community Psychology* 84.

¹⁴⁶ Conca *et al Green Planet Blues* 50.

¹⁴⁷ Conca *et al Green Planet Blues* 50.

¹⁴⁸ Levine 1986 *Journal of Community Psychology* 87. Also see Cox "No Tragedy on the Commons 49.

¹⁴⁹ Kerridge "The Farmers of Old England" 53-54.

¹⁵⁰ Levine 1986 *Journal of Community Psychology* 87.

abusing the commons.¹⁵¹ It can thus therefore be deduced that in medieval England, commons were shared resources that were collectively managed by the community based on rules the community devised.

The commons of medieval England declined from the thirteenth century onwards due to several factors such as abuse of the rules governing the commons, improved agricultural methods and the introduction of enclosure.¹⁵² Enclosure, involved the removal of communal rights, controls or ownership over a piece of land and its conversion into a state where the owner had sole control over its use and of access to it.¹⁵³ The process of enclosure could be accomplished when Lord bought the land rights as well as rights in the commons to accomplish exclusive rights of use and to ensure an increase in the value of the land.¹⁵⁴

The other method of enclosure derived their authority from a private Act of Parliament, one of the General Enclosure Acts passed from 1836 onwards, or written formal agreements signed by the Lord and the villagers.¹⁵⁵ After enclosure, the land could remain open or fenced off.¹⁵⁶ Enclosure was therefore not necessarily the fencing of land but determining the borders of land for ownership or exclusive use rights.¹⁵⁷ The effect of the enclosures was that it deprived poor people access to land upon which their livelihoods depended upon.¹⁵⁸ This exclusion of the rural population from accessing land that they previously relied on for survival is evident in the concept of the tragedy of the commons outlined in the paragraphs below.

¹⁵¹ Levine 1986 *Journal of Community Psychology* 87.

¹⁵² Cox "No Tragedy on the Commons" 49. Also see Blome *The Gentleman's Recreations* 254.

¹⁵³ Roger *et al* *Enclosure Maps* 1. Also see Blome *The Gentleman's Recreations* 254; Neeson *Commoners: Common Right, Enclosure and Social Change in England* 156; Curtier *The Enclosure and Redistribution of Our Land* 242

¹⁵⁴ Roger *et al* *The Enclosure Maps* 9. Also see Blome *The Gentleman's Recreations* 254; Neeson *Commoners: Common Right, Enclosure and Social Change in England* 156; Curtier *The Enclosure and Redistribution of Our Land* 242.

¹⁵⁵ Roger *et al* *The Enclosure Maps* 9. Also see Blome *The Gentleman's Recreations* 254; Neeson *Commoners: Common Right, Enclosure and Social Change in England* 156; Curtier *The Enclosure and Redistribution of Our Land* 242.

¹⁵⁶ Roger *et al* *The Enclosure Maps* 4.

¹⁵⁷ Roger *et al* *The Enclosure Maps* 4.

¹⁵⁸ Roger *et al* *The Enclosure Maps* 4.

2.3.2 Concept of the tragedy of the commons

Hardin¹⁵⁹ "in 1968 discussed the tragedy of the commons originating from the overexploitation of natural resources due to overpopulation." To illustrate the structure of his theory, "Hardin asked the reader to envision a pasture that is open to all."¹⁶⁰ After that, Hardin examined his theory from the perspective of a rational herdsman.¹⁶¹ Hardin stated that "each herdsman receives a direct benefit from his animals and suffers delayed costs from the deterioration of the commons when he and others overgraze."¹⁶² The herdsman "is motivated to add more and more animals because he receives the direct benefit of his animals and bears only a share of the costs resulting from overgrazing." Harding¹⁶³ concludes his theory by stating the following:

Therein is the tragedy. Each man is locked into a system that compels him to increase his herd without limit in a world that is limited. Ruin is the destination toward which all men rush, each pursuing his own best interest in a society that believes in the freedom of the commons.

Hardin points out that "apart from grazing land, places like national parks and oceans are also susceptible to tragedy if there is overexploitation of resources in such commonly owned areas."¹⁶⁴ It can be deduced that "the grazing commons example used by Hardin, is perceived to be a metaphor for a general problem of overpopulation."¹⁶⁵ This is so, as the concept of the tragedy of the commons has come

¹⁵⁹ Hardin 1968 *Science* 1244 states that "the idea for his theory from the Oxford economist William Forster Lloyd, who in 1833 wrote: "Why are the cattle on a common so puny and stunted? Why is the common itself so bareworn and cropped so differently from the adjoining enclosures? If a person puts more cattle into his own field, the amount of the subsistence which they consume is all deducted from that which was at the command of his original stock; and if, before, there was no more than a sufficiency of pasture, he reaps no benefit from the additional cattle, what is gained one way, being lost in another. But if he puts more cattle on a common, the food which they consume forms a deduction which is shared between all the cattle, as well that of others as his own, and only a small part of it is taken from his own cattle." Also see Ostrom "Commons Dilemmas" 103; Ostrom "Tragedy of the Commons" 1; Sibhatu *An Institutional Approach to Appropriation and Provision in the Commons* 21-22.

¹⁶⁰ Hardin 1968 *Science* 1244. Also see Ostrom *Governing the Commons* 2; Ostrom "Commons Dilemmas" 103; Ostrom "Tragedy of the Commons" 1; Sibhatu *An Institutional Approach to Appropriation and Provision in the Commons* 21-22.

¹⁶¹ Hardin 1968 *Science* 1244.

¹⁶² Hardin 1968 *Science* 1245.

¹⁶³ Hardin 1968 *Science* 1245.

¹⁶⁴ Hardin 1968 *Science* 1245.

¹⁶⁵ Hardin 1968 *Science* 1245. Also see Ostrom "Commons Dilemmas" 103; Ostrom "Tragedy of the Commons" 1; See also Ostrom *Governing the Commons* 3.

to "symbolise the degradation of the environment expected when many individuals use a scarce resource in common."¹⁶⁶ Hardin points out that "the tragedy of the commons may be averted through privatisation or government control of resources."¹⁶⁷

Scholars, such as Heilbroner, agree with Hardin's tragedy of the commons theory, by stating that "iron governments or perhaps military governments are necessary to achieve control over ecological problems."¹⁶⁸ In a less draconian view, Erenfeld suggests that "if private interests cannot be expected to protect the public domain, then external regulation by public agencies, governments or international authorities is required."¹⁶⁹ Stillman points out that "those who perceive a strong central government (as a strong ruler) as a solution implicitly assumes that the ruler will be wise and ecologically aware."¹⁷⁰ Smith agrees that privatisation may avert the tragedy of the commons by stating that "the only way to avoid the tragedy of the commons in natural resources and wildlife is to end the common property system by creating a system of private property rights."¹⁷¹

2.3.3 Criticism of the tragedy of the commons concept

Several environmentalists and social scientists have criticised the idea of the tragedy of the commons using empirical evidence and theory. According to Fenny *et al*,¹⁷² "Hardin's prediction of the 'tragedy of the commons' that overexploitation of resources held in common will ultimately lead to overexploitation of the resources, is based on a flawed assumption that commons provide open access." This proposition is supported by Vink,¹⁷³ who suggests that "a common property regime is one in which there is an institutional arrangement according to which resources are assigned to an identifiable

¹⁶⁶ Baden *et al* *Managing the Commons* 96. Ostrom "Tragedy of the Commons 1; Ostrom *Governing the Commons* 3 states that "The tragedy of the commons has been used to describe such diverse problems as the Sahelian famine in the 1970s, the problem of acid rain, the organisation of the Mormon Church, the ability of the US Congress to limit its own capacities to overspend, urban crime, public sector-private sector relationships in modern economics, the problems of international cooperation and communal conflict in Cyprus."

¹⁶⁷ Hardin 1968 *Science* 1245.

¹⁶⁸ Heilbroner 1975 *Social Forces* 301. Also see Ostrom *Governing the Commons* 9.

¹⁶⁹ Erenfeld *Conserving Life on Earth* 80. Also see Ostrom *Governing the Commons* 9.

¹⁷⁰ Stillman "The Tragedy of the Commons" 13. Also see Ostrom *Governing the Commons* 12.

¹⁷¹ Smith 1981 *CATO Journal* 450. Also see Ostrom *Governing the Commons* 3.

¹⁷² Feeny 1990 *Human Ecology* 2.

¹⁷³ Vink *An institutional approach to livestock development in Southern Africa* 87.

group of users, who have the right to exclude non-members of the group from using the resource and also set rules over the usage rate of resources by members of the group."¹⁷⁴ On the other hand, open access is characterised by a situation in which no one owns or regulates a resource and where the resource is free and open to use.¹⁷⁵ As a result, scholars argue that "Hardin's tragedy of the commons results typically not from an inherent failure of common property management, but from an institutional failure to control access to resources and to make and enforce internal decisions for collective use."¹⁷⁶ Sibhatu¹⁷⁷ suggests that "when a commons degenerates into an open access regime due to institutional collapse for various reasons, Hardin's predictions are most likely to occur."

Hardin proposed government control and privatisation as a means of avoiding the inevitable destruction of resources used in common.¹⁷⁸ Hardin stressed that "by not acting in one of those two ways may yield to the damage of the commons."¹⁷⁹ The two options proposed by Hardin as a means of averting the tragedy have been investigated in terms of their ability to sustainably managed resources.¹⁸⁰ The results from the investigations have shown that these two prescribed methods have not led to the successful management of resources, as discussed in the paragraphs below.

According to Sharma,¹⁸¹ "case studies in Africa show that various means of averting the tragedy of the commons proposed by Hardin namely 'nationalisation' and 'privatisation' were implemented and had unsuccessful results." In the case of 'nationalisation', this essentially refers to "government control of resources, which was proposed by Hardin to be a means of averting the tragedy of the commons."¹⁸² For instance, "in Mali, pastoral resources of the inland delta of river Niger were taken over by the

¹⁷⁴ Sibhatu *An Institutional Approach to Appropriation and Provision in the Commons* 33-34.

¹⁷⁵ Sibhatu *An Institutional Approach to Appropriation and Provision in the Commons* 34.

¹⁷⁶ McGinnis and Ostrom "Design Principles for local and Global Commons" 6. Also see Ostrom "The Commons Dilemmas" 1; Sibhatu *An Institutional Approach to Appropriation and Provision in the Commons* 35.

¹⁷⁷ Sibhatu *An Institutional Approach to Appropriation and Provision in the Commons* 35.

¹⁷⁸ Hardin 1968 *Science* 1245.

¹⁷⁹ Hardin 1968 *Science* 1245.

¹⁸⁰ Hardin 1968 *Science* 1245.

¹⁸¹ Sharma "Critique of the Tragedy of the Commons" 5.

¹⁸² Hardin 1968 *Science* 1245.

government."¹⁸³ Further, "previously, under customary practice dryland flood pastures were divided into thirty territories allocated to sub-clans of Fulani pastoralists and outsiders could access these areas after payment of a fee."¹⁸⁴ In addition, "the resource managers for each territory set the dates on which crossings into pastures could take place."¹⁸⁵ However, "this 'nationalisation' brought an inflexible, untracked policy according to which animals moved onto the flood pastures when they were dry, resultantly preventing the regeneration of the pasture." The case of Mali "proves that 'nationalisation' as a means of averting the tragedy of the commons is questionable due to the reason that pastoralists in Mali could not check outsiders' access to their pastureland as they previously could when they governed their pastureland as a commons."

Feeny *et al*¹⁸⁶ observed that "there is abundant evidence, contrary to Hardin's views on the tragedy of the commons, on the ability of social groups to design, utilise and often adapt resourceful mechanisms to allocate use rights among members and manage resources sustainably." The medieval English commons which featured in Hardin's paper, like many other historic and contemporary commons, were often subject to comprehensive systems of regulation. Many scholars have noted in passing that "the commons operated successfully for several hundred years in medieval England and have questioned if a tragedy of the sort described by Hardin ever occurred."¹⁸⁷

A real-life example of this is the forest and meadow commons in Japanese villages which were the subject of elaborate regulations. Village leaders fixed opening and closing dates for the harvest of certain products from the commons.¹⁸⁸ Within some Japanese villages, thatch was harvested collectively, and bundles were then randomly assigned to each household.¹⁸⁹ This scheme enabled the aggregate level of resource use to be controlled while giving each household an incentive to be reasonably careful

¹⁸³ Lane *et al* *New Directions in Rangeland and Resource Tenure and Policy* 1.

¹⁸⁴ Sharma "Critique of the Tragedy of the Commons" 5.

¹⁸⁵ Sharma "Critique of the Tragedy of the Commons" 5.

¹⁸⁶ Feeny *et al* 1990 *Human Ecology* 10.

¹⁸⁷ McKean and Cox 1982 *Environmental Review* 70.

¹⁸⁸ McKean and Cox 1982 *Environmental Review* 70.

¹⁸⁹ McKean and Cox 1982 *Environmental Review* 70.

in its harvesting effort.¹⁹⁰ Guards patrolled the commons in order to prevent poaching by villagers and outsiders.¹⁹¹ Written rules provided a graduated schedule of fines for violators and rules established by villagers ensured sustainable use of common lands for generations.¹⁹²

2.4 State centred policies and the evolution of the common-pool resource theory

2.4.1 Post Hardin

According to Schlager,¹⁹³ "soon after Hardin's theory that government or private control would be effective in averting a tragedy of the commons, several governments acted forcefully. For instance, in the United States the national government, for the first time, adopted strict laws establishing national standards for clean air and water."¹⁹⁴ In addition, the Canadian government created a Department of Fisheries and Oceans to establish national fishery regulation and enforcement as a means of protecting and enhancing fish stocks and improving fisheries welfare.¹⁹⁵ In developing countries such as Nepal, Honduras, Philippines, India and Tanzania, resources that the local community once held in common were nationalised.¹⁹⁶ International aid organisations also invested heavily in state capacity building so that governments would have the ability to impose and enforce regulations.¹⁹⁷ The dominant policy paradigm was state centred control and regulation.¹⁹⁸

However, increasing dissatisfaction eventually emerged with the state-centred policy programmes that were being pursued. Schlager¹⁹⁹ states that "in many instances where national governments and centralised bureaucratic agencies intervened, ownership was claimed, extensive infrastructure built or management regimes imposed, the results

¹⁹⁰ McKean and Cox 1982 *Environmental Review* 70.

¹⁹¹ McKean and Cox 1982 *Environmental Review* 70.

¹⁹² McKean and Cox 1982 *Environmental Review* 70.

¹⁹³ Schlager *Common-Pool Resource Theory* 148.

¹⁹⁴ Schlager *Common-Pool Resource Theory* 148.

¹⁹⁵ Schlager *Common-Pool Resource Theory* 148.

¹⁹⁶ Schlager *Common-Pool Resource Theory* 149.

¹⁹⁷ Schlager *Common-Pool Resource Theory* 149.

¹⁹⁸ Schlager *Common-Pool Resource Theory* 149.

¹⁹⁹ Schlager *Common-Pool Resource Theory* 149.

have been disappointing." There is evidence that most commercially valuable fish stocks are overharvested; government-owned and operated irrigation projects are poorly maintained and the health of many people in the world over remaining threatened by polluted air, unclean water and exposure to toxic chemicals and waste.²⁰⁰ In some instances, policymakers and analysts and citizens came to the realisation that government centred approaches, although successful at limiting and even reversing resource degradation, could not single-handedly address many environmental problems.²⁰¹

As a result of the failures of government control in successfully handling environmental issues, policy scholars in the mid-1980s began questioning the general application of models patterned after the tragedy of the commons.²⁰² Having witnessed the failure of government control proposed by Hardin, in 1985 the United States National Research Council convened a distinguished panel of scholars to investigate and report on self-governing institutional arrangements devised by appropriators (those who withdraw resources from commons) to coordinate and limit their use of shared resources within the commons.²⁰³ Ostrom emerged as one of the scholars who introduced a different way of managing the commons (as opposed to the proposals of Hardin) towards the sustainable management of resources.

According to Ostrom, "studies of community-based management systems and single-use resource management regimes have been central to the development of the commons theory, but that many of the institutional systems studied were in reality multi-level and far from simple."²⁰⁴ These multi-level systems are linked horizontally (across geographic space) and vertically (across levels of organisations).²⁰⁵ According to Ostrom²⁰⁶ "greater attention to vertical and horizontal linkages should help social actors and institutions to

²⁰⁰ Schlager *Common-Pool Resource Theory* 149.

²⁰¹ Schlager *Common-Pool Resource Theory* 149.

²⁰² Schlager *Common-Pool Resource Theory* 149.

²⁰³ Schlager *Common-Pool Resource Theory* 150.

²⁰⁴ Ostrom "Understanding Institutional Diversity" 221. See also Armitage 2008 *International Journal of the Commons* 9.

²⁰⁵ Ostrom "Understanding Institutional Diversity" 221. See also Armitage 2008 *International Journal of the Commons* 9.

²⁰⁶ Ostrom "Understanding Institutional Diversity" 221. See also Armitage 2008 *International Journal of the Commons* 9.

respond to change, adapt and cope with uncertainty by improving communication, coordination and collaboration."

Ostrom argues that "attempting to resolve dilemmas in commons, appropriators must work through three closely related issues, namely supply, commitment and monitoring."²⁰⁷ Commons dilemmas emerge because individuals in interdependent situations do not coordinate their actions, which leads to outcomes in which all appropriators are worse off. Better outcomes might be achieved if individuals devise and adopt sets of rules that coordinate the use of the shared resources within the commons."²⁰⁸

Ostrom²⁰⁹ also stated that, "when supplying institutional arrangements that may resolve commons dilemmas, appropriators are confronted with collective action problems namely, obtaining voluntary contribution of time and resources needed to identify and negotiate a set of rules acceptable to most of them."²¹⁰ Even if appropriators successfully supply a set of rules, they must follow those arrangements most of the time to make them credible and effective."²¹¹ However, in many cases, appropriators may face a temptation to disobey rules."²¹² In addressing such temptation, Ostrom proposed monitoring as a means to ensure that most appropriators are following the rules, "as effective monitoring should discourage rule-breaking and assure rule followers that they are not being taken advantage off by those who contravene the rules."²¹³

²⁰⁷ Ostrom *Governing the Commons* 90. Also see Ostrom 2000 *Swiss Political Science Review* 10; McGinnis and Ostrom "Design Principles for local and Global Commons" 8.

²⁰⁸ Ostrom *Governing the Commons* 90. Also see Ostrom 2000 *Swiss Political Science Review* 10; McGinnis and Ostrom "Design Principles for local and Global Commons" 8.

²⁰⁹ Ostrom *Governing the Commons* 90. Also see Ostrom 2000 *Swiss Political Science Review* 10; McGinnis and Ostrom "Design Principles for local and Global Commons" 8.

²¹⁰ Ostrom *Governing the Commons* 90. Also see Ostrom 2000 *Swiss Political Science Review* 10; McGinnis and Ostrom "Design Principles for local and Global Commons" 8.

²¹¹ Ostrom *Governing the Commons* 90. Also see Ostrom 2000 *Swiss Political Science Review* 10; McGinnis and Ostrom "Design Principles for local and Global Commons" 8.

²¹² Ostrom *Governing the Commons* 90. Also see Ostrom 2000 *Swiss Political Science Review* 10; McGinnis and Ostrom "Design Principles for local and Global Commons" 8.

²¹³ Ostrom *Governing the Commons* 90. Also see Ostrom 2000 *Swiss Political Science Review* 10; McGinnis and Ostrom "Design Principles for local and Global Commons" 8.

2.4.2 Ostrom's eight design principles

Ostrom undertook extensive research on commons in various parts of the world, "for instance, in Törbel in Switzerland and the villages of Hirano, Nagaike, and Yamanoka located in Japan where hybrid systems of private and communally owned institutions have been used to govern mountain meadows and forest products for hundreds of years."²¹⁴ Additionally, Ostrom undertook research in Spain, in the region of Valencia, as well as the islands of the Philippines, where there are examples of communally managed irrigation systems that have been maintained for a similar length of time.²¹⁵ As a result of the extensive research, Ostrom developed eight design principles that she said are present in sustainable long-term surviving commons. These principles also facilitate the various social actors and institutions to respond to change, adapt and cope with uncertainty by improving communication, coordination and collaboration.²¹⁶

The first "design principle - 'clearly defined boundaries' - requires that individuals or households who have the right to withdraw resource units from the common-pool resource²¹⁷ be identified, including the boundaries of the common-pool resource itself."²¹⁸ As "long as the boundaries of the resource and or the specification of individuals who can use the resource remain uncertain, no one knows what or who is being managed."²¹⁹ In addition, "without defining the boundaries of the common-pool resource and closing it to outsiders, local appropriators may face the risk that any benefits they produce by their efforts will be reaped by others who have not contributed to those efforts."²²⁰

The second "design principle - 'congruence between appropriation and provision rules and local conditions' - requires that appropriation rules restricting time, place,

²¹⁴ Ostrom *Governing the Commons* 61-88. Also see Carpenter "Alternatives to Tragedy" 8; Sibhatu *An Institutional Approach to Appropriation and Provision in the Commons* 33.

²¹⁵ Ostrom *Governing the Commons* 71. Also see Carpenter "Alternatives to Tragedy" 8; Sibhatu *An Institutional Approach to Appropriation and Provision in the Commons* 33.

²¹⁶ Ostrom "Understanding Institutional Diversity" 221. Also see Armitage 2008 *International Journal of the Commons* 9.

²¹⁷ See para 2.2 above.

²¹⁸ Ostrom *Governing the Commons* 91.

²¹⁹ Ostrom *Governing the Commons* 91.

²²⁰ Ostrom *Governing the Commons* 91.

technology, and or quantity of resource units are related to local conditions."²²¹ Additionally, "the same can be said concerning provision rules requiring labour, materials, and or money."²²² The second design principle "involves two parts, the first being congruence between the rules that assign benefits and the rules that assign costs."²²³ Regarding this, "fair rules are those that keep a relative proportionate relationship between the assignment of benefits and of costs."²²⁴ Ostrom²²⁵ "citing the case of irrigation systems, for example, states rules that allocate water to different farmers according to the amount of land they own as well as allocating the duties for costs of operation and maintenance using the same method, are usually considered fair by farmers." The "second part of the design principle is that both types of rules be well-matched to the local conditions such as soils, slope, number of diversions, crops being grown, predominant culture, ideology, customs, livelihood strategies of a community amongst many others."²²⁶

The "third design principle - 'collective-choice arrangements' - requires that individuals affected by the operational rules can participate in modifying the operational rules."²²⁷ Ostrom²²⁸ states that "if most appropriators are not involved in modifying these rules over time, the information about the benefits and costs as perceived by different participants is not fully taken into account in these efforts to adapt to new conditions and information over time." Further, "appropriators who begin to perceive the costs of their system being higher than their benefits and who are prevented from making serious proposals for change may simply begin to cheat whenever they have the opportunity."²²⁹ Additionally, "once cheating on rules becomes more frequent for some

²²¹ Ostrom *Governing the Commons* 92. Also see McGinnis and Ostrom "Design Principles for local and Global Commons" 15.

²²² Ostrom *Governing the Commons* 92. Also see McGinnis and Ostrom "Design Principles for local and Global Commons" 15.

²²³ Ostrom 2000 *Swiss Political Science Review* 11. Also see McGinnis and Ostrom "Design Principles for local and Global Commons" 15.

²²⁴ Ostrom 2000 *Swiss Political Science Review* 11.

²²⁵ Ostrom 2000 *Swiss Political Science Review* 11.

²²⁶ Ostrom 2000 *Swiss Political Science Review* 11. Also see Cox *et al* "Design Principles for Community-based Natural Resources Management" 7.

²²⁷ Ostrom *Governing the Commons* 93.

²²⁸ Ostrom 2000 *Swiss Political Science Review* 12.

²²⁹ Ostrom 2000 *Swiss Political Science Review* 12.

appropriators, others may follow suit."²³⁰ Also, "in this case, enforcement costs become very high, or the system fails."²³¹ According to Ostrom,²³² "no matter how high the level of agreement to an initial agreement is, there would be conditions that tempt some individuals to cheat even when they perceive the overall benefits of the system to be higher than the costs."²³³ Ostrom further stated that "if one person can cheat while others conform to the rules, the cheater is usually able to gain substantially to the disadvantage of others."²³⁴

The fourth design principle, 'monitoring', requires monitors who are part of the community to establish means to actively ensure that members of the community are complying to rules that have been set on the use of shared resources.²³⁵

The "fifth design principle, 'graduated sanctions', stipulates that appropriators who violate operational rules are likely to be exposed to sanctions (depending on the seriousness and context of the offence) by other appropriators, by officials accountable to these appropriators, or by both."²³⁶ According to Cox *et al*,²³⁷ "sanctions discourage participants from engaging in the excessive violation of community rules. These sanctions help to maintain community cohesion while genuinely punishing severe cases; they also maintain proportionality between the severity of violations and sanctions, similar to the proportionality between appropriation and provision rules from the second design principle."²³⁸

The "sixth design principle, 'conflict-resolution mechanisms', requires appropriators and their officials who have rapid access to low-cost local arenas to resolve conflicts among appropriators or between appropriators and officials."²³⁹ Within common-pool resource systems, it is easy to have a disagreement over interpreting a "rule that limits

²³⁰ Ostrom 2000 *Swiss Political Science Review* 12.

²³¹ Ostrom 2000 *Swiss Political Science Review* 12.

²³² Ostrom 2000 *Swiss Political Science Review* 12.

²³³ Ostrom "Reformulating the Commons" 12.

²³⁴ Ostrom "Reformulating the Commons" 12.

²³⁵ Ostrom "Reformulating the Commons" 12.

²³⁶ Ostrom *Governing the Commons* 94.

²³⁷ Cox *et al* "Design Principles for Community-based Natural Resources Management" 10.

²³⁸ Cox *et al* "Design Principles for Community-based Natural Resources Management" 10.

²³⁹ Ostrom *Governing the Commons* 100.

appropriation activities or requires input resources."²⁴⁰ Ostrom²⁴¹ states that "if these disagreements are not resolved in a low-cost and orderly manner, then appropriators may lose their willingness to conform to rules because of the ways that others interpret them in their favour."

The "seventh design principle, 'minimal recognition of rights to organise', requires that external governmental authorities do not challenge the rights of appropriators to devise their own institutions."²⁴² Regarding this principle, "appropriators frequently devise their own rules without creating formal governmental authorities for this purpose."²⁴³ Ostrom²⁴⁴ provides that "as long as the external governmental officials give minimal recognition to the legitimacy of such rules, the appropriators themselves may be able to enforce the rules themselves." However, "in cases that the external governmental officials presume that only they have the authority to set the rules, then it will be very difficult for local appropriators to sustain a rule-governed common-pool resource over the long run."²⁴⁵

The "eighth design principle, 'nested enterprises', is applicable to common-pool resources that are part of a larger system."²⁴⁶ The design principle "requires that appropriation, provision, monitoring, enforcement, conflict resolution, and governance activities are organised in multiple layers of nested enterprises."²⁴⁷ In the case of "larger common-pool resource systems with many participants, nested enterprises that range in size from small to large enable participants to solve diverse problems involving different scale economies."²⁴⁸

Ostrom, it must be emphasised, does not regard her eight design principles as a strict blueprint for successful commons because many contingents and other situational

²⁴⁰ Ostrom "Reformulating the Commons" 12.

²⁴¹ Ostrom "Reformulating the Commons" 12.

²⁴² Ostrom *Governing the Commons* 101.

²⁴³ Ostrom *Governing the Commons* 101.

²⁴⁴ Ostrom *Governing the Commons* 101.

²⁴⁵ Ostrom *Governing the Commons* 101.

²⁴⁶ Ostrom *Governing the Commons* 101.

²⁴⁷ Ostrom *Governing the Commons* 101.

²⁴⁸ Ostrom "Reformulating the Commons" 12.

factors may affect the performance of commons.²⁴⁹ Instead, she perceived the principles as general guidelines.²⁵⁰

In modern times the "term commons is often equated with the phrase 'public domain' and believed to mean a given right, a non-assigned right, an unclaimed right or an unmanaged resource."²⁵¹ A challenge in defining the term "'commons' is that it does not neatly fit into the conventional private-public dichotomy."²⁵² Commons are sometimes referred to as the private property of a group. Du Plessis²⁵³ states that "this might not always be accurate because, in many instances, commons regimes also recognise the rights of transient users such as grazing on an equal footing."²⁵⁴

From the above analysis of the theoretical foundations of the commons and the commons theory, it can therefore be gathered that the commons "are primarily about the self-determined norms, practices, and traditions that commoners themselves devise for nurturing and protecting their shared resources."²⁵⁵ The 'property rights' within the framework of the commons are divided into two groups, "namely use rights such as the right to access the resource (for example, to walk across a field), withdraw from a resource (pick wild plants), or exploit a resource for an economic benefit (commercial fishing) and control or decision-making rights such as the rights to management (plant a crop), exclusion (prevent others from accessing the field), or alienation (rent out, sell or give away the rights)."²⁵⁶ Furthermore, "in the commons model, several individuals or groups have different rights the same resource."²⁵⁷ Du Plessis²⁵⁸ states that "this means that even if the state, for instance, has the control rights over a resource, a community can have the use rights, and different segments of the community can have different use rights."

²⁴⁹ Weston and Bollier *Green Governance* 6.

²⁵⁰ Weston and Bollier *Green Governance* 6.

²⁵¹ Hess and Ostrom "Ideas, Artifacts, and Facilities: Information as A Common Pool Resource" 114. Also see Du Plessis 2011 *PELJ* 58.

²⁵² Du Plessis 2011 *PELJ* 58.

²⁵³ Du Plessis 2011 *PELJ* 58.

²⁵⁴ Du Plessis 2011 *PELJ* 58.

²⁵⁵ Weston and Bollier *Green Governance* 4.

²⁵⁶ Capri *Resources, Rights and Cooperation* 9.

²⁵⁷ Capri *Resources, Rights and Cooperation* 9.

²⁵⁸ Du Plessis 2011 *PELJ* 47.

In addition, "the framework of the commons allows for resource owners and users to exercise multiple rights to the same resource to be acknowledged and protected."²⁵⁹ The commons framework also "provides an organisational framework for how such rights and the conflict between the users of the rights can be managed."²⁶⁰ Further, the framework of the commons "recognises communities' own ability to organise themselves and the various rights in the resource without relying on the traditional property law model of ownership."²⁶¹ Rights of use and control or decision making stipulated above in the commons model originate from various sources such as, regional and sub-regional law, national law and in the African context, African customary law, which may be formal written custom or living interpretations of custom.²⁶²

Apart from rights, the commons framework recognises rules. Schlager *et al*²⁶³ point out that "rights are the products of rules, with rights referring to particular actions that are authorised that is those who are allowed to take place with regard to a particular resource." Schlager *et al*²⁶⁴ state that "rules are generally agreed-upon and enforced prescriptions that require, forbid, or permit specific actions for more than one single individual." It can therefore, be deduced that rules are established through the agreement of all stakeholders of a shared resource.

2.5 Governance of a common-pool resource

CPRs may be owned by national, regional, or local governments; by communal groups; by private individuals or corporations; or used as open access resources by those who can gain access.²⁶⁵ As such, institutions for CPR governance are not found at just one

²⁵⁹ Du Plessis 2011 *PELJ* 47.

²⁶⁰ Du Plessis 2011 *PELJ* 47.

²⁶¹ Du Plessis 2011 *PELJ* 47.

²⁶² Capri *Resources, Rights and Cooperation* 10. In South Africa there is a debate on whether written or living customary law should be applied – see in this regard Himonga *et al* (eds) *African Customary Law in South Africa* 25-34. In the case of *Alexkor Ltd and Another v Richtersveld Community and Others* 2004 (5) SA 460 (CC); 2003 (12) BCLR 1301 (CC) at para [51], the court referred to customary law as one of the sources of the law.

²⁶³ Schlager and Ostrom 1992 *Land Economics* 250.

²⁶⁴ Schlager and Ostrom 1992 *Land Economics* 250.

²⁶⁵ Ostrom and Hess *Private and Common Property Rights* 10. Also see Paterson "Protected Areas" para 12.1.2.2 which shows that the governance of CPRs follows the governance approach with respect to protected areas as provided for in the based on the *IUCN Management Guidelines* and the *IUCN*

level but at multiple levels of organisation from regional, national and local, and these levels tend to be linked.²⁶⁶

Based on the above analysis 'commons' for this study is therefore defined as (i) common-pool resources; (ii) where a community of commoners devise the rules to govern the resource (this can happen within the framework of legislation or African customary law, or mindful of the limitations that legislation or custom places on decision making); and (iii) presenting the characteristics of Ostrom's eight design principles.

The institutions of commons governance discussed above show that, decision making in the governance of commons transcends over regional, national and local levels. This multilevel nature of governance allows for the integration of a wide range of stakeholders in devising new rules and practices that ensure adaptation to climate change impacts such as droughts and flooding occurring within the case studies, human-wildlife conflict and governance challenges occurring in these areas.²⁶⁷ To achieve this social-ecological resilience is an important consideration as it allows CPRs systems to respond to changes while their identity and functions are maintained.²⁶⁸

Governance Guidelines which provide four main protected areas governance types. These governance types are as follows: "(i) governance by government is the traditional form of protected areas governance whereby a government body, usually a government agency or statutory authority, holds the authority, responsibility, and accountability for managing the area, determining its conservation objectives, and developing and enforcing its management plan; (ii) shared governance which involves governance by two or more actors who share management authority and responsibility. These actors can include government institutions, local communities, indigenous peoples, non-governmental organisations, user associations, corporations, private landowners, or some combination thereof; (iii) private governance which has been introduced has been introduced in order to recognise the growing number of protected areas largely voluntarily established by private entities to promote conservation objectives, decision-making authority relating to setting conservation objectives and developing and implementing management planning is generally statutorily vested in the private entity; and (iv) governance by indigenous peoples and local communities management authority and responsibility rest with indigenous peoples and/or local communities through various forms of customs or laws, formal or informal, institutions and rules." See also Dudley *Protected Area Management Categories* 26; Paterson "Protected Areas Governance in a Southern African Transfrontier Context" 175; Paterson 2010 *SALJ* 497; Paterson *Bridging the Gap Between Conservation and Land Reform* 44; Borrini-Feyerabend *et al Indigenous and Local Communities and Protected Areas* 22.

²⁶⁶ Berkes *Environmental Governance* 4.

²⁶⁷ See Chapters 1 and 3 for a detailed discussion.

²⁶⁸ Berkes *Environmental Governance* 4.

2.6 Social-ecological resilience

The theory of social-ecological resilience has been developed in response to the need for understanding how linked social-ecological systems operate under conditions of complexity.²⁶⁹ Social-ecological systems are often referred to as "coupled human-natural systems."²⁷⁰ People depend on ecosystems in a wide variety of ways, and this dependency often requires modifying or managing ecosystems to enhance the delivery of ecological goods and services.²⁷¹ As ecosystems respond to this intervention and use by people, unexpected things may happen, for example, pest outbreaks and unusually large fires, loss of forests, or shallow lakes become dominated by toxic algae.²⁷²

Ostrom²⁷³ states that "social-ecological systems are characterised as resource systems (which include a designated protected area encompassing a specified territory containing forested areas, wildlife and water systems); resource units (which include trees, shrubs and plants contained in the protected area, wildlife and the amount and flow of water); governance systems (which include governance by the government and other organisations that manage the protected area, the specific rules related to the use of the protected area and how these rules are made); and resource users (which include individuals who use the area in diverse ways for sustenance, recreation and commercial purposes)." From the above, it seems that social-ecological ecosystems applied to the theme of the study that includes TFCAs and their surrounding areas as resource areas, where human-natural systems or resource units are constantly interrelating, involving social, economic and ecological elements as well as the interactions between them,²⁷⁴ and that are governed by rules that apply to the resource users.

Social-ecological resilience has its roots in the work of Holling in the 1960s and early 1970s. The resilience theory "reflects a paradigm shift in ecology, natural resources management and environmental law away from believing that social-ecological systems

²⁶⁹ Humby 2014 *PELJ* 1682.

²⁷⁰ Berkes "Social-ecological systems, resilience and collaborative learning" 3-4.

²⁷¹ Cumming and Allen 2017 *Ecological Applications* 1710.

²⁷² Cumming and Allen 2017 *Ecological Applications* 1710.

²⁷³ Ostrom "Sustainability of social-ecological systems" 420.

²⁷⁴ Graeme *et al* "Understanding Protected Area Resilience" 301.

operate around an equilibrium that can be maintained by 'optimising' the use of particular natural resources."²⁷⁵ According to Humby,²⁷⁶ "there is now an understanding that the various elements that constitute social-ecological systems impact upon and change each other such that the system can both maintain a steady state (for as long as the type of relationships and feedbacks between the various elements are maintained) as well as to adapt and change over time in response to various anthropogenic and non-anthropogenic shocks." As such 'resilience' has thus been defined as the capacity of a system to absorb disturbance and still maintain its basic structure and function.²⁷⁷ In general, social-ecological resilient systems have the ability to: (i) to absorb shocks and stresses; (ii) to self-organise and (iii) to learn and adapt.²⁷⁸

2.6.1 Adaptation and transformation

A relatively small disturbance in a social-ecological system typically triggers short-term or coping responses.²⁷⁹ However, if this coping or absorptive capacity is exceeded, individuals and communities would then exercise their adaptive resilience.²⁸⁰ At the core of resilience is the adaptive capacity, which refers to the ability of the social-ecological system to learn and to adjust its responses to the impacts of external drivers and internal change.²⁸¹ The system changes while still retaining its system identity, function, structure and feedbacks.²⁸² The process of adaptation is a problem-solving process whereby priority is given to communication, perspective sharing, social learning, negotiation, and the development of adaptive collaborative strategies for moving forward.²⁸³

²⁷⁵ Humby 2014 *PELJ* 1682. Also see Holling "Resilience and Stability of Ecological Systems" 17-19; Humby 2014 *Seattle Journal of Environmental Law* 89; Cosens 2012 *Environmental Law* 245.

²⁷⁶ Humby 2014 *PELJ* 1682.

²⁷⁷ Holling *Resilience and Stability of Ecological Systems* 17-19. Also see Walker and Salt *Resilience Thinking* iii; Humby 2014 *Seattle Journal of Environmental Law* 89; Cosens 2012 *Environmental Law* 245.

²⁷⁸ Berkes *Environmental Governance* 5.

²⁷⁹ Berkes *Environmental Governance* 5.

²⁸⁰ Walker *et al Resilience, adaptability and transformability in social-ecological systems* 5.

²⁸¹ Walker *et al Resilience, adaptability and transformability in social-ecological systems* 5.

²⁸² Walker *et al Resilience, adaptability and transformability in social-ecological systems* 5.

²⁸³ Walker *et al Resilience, adaptability and transformability in social-ecological systems* 5.

These elements of adaptation are found in Ostrom's eight design principles, as discussed above.²⁸⁴ However, if the changes in a social-ecological system are so large that they overwhelm the adaptive capacity of the system, the response is no longer incremental, but it becomes transformative.²⁸⁵ The system no longer retains its identity, it becomes transformed.²⁸⁶ Such changes involve shifts in the nature of the system, such as when a coastal region may move from a fishing economy to a tourism-based economy.²⁸⁷ Transformative changes may involve institutional change, technological innovation, behavioural shifts, and cultural change.²⁸⁸ Transformability is understood as the ability to create a fundamentally new system when ecological, social, and economic conditions of the old system are no longer tenable.²⁸⁹ Brown considers absorptive capacity, adaptive capacity, and transformative capacity as the three dimensions of social-ecological resilience.²⁹⁰

Social-ecological resilience for purposes of this study is therefore defined as the capacity of a linked social-ecological system to adapt, absorb and transform in the face of disturbance and still maintain its functions.

After having established the interconnectedness of multilevel-level social and natural ecosystems to adapt or transform with respect to changes within them from the perspective of social-ecological resilience, it is appropriate to undertake an analysis of the adaptive in adaptive governance.

2.7 Adaptive management, co-management and governance

Tools relating to social-ecological resilience in natural resources management include (i) adaptive management; (ii) adaptive co-management; and (iii) adaptive governance.²⁹¹ Adaptive governance, which is used in this study, is seen as a combination of (i)

²⁸⁴ See para 2.4 above.

²⁸⁵ Berkes *Environmental Governance* 5.

²⁸⁶ Berkes *Environmental Governance* 5.

²⁸⁷ Berkes *Environmental Governance* 5.

²⁸⁸ Berkes *Environmental Governance* 5.

²⁸⁹ Folke *et al* "Resilience thinking" 20.

²⁹⁰ Brown *Resilience, Development and Global Change* par 3.

²⁹¹ Humby 2014 *Seattle Journal of Environmental Law* 98. Also see Folke *et al* 2005 *Annual Review of Environmental Resources* 449.

adaptive management and (ii) adaptive co-management.²⁹² This will be discussed in the following paragraphs.

2.7.1 Adaptive management

Adaptive management has its roots in traditional ecological knowledge and practice of traditional resource management, which promotes learning while managing natural resources.²⁹³ Indigenous peoples have tended natural resources for centuries using information accumulated over generations.²⁹⁴ Gatherers and hunters experienced uncertainty daily, seasonally and over years of dealing with variable weather and resource availability.²⁹⁵ The advice from elders and individual experiences led to learning as people repeated old ways and tried new ways to obtain resources. For instance, in Canada, expert judgement is drawn from aboriginal communities to improve the adaptive management of salmon.²⁹⁶ A thirty year old study found that traditional ecological knowledge helped expert farmer-fishers adapt to both gradual and unpredictable changes in flood patterns.²⁹⁷

Furthermore, it is widely accepted that adaptive management is an approach for monitoring the response of social-ecological systems to different policies and practices and attempts to reduce inherent uncertainty in ecological systems, through a system of monitoring and iterative decision making and experimentation.²⁹⁸ Monitoring is an essential aspect of adaptive management as information from the system, for example monitoring data, feeds back into the management process in an iterative manner that allows managers to adapt to changing circumstances.²⁹⁹ Further, adaptive management is grounded in the admission that humans do not know enough about managing ecosystems while simultaneously recognising the need for action. Adaptive

²⁹² Humby 2014 *Seattle Journal of Environmental Law* 98. Also see Folke *et al* 2005 *Annual Review of Environmental Resources* 449.

²⁹³ Berkes *et al* 2000 *Ecological Applications* 1252.

²⁹⁴ Berkes *et al* 2000 *Ecological Applications* 1252.

²⁹⁵ Zelder "Adaptive Management and Restoration of Coasts and Estuaries" 2.

²⁹⁶ Zelder "Adaptive Management and Restoration of Coasts and Estuaries" 2.

²⁹⁷ Berkes *et al* 2000 *Ecological Applications* 1253. See also Folke *et al* "Resilience and sustainability" 414-436.

²⁹⁸ Cosens and Williams 2020 *Ecology and Society* 238.

²⁹⁹ Allen and Garmestani *Adaptive Management of Social-Ecological Systems* 107. Also see Garmestani and Allen *Social-Ecological Resilience* 371.

management further recognises that ecosystems are naturally dynamic.³⁰⁰ The ecosystems are inextricably linked to human communities that interact and depend on them and therefore are also complex.³⁰¹ As such uncertainty is inherent in any management decisions that are made regarding these dynamic complex systems.³⁰² Implicit in adaptive management is an acknowledgement that the most important uncertainties should be tested early.³⁰³ By recognising the value in tracking ecosystem responses to management, the adaptive management approach enables management to proceed with impartial knowledge. Additionally, strategies are developed as experiments to provide information about the system that is being managed.³⁰⁴ This information is then used to refine or develop future strategies.³⁰⁵ As adaptive management is designed to employ a diversity of testable actions, it affords a system a greater capacity to manage rather than the current tendency to employ single policies across ecological space and time that could potentially lead to a disaster.³⁰⁶

The core principles of adaptive management are that it is experimental, multi-scalar, and place-based.³⁰⁷ The experimental principle recognises the ongoing search for knowledge that is necessary to set and achieve goals.³⁰⁸ The multi-scalar principle recognises the need for managers to model and monitor management on multiple scales of space and time.³⁰⁹ The place-based principle relates to accepting that people occupy ecosystems, therefore the way people are likely to perceive and respond to management will reflect their social and geographical orientations.³¹⁰ The experimental component of adaptive management stresses the importance of not delaying action for lack of knowledge and the opportunity to take advantage of the situation and learn

³⁰⁰ Allen and Garmestani *Adaptive Management of Social-Ecological Systems* 103. Also see Garmestani and Allen *Social-Ecological Resilience* 371.

³⁰¹ Allen and Garmestani *Adaptive Management of Social-Ecological Systems* 130.

³⁰² Silvy *Wildlife Techniques* Manual 44.

³⁰³ Allen and Garmestani *Adaptive Management of Social-Ecological Systems* 130.

³⁰⁴ Allen and Garmestani *Adaptive Management of Social-Ecological Systems* 130.

³⁰⁵ Allen and Garmestani *Adaptive Management of Social-Ecological Systems* 130.

³⁰⁶ Allen and Garmestani *Adaptive Management of Social-Ecological Systems* 130.

³⁰⁷ Graham and Hicks "Adaptive management for novel ecosystems" 132. Also see Shaw and Uy *Ecosystem-Based Adaptation* 241.

³⁰⁸ Norton *Searching for Sustainability* 517. Also see Allen and Garmestani *Adaptive Management of Social-Ecological Systems* 131.

³⁰⁹ Shaw and Uy *Ecosystem-based Adaptation* 241. Also see Allen and Garmestani *Adaptive Management of Social-Ecological Systems* 131.

³¹⁰ Green *et al* "Enhancing ecosystem services" 131. Also see Graham and Hicks "Adaptive management for novel ecosystems" 132.

from it.³¹¹ In such a case, management actions are designed in a structured way that lessons can be rigorously inferred, similar to how experiments are designed.³¹²

From the above it seems that adaptive management relates to predicting the future of ecosystems, including the interaction with the human component thereof and would require proactive management – addressing management issues before they become a challenge. In a TFCA context, such management will require scientific input and proactive action to prevent social-ecological shocks that cannot be managed, through processes such as social learning, monitoring and review.

2.7.2 Adaptive co-management

The concept of "adaptive co-management has its foundations in the convergence of two independently evolved concepts, namely adaptive management and co-management."³¹³ Further, "in practice, these approaches blend into adaptive co-management when successive cycles of participation, learning and doing occur."³¹⁴ The process of "adaptive co-management has four cornerstones, namely: (i) an enabling environment through institutional arrangements (norms and rules), leadership, policies and legislation; (ii) learning through experimentation, monitoring and evaluation in a real-world setting; (iii) collaboration towards a diversity of stakeholders sharing a resource, rights and responsibilities at multiple levels and scales; and (iv) in a repeated process."³¹⁵ As such "adaptive co-management thus refers to an ongoing process that allows stakeholders to share responsibility, find common ground, learn from their institutions and practices and adapt and modify them for subsequent cycles."³¹⁶ While, as with adaptive management, the focus remains learning-by-doing; adaptive co-management takes into account a diversity of "knowledge, formal scientific knowledge and sharing rights, responsibilities and power among the diverse range of stakeholders."³¹⁷ Further, these interactions may occur at multiple levels, for example,

³¹¹ Allen and Garmestani *Adaptive Management of Social-Ecological Systems* 131.

³¹² Allen and Garmestani *Adaptive Management of Social-Ecological Systems* 131.

³¹³ Fabricius and Currie "Adaptive Co-management" 147.

³¹⁴ Fabricius and Currie "Adaptive Co-management" 147.

³¹⁵ Fabricius and Currie "Adaptive Co-management" 148.

³¹⁶ Fabricius and Currie "Adaptive Co-management" 148.

³¹⁷ Fabricius and Currie "Adaptive Co-management" 149.

local communities, provincial and national levels.³¹⁸ Stakeholders include resource users, government agencies and non-governmental organisations.³¹⁹ Further, "the degree of collaboration can occur on a continuum of involvement which can also vary during different phases of the adaptive management cycle."³²⁰

In relation to TFCAs, co-management will relate to the cooperation of stakeholders sharing a common-pool resource, rights and responsibilities, taking into account diverse forms of knowledge and engaging in social learning, monitoring and review, to be able to deal with any unexpected changes occurring in these areas.

2.7.3 Adaptive governance as a tool to promote social-ecological resilience

Interlinked to the concept of adaptive management and adaptive co-management is the adaptive governance approach.³²¹ This governance approach combines the results of learning by doing from adaptive management and the collaboration of stakeholders in the decision making process from adaptive co-management at different levels.³²² Further, "adaptive governance involves the devolution of management rights and power-sharing that promotes participation, among resource stakeholders."³²³ It involves a collaboration between protected area agencies, non-governmental organisations, private landowners and local community members, amongst others.³²⁴ Folke *et al* refer to these as "institutional structures that involve governance through multiple, layered authorities, each with its sphere of responsibility."³²⁵ Further, a variety of complex institutions that are nested in many layers, each with a degree of autonomy (termed polycentric governance), may be superior to one centralised, sole authority.³²⁶

³¹⁸ Fabricius and Currie "Adaptive Co-management" 149.

³¹⁹ Fabricius and Currie "Adaptive Co-management" 150.

³²⁰ Fabricius and Currie "Adaptive Co-management" 150.

³²¹ Humby 2014 *Seattle Journal of Environmental Law* 98. Also see Folke *et al* 2005 *Annual Review of Environmental Resources* 449.

³²² Humby 2014 *Seattle Journal of Environmental Law* 98. Also see Folke *et al* 2005 *Annual Review of Environmental Resources* 449.

³²³ Roe *Governance, Policy and Juxtaposition* 106. Also see Kasperson and Berberian *Integrating Science and Policy* 257.

³²⁴ Humby 2014 *PELJ* 1683.

³²⁵ Folke *et al* 2005 *Annual Review of Environmental Resources* 450.

³²⁶ Folke *et al* 2005 *Annual Review of Environmental Resources* 450.

Polycentric structures have the advantage of being able to address environmental problems at multiple scales, their diversity enabling innovative, dynamic responses in the face of rapid change and uncertainty.³²⁷ Single level, centralised governance units do not have the variety of response capabilities necessary to deal with complexity.³²⁸ An additional advantage of polycentric governance is that effective responses to environmental threats at one scale of authority may offset failures at another scale.³²⁹ Formal lines of authority are blurred in these self-organised polycentric governance systems in which diverse policy actors are knitted together to focus on common problems.³³⁰ These multilevel networks can stimulate collaboration, build trust, provide information, and encourage the development of common perspectives on policy issues.³³¹ Such networks represent informal governance systems across organisational levels with an interest in influencing and implementing policies in a given resource area.³³² In times of rapid change, informal social networks can provide arenas for novelty and innovation and enhance flexibility, all of which tend to be stifled in bureaucracies.³³³ However, these network structures do not replace the accountability of existing hierarchical bureaucracies but operate within and complement them.³³⁴

Adaptive governance therefore includes, therefore, the collaboration by "a diversity of stakeholders sharing a resource, rights and responsibilities at multiple levels and scales"³³⁵ taking into account diversity of knowledge and information sharing as well as social-learning, monitoring and review.

Social-ecological resilience, merged with adaptive governance, can therefore for purposes of this study be defined as the (i) capacity of a linked social-ecological system to adapt, absorb and transform in the face of disturbance and still maintain functions; (ii) through processes such as the collaboration by a diversity of stakeholders sharing a resource, rights and responsibilities at multiple levels and scales taking into account

³²⁷ Gruby and Carlisle 2019 *Policy Studies Journal* 32.

³²⁸ Novellie et al 2017 *African Journal of Wildlife Research* 82.

³²⁹ Novellie et al 2017 *African Journal of Wildlife Research* 82.

³³⁰ Novellie et al 2017 *African Journal of Wildlife Research* 83.

³³¹ Folke et al 2005 *Annual Review of Environmental Resources* 460-461.

³³² Folke et al 2005 *Annual Review of Environmental Resources* 460-461.

³³³ Bown et al *Contested Forms of Governance* 48.

³³⁴ Bown et al *Contested Forms of Governance* 48.

³³⁵ Folke et al 2005 *Annual Review of Environmental Resources* 450.

diversity of knowledge and information sharing; and (iii) social-learning, monitoring and review.

2.8 The commons, social-ecological resilience and adaptive governance nexus

Based on the discussion above, it can be gathered that there is a nexus between the commons, social-ecological resilience and adaptive governance.³³⁶ The commons-social-ecological resilience-adaptive governance nexus essentially means that these concepts are linked and any action occurring within the elements of the nexus impacts on each of these concepts.

The first interface is that the commons, social-ecological resilience and adaptive governance frameworks apply to clearly defined spaces where human beings interact with nature as resource users or managers.³³⁷ This interaction takes place at various spheres of government, local community groups or non-governmental organisations, amongst others.³³⁸ As they interact with nature, human beings exercise various rights over resources which may overlap at multiple levels,³³⁹ meaning for instance, local community members may have rights of use over resources that are owned by the government or *vice versa*.

The second interface of the commons-social-ecological resilience-adaptive governance nexus is that the interventions by the social system which constitutes a resource and members of the governance structures' actions on land have an effect on the ability of the ecosystems on their shared land to better adapt to any external pressures while the ecosystem structure and functions are maintained.³⁴⁰

The third interface of the commons-social-ecological resilience-adaptive governance is the nature of relations among those in the social system that is the resource stakeholders' impacts on promoting social-ecological resilience. If all resource users and those governing resources collaborate, an environment of trust and a" willingness by all

³³⁶ See paras 2.4, 2.6 and 2.7.3 above.

³³⁷ See paras 2.4, 2.5 and 2.7 above.

³³⁸ See para 2.6 read with para 2.7 above.

³³⁹ See para 2.5 read with para 2.6 above and para 2.7 above.

³⁴⁰ See paras 2.6 and 2.7 above.

stakeholders to implement measures such as conservation and to adhere to laws directed towards promoting social-ecological resilience of the shared resource, is created.³⁴¹ This collaboration involves the integration of various forms of knowledge, be it traditional or scientific devised, in the process of learning by doing, monitoring and evaluation in a real world setting, devising approaches to sustainably manage resources even in the event of uncertainty in the environment and collectively complying with all legal and other provisions aimed at promoting social-ecological resilience and ultimately adaptive governance by all stakeholders.³⁴² In instances where there is a lack of collaboration, as set out in Chapter 1, it impacts on promoting social-ecological resilience in the commons within the selected TFCAS discussed in this thesis.³⁴³ Social-ecological resilience is impacted upon when the social system is not in harmony to be able to fully integrate with the ecological system in order to foster social-ecological resilience.³⁴⁴

2.9 Conclusion

This chapter commenced with a discussion on clarifying theoretical terms applied to commons in terms of which confusion persists in literature. These terms included CPRs, the common property regime and commons.³⁴⁵ The common-pool resource theory was discussed in relation to its origins in England that subsequently led to Hardin's idea of the tragedy of the commons. Different authors criticised this theory.³⁴⁶ Ostrom, for example, negated Hardin's theory and tried to solve the commons dilemma that originates if there is no coordination in individual action.³⁴⁷ She proposed that individuals should devise and adopt sets of rules to coordinate the use of shared resources within a commons.³⁴⁸ She developed eight design principles that would enable long term

³⁴¹ See para 2.7 above.

³⁴² See paras 2.7.1, 2.7.2 and 2.7.3 above.

³⁴³ See para 1.2 above.

³⁴⁴ See Chapter 1 above which states that the GLTFCA, the KTFCA and the GMTFCA encounters various unsustainable land use practices ranging from overgrazing, human-wildlife conflict and farmer-wildlife conflict due to the lack of community involvement in the decision-making or control of land belonging to them.

³⁴⁵ See para 2.2 above.

³⁴⁶ See para 2.4 above.

³⁴⁷ See para 2.4 above.

³⁴⁸ See para 2.4 above.

sustainable commons.³⁴⁹ Based on considerable research on CPRs, Ostrom suggested that robust or long term sustainable institutions are characterised by most of the design principles.³⁵⁰ However, Ostrom emphasised that her eight design principles are general guidelines and, should not be viewed as a strict blueprint for successful commons because many other factors may influence the commons.³⁵¹

Thereafter a discussion was undertaken on the governance of CPRs it was stated that the governance of these areas involved multiple stakeholders including regional, national and local levels, such as national, regional, or local governments; communal groups; and private individuals or corporations.³⁵²

Taking the above into account the 'commons' for purposes of this study was defined as (i) common-pool resources; (ii) where a community of commoners devise the rules to govern the resource (this can happen within the framework of legislation or African customary law, or mindful of the limitations that legislation or custom places on decision making); and (iii) presenting characteristics of Ostrom's eight design principles.

The concept of social-ecological resilience was also investigated.³⁵³ From this, it was found that social-ecological resilience involved the interconnected nature of social and ecological ecosystems in terms of which humans interact with nature to foster resilience.³⁵⁴ From the discussion, social-ecological resilience was found to involve the ability of social-ecological linked ecosystems to absorb, adapt and transform in the face of change³⁵⁵ and accordingly, 'social-ecological resilience' for purposes of this study was

³⁴⁹ Repeated for purpose of the summary: namely: (i) clearly defined boundaries; (ii) congruence between appropriation and provision rules and local conditions; (iii) collective choice arrangements allowing for the participation of most of the appropriators in the decision making process; (iv) effective monitoring by monitors who are part of or accountable to the appropriators; (v) graduated sanctions for appropriators who do not respect community rules; (vi) conflict resolution mechanisms which are cheap and easy to access; (vii) minimal recognition of rights to organise (for example, by the government); and (viii) in the case of larger CPRs, organisations in the form of multiple layers of nested enterprises, with small, local CPRs at their bases.

³⁵⁰ See para 1.2 read with para 2.4 above.

³⁵¹ See para 2.4 above.

³⁵² See para 2.5 above.

³⁵³ See para 2.6 above.

³⁵⁴ See para 2.6 above.

³⁵⁵ See para 2.6 above.

defined as the capacity of a linked social-ecological system to adapt, absorb and transform in the face of disturbance and still maintain functions.³⁵⁶

A discussion was also undertaken of tools that foster social-ecological resilience namely (i) adaptive management; (ii) adaptive co-management; and (iii) adaptive governance.³⁵⁷ Adaptive governance includes elements of adaptive management and adaptive co-management. It was found that adaptive governance will be applied in this study.

Social-ecological resilience, merged with adaptive governance, for purposes of this study was defined as the (i) capacity of a linked social-ecological system to adapt, absorb and transform in the face of disturbance and still maintain functions; (ii) through processes such as the collaboration by a diversity of stakeholders sharing a resource, rights and responsibilities at multiple levels and scales taking into account diversity of knowledge and information sharing; and (iii) social-learning, monitoring and review.³⁵⁸

There is a nexus between commons, social-ecological resilience and adaptive governance. The first interface of the commons, social-ecological resilience and adaptive governance nexus is where the commons, social-ecological resilience and adaptive governance elements apply to confined spaces, such as TFCAs or their surrounding areas, with resource managers, whose rights may overlap at multiple levels.³⁵⁹

The second interface of the commons-social-ecological-resilience-adaptive governance nexus is that the interventions by the social system which constitutes resource and members of the governance structure's actions on land, affects the ability of the ecosystems on their shared land to better adapt to any external pressures while their structure and functions are maintained.³⁶⁰

The third interface of the commons-social-ecological resilience-adaptive governance is that the nature of relations among those in the social system that is the resource

³⁵⁶ See para 2.7.3 above.

³⁵⁷ See paras 2.7.1, 2.7.2 and 2.7.3 above.

³⁵⁸ See para 2.7.3 above.

³⁵⁹ See para 2.8 above

³⁶⁰ See para 2.8 above.

stakeholders impacts on promoting social-ecological resilience and ultimately adaptive governance. If all resource users and those governing resources collaborate, an environment of trust and willingness by all stakeholders to implement measures such as conservation and to adhere to laws directed towards promoting social-ecological resilience and adaptive governance of the shared resource are created.³⁶¹

In the next chapter, it will be determined whether the commons and social-ecological resilience and adaptive governance as a tool to promote social-ecological resilience, are reflected in the commons in practice in the KTFCA, GLTFCA, and GMTFCA and the South African legislation applicable to the governance of commons.³⁶²

³⁶¹ See para 2.8 above.

³⁶² See Chapter 3.

CHAPTER 3: The Commons in Practice in the KTFCA, GLTFCA and GMTFCA

3.1 Introduction

In this chapter, the commons theory will be analysed in relation to the KTFCA, GLTFCA and GMTFCA. This process entails (a) a short introduction of the TFCAs as a CPR and (b) focuses on identifying and describing the areas in the selected TFCAs that qualify as commons. Thereafter, the concept of social-ecological resilience will be analysed with respect to its meaning within TFCAs. This chapter will use the elements of the commons and social-ecological resilience in Chapter 2 to analyse the relevant governance documents pertaining to the commons in the selected TFCAs.³⁶³ This analysis will be TFCAs specific, in terms of this chapter.³⁶⁴

Each of the three selected areas are discussed by (a) providing a description of the establishment of commons in these areas and (b) an analysis of the specific agreement documents that pertain to these areas to determine whether elements of the commons are recognised and there is provision for elements of social-ecological resilience.

3.2 Commons within TFCAs

According to Munthali³⁶⁵ "TFCAs are defined as a part or component of a larger eco-region that straddles the border between two or more countries, encompassing one or more protected areas as well as multiple-resource use areas for the use of communities and private landholders, managed for sustainable use of natural resources." As such a TFCAs can thus be considered to constitute a CPR as it is a resource in terms of which excluding access by stakeholders such as regional, national, local community members and private landowners is difficult as they collectively own and govern the resource, and

³⁶³ See para 2.4 above.

³⁶⁴ As stated in the research methodology, no empirical research was conducted and all research and findings are based on a desktop research of the documents that are relevant to the establishment and governance of commons within selected TFCAs and findings based on the empirical research of other researchers in these areas. Also see para 1.2 above.

³⁶⁵ Munthali Natural Resource Forum 52.

that the joint use of resources within the TFCA implies that resource use by one of the stakeholders limits the resources available for use to others.³⁶⁶

Table 3-1: Classification of TFCAs as common-pool resources adapted from Hess *et al*³⁶⁷

		SUBTRACTABILITY	
		<i>Low</i>	<i>High</i>
EXCLUSION	<i>Difficult</i>	Public goods: (sunset/common knowledge)	Common-pool resources (TFCA area, wildlife, natural resources, water, forests, etc.)
	<i>Easy</i>	Shared goods (shared grazing land, medicinal plants, water holes, campsites, lodges and restaurants)	Private goods (park access fees)

As indicated above,³⁶⁸ the TFCAs include land that was awarded to local community groups subject to successful land claims, as well as land owned by private landowners. This land is subject to co-governance with rules on resource management being collectively devised by the local community members or private landowners and SANParks that manages the area.³⁶⁹ As indicated above, the involvement of community members or private entities in the governance of their land in the TFCAs qualifies these areas to be regarded as commons.³⁷⁰

In the following paragraphs, it will be investigated if the constituting documents and the management plans of the selected TFCAs reflect the principles of the commons. Some background information on the establishment of the parks will also be provided.

³⁶⁶ See para 2.3 above.

³⁶⁷ Hess and Ostrom "Ideas, Artifacts, and Facilities: Information as A Common-Pool Resource" 120. See also Du Plessis 2011 *PELJ* 58.

³⁶⁸ See para 1.2 above.

³⁶⁹ See para 2.5 above.

³⁷⁰ See para 2.2 above.

3.3 Governance in the KTFCA

3.3.1 Background

According to Child *et al*³⁷¹ "after the election of a democratic government in South Africa in 1994, the Khomani San and Mier communities prepared and submitted a claim for the restitution of their traditional land, declaring that community members had been illegally evicted from their ancestral land following the proclamation of the park in 1931." Based on the Ae!Hai Kalahari Heritage Park Agreement, 2002 (hereafter Park Agreement), the motivation for the land claim was that the Khomani San's loss of land meant the loss of natural resources.³⁷² The first phase of the land claim was completed in March 1999 when the government returned 40 000 hectares of farmland outside the KTFCA and more than 25 000 hectares inside the KTFCA.³⁷³ According to Pienaar³⁷⁴ "this was in line with the government's land restitution programme to restore the land to those people who were forcibly displaced after June 1913 as a consequence of apartheid laws." The land awarded was meant to be used for "the benefit and development of the Khomani San community who were members of the overall Communal Property Association."³⁷⁵

Child *et al*³⁷⁶ "further states that The Mier land claim overlapped with that of the Khomani San community." The Mier community claimed areas within the Park from which they were also displaced when the nature reserve was first established in

³⁷¹ Clauses 3-4 of the Park Agreement. Also see Child *et al* *Evolution and Innovation in Wildlife Conservation* 366; Huizenga "Khomani San Land Claim in South Africa 145-161; Koot and Buscher 2019 *Journal of Southern African Studies* 357-374; Thondhlana *et al* "Kgalagadi Transfrontier Park and its land claimants" 1-12; Kepe *et al* 2005 *International Journal of Biodiversity Science and Management* 3-16; [https://www.sahrc.org.za/home/21/files/National%20Hearing%20Report%20on%20the%20Humn%20Rights%20of%20the%20Khoi-San%20-%2014%20March%202018%20\(003\).pdf](https://www.sahrc.org.za/home/21/files/National%20Hearing%20Report%20on%20the%20Humn%20Rights%20of%20the%20Khoi-San%20-%2014%20March%202018%20(003).pdf) –[Accessed 13 October 2020] provides a historical background of the the Khomani San community and the history of their land dispossession.

³⁷² Child *et al* *Evolution and Innovation in Wildlife Conservation* 366.

³⁷³ Clauses 3-5 of the Park Agreement. Also see Child *et al* *Evolution and Innovation in Wildlife Conservation* 366.

³⁷⁴ *Restitution of Land Rights Act* 22 of 1994. On restitution, see Pienaar *Land Reform* 464; Bradstock 2006 *Land Use Policy* 114.

³⁷⁵ Constituted in terms of the *Communal Properties Association Act* 28 of 1996. On the Act, see the preamble. Also see Child *et al* *Evolution and Innovation in Wildlife Conservation* 366.

³⁷⁶ Child *et al* *Evolution and Innovation in Wildlife Conservation* 366.

1931.³⁷⁷ Subsequently, a settlement framework was concluded in 1999, and the agreement resulted in the transfer of about 42 000 ha of land outside the KTFCA to the Mier community.³⁷⁸ The Khomani San community, with the help of their lawyers, along with independent mediators appointed by the then Department of Land Affairs, negotiated with SANParks, the then Department of Environmental Affairs and Tourism³⁷⁹ and the Mier community.³⁸⁰ This process included workshops attended by hundreds of interested parties to outline the uses and management of the Khomani San land inside the park.³⁸¹ The establishment of the Park Agreement was the product of these discussions.³⁸² The Park Agreement is a tri-lateral agreement that was drawn up at the finalisation of the joint Khomani San and Mier communities land claims.³⁸³ The Park Agreement signed by the then Ministers for Land Affairs and Environment and Tourism and the duly nominated representatives of the Khomani San and Mier communities, committed the parties to establish and develop a contractual park.³⁸⁴

In accordance with the terms of the Park agreement, the South African Government further transferred the ownership of about 30 000 hectares of Park land, called the Mier Heritage Land, to the Mier community.³⁸⁵ The Mier community, in the face of a desperate land need themselves, freely gave 7 000 hectares of their land to the Khomani San as a remarkable gesture of reconciliation since they displaced the San in

³⁷⁷ Child *et al* *Evolution and Innovation in Wildlife Conservation* 366.

³⁷⁸ Clause 5 of the Park Agreement. Also see Child *et al* *Evolution and Innovation in Wildlife Conservation* 366.

³⁷⁹ In 2020, referred to as the *Department of Forestry, Fisheries and Environment*.

³⁸⁰ See clause 3 of the Park Agreement. Also see Child *et al* *Evolution and Innovation in Wildlife Conservation* 367; Kepe *et al* 2005 *International Journal of Biodiversity Science and Management* 12-13.

³⁸¹ Clause 3 of the Park Agreement. See also Child *et al* *Evolution and Innovation in Wildlife Conservation* 367. See also Kepe *et al* 2005 *International Journal of Biodiversity Science and Management* 12-13.

³⁸² Child *et al* *Evolution and Innovation in Wildlife Conservation* 367. See also Kepe *et al* 2005 *International Journal of Biodiversity Science and Management* 12-13; Thondhlana *et al* "Kgalagadi Transfrontier Park and its land claimants" 4-5; Hughes *Heritage Land in the Kalahari* 43.

³⁸³ Chapter 5 of the Park Agreement.

³⁸⁴ Clause 7 of the Park Agreement. See also Child *et al* *Evolution and Innovation in Wildlife Conservation* 367; Kepe *et al* 2005 *International Journal of Biodiversity Science and Management* 12-13; Thondhlana *et al* "Kgalagadi Transfrontier Park and its land claimants" 4-5; Hughes *Heritage Land in the Kalahari* 43.

³⁸⁵ Clause 16 of the Park Agreement. See also Child *et al* *Evolution and Innovation in Wildlife Conservation* 367; Thondhlana *et al* "Kgalagadi Transfrontier Park and its land claimants" 5.

the Kalahari in the 19th century.³⁸⁶ Thondhlana *et al*³⁸⁷ state that "the land given to the Khomani San and Mier communities is divided into parkland and community-managed resettlement land or farms outside of the park about sixty kilometres from the main gate." Further, there was an agreement that San members would not settle permanently in the KTFCA.³⁸⁸

The land within the KTFCA which was transferred to the San and Mier communities functions as a jointly-owned Contract Park (a combination of Khomani San and Mier heritage land known as the !Ae!Hai Kalahari Heritage Park).³⁸⁹ The Contract Park aims to enable ecotourism opportunities, including hunting, camping trails, walking trails and a tourism lodge, for the benefit of the communities.³⁹⁰ Currently, a commercial partner is reportedly operating !Xaus Lodge (owned by the communities), while ensuring that the interests of and benefits to the partner do not supersede those of the owners.³⁹¹

The Contract Park is jointly managed by the Joint Management Board (hereafter JMB). In this committee, representatives of SANParks and Khomani San community take decisions on the management of the Contract Park.³⁹² The benefits from the Contract Park so far are only in the form of job opportunities (employment and crafts selling) and the generated income does not directly accrue to individual San and Mier households.³⁹³ The income is reportedly used for the community (!Xaus) lodge's maintenance and general development of the San and Mier area in the form of provision of water and housing.³⁹⁴ Apart from eco-tourism ventures, the co-management agreement in theory allows the San to carry out cultural practices, hunt (in a traditional way) and collect culturally important wild foods and medicines within

³⁸⁶ Clause 54.4.4 of the Park Agreement. See also Child *et al* *Evolution and Innovation in Wildlife Conservation* 367; Thondhlana *et al* "Kgalagadi Transfrontier Park and its land claimants" 5.

³⁸⁷ Clause 16 of the Park Agreement. See also Thondhlana *et al* 2011 *Environmental Research Letters* 5.

³⁸⁸ Clause 18 of the Park Agreement. See also Thondhlana *et al* 2011 *Environmental Research Letters* 5; Thondhlana *et al* "Natural resource governance in Kgalagadi Transfrontier Park" 14.

³⁸⁹ Clause 25 of the Park Agreement. See also Child *et al* *Evolution and Innovation in Wildlife Conservation* 368; Thondhlana *et al* "Natural resource governance in Kgalagadi Transfrontier Park" 22.

³⁹⁰ Clause 28 of the Park Agreement. Thondhlana *Dryland Conservation Areas* 59; Thondhlana *et al* "Natural resource governance in Kgalagadi Transfrontier Park" 22.

³⁹¹ Clause 48 of the Park Agreement. See also Thondhlana *Dryland Conservation Areas* 59.

³⁹² Clause 38 of the Park Agreement. See also Thondhlana *Dryland Conservation Areas* 59.

³⁹³ Clauses 48-49 of the Park Agreement. See also Thondhlana *Dryland Conservation Areas* 59.

³⁹⁴ Clauses 48-49 of the Park Agreement. See also Thondhlana *et al* "Natural resource governance in Kgalagadi Transfrontier Park" 14.

the Contract Park.³⁹⁵ Based on interviews conducted in the area "at the moment the traditional use of wild natural resources in the Contract Park is still restrictive and hunting has not yet happened."³⁹⁶

Within the KTFCA, three types of access rights are recognised and organised into three main zones, namely the Contract Park, Commercial Preference Zone (V-Zone) and the San Symbolic and Cultural Zone (S-Zone).³⁹⁷ The Commercial Zone belongs to SANParks, but the San have access for commercial joint venture use (e.g. ecotourism) with SANParks.³⁹⁸ The Symbolic and Cultural Zone belongs to SANParks.³⁹⁹ However, the Khomani San can access this area for cultural visits and accessing symbolically important sites and the traditional gathering of food and medicines and educational trips.⁴⁰⁰ The last zone belongs to SANParks, with no local community access.⁴⁰¹

The Park Agreement provides that "the Khomani San community may grant the Mier community members access to the use of tourism facilities within the V-Zone, on condition that they pay an access fee."⁴⁰² Apart from this, "the Khomani San community may set reasonable restrictions on the frequency, nature and extent of use by the Mier community."⁴⁰³ This permission of access granted by the Khomani San community is subject to further written permission from SANParks.⁴⁰⁴

3.3.2 Commons Framework

In this section, the principles that constitute the commons framework as reflected in Chapter 2 shall be analysed with respect to the Park Agreement and the Kalahari

³⁹⁵ Clauses 28.2-28.4 of the Park Agreement. See also Thondhlana *et al* "Natural resource governance in Kgalagadi Transfrontier Park" 14.

³⁹⁶ Child *et al Evolution and Innovation in Wildlife Conservation* 368. See also Thondhlana *et al* "Natural resource governance in Kgalagadi Transfrontier Park" 22.

³⁹⁷ Clauses 25, 49 and 50 of the Park Agreement. See also Thondhlana *et al* "Natural resource governance in Kgalagadi Transfrontier Park" 22.

³⁹⁸ Clause 49 of the Park Agreement. See also Thondhlana *et al* "Natural resource governance in Kgalagadi Transfrontier Park" 22.

³⁹⁹ Clause 49 of the Park Agreement. See also Thondhlana *et al* "Natural resource governance in Kgalagadi Transfrontier Park" 22.

⁴⁰⁰ Clause 50 of the Park Agreement. See also Thondhlana *Dryland Conservation Areas* 60.

⁴⁰¹ Thondhlana *Dryland Conservation Areas* 60.

⁴⁰² Clause 52.3 of the Park Agreement.

⁴⁰³ Clause 52.7 of the Park Agreement.

⁴⁰⁴ Clause 52.4 of the Park Agreement.

Gemsbok National Park Management Plan of 2016-2026 (hereafter Kalahari Park Management Plan).

3.3.2.1 Design Principle one: Clearly defined boundaries and resource users

Section 2 of the Kalahari Park Management plan recognises and clearly defines the boundaries of the South African side of the KTFCA, referring to the areas as the Kalahari Gemsbok National Park.⁴⁰⁵ The Park Management Plan identifies the resource uses of the the Contract Park within the Kalahari Gemsbok National Park as the State, the Khomani San and Mier communities.⁴⁰⁶ SANParks is responsible for the daily conservation management of the contractual area. At the same time, the two community groups have the right to use the respective area for economic, symbolic and cultural purposes as permitted in terms of the Park Agreement within the commons.⁴⁰⁷

The territory of the Kalahari Gemsbok National Park is well defined and includes all the adjoining zones that form part of the South African side of the KTFCA as a whole.⁴⁰⁸ The zones adjoining the Contract Park include a Commercial Preferential Zone that borders the Contract Park.⁴⁰⁹ In this zone, the Khomani San community members have priority to exercise commercial and cultural rights.⁴¹⁰ The following zone is the Sbolic and Cultural Zone, which constitutes the remainder of the KTFCA.⁴¹¹ In this zone, only members of the Khomani San community have access rights for purposes such as visiting culturally and symbolically important sites, food or medicine gathering and educational trips under the control of Kgalagadi Transfrontier Park Management.⁴¹²

From the above, it is clear that the boundaries of the Contract Park and the zones forming the rest of the KTFCA are clearly defined and that the Khomani San and Mier community representatives, the CPA and SANParks representatives have rights to withdraw resource units from the area. In the Commercial and Symbolic Zones of the

⁴⁰⁵ Section 2.1 of the Kalahari Park Management Plan 2016-2026. See also GN 1051 in GG 30442 of 9 November 2007; <http://mapservice.environment.gov.za/PAR/map.aspx>.

⁴⁰⁶ Section 2.4 of the Kalahari Park Management Plan 2016-2026.

⁴⁰⁷ Section 2.5 of the Kalahari Park Management Plan 2016-2026.

⁴⁰⁸ See para 3.3.1 above.

⁴⁰⁹ See para 3.3.1 above.

⁴¹⁰ See para 3.3.1 above.

⁴¹¹ See para 3.3.1 above.

⁴¹² See para 3.3.1 above.

KTFCA only the Khomani San community has access and use rights to resources found in this specific area. The local government plays a developmental role and have to provide the communities with access to services.

3.3.2.2 Design Principle two: Congruence between appropriation and provision rules and local conditions

In terms of section 3 of the Kalahari Park Management Plan, the internal rules for the South African side of the KTFCA in which the commons are situated, are provided in the GN R1061 of 2005⁴¹³ (hereinafter referred to as GN R1061) – the regulations for the proper administration of special nature reserves.⁴¹⁴ These regulations apply in addition to internal rules and recognise appropriation rules. Regulation 4 of GN R1061, for example, sets out the provisions for biodiversity management and conservation in protected areas (including a special nature reserve, national park and world heritage site) and provides as follows:

4. Prohibitions

(1) No person shall, other than in an open access protected area, in a special nature reserve, national park or world heritage site, without the prior written consent of a management authority, license, permit or receipt—

(a) introduce any species or specimen, or part thereof to a special nature reserve, national park or world heritage site;

(b) engage in any restricted activity as defined in Regulation 45;⁴¹⁵

⁴¹³ GN R1061 in GG 28181 of 28 October 2005 issued in terms of section 86 of the NEMPAA. These regulations are not specific to the Kgalagadi as such, but the rules apply in general to this park as well as the other parks.

⁴¹⁴ Section 3.4 of the Kalahari Park Management Plan 2016-2026.

⁴¹⁵ In terms of regulation 45 restrictions are provided in terms of the use of biological resources in a special nature reserve, national park and world heritage site. Regarding this, “any person without a written authorisation of a management authority in these areas is (a) prohibited in relation to a specimen of a protected sections from (i) hunting, catching, capturing or killing any living specimen of a listed threatened or protected species by any means, method or device whatsoever, including searching, pursuing, driving, lying in wait, luring, alluring, discharging a missile or injuring with intent to hunt, catch, capture or kill any such specimen; (ii) gathering, collecting or plucking any specimen of a listed threatened or protected species; (iii) picking parts of, or cutting, chopping off, uprooting, damaging or destroying, any specimen of a listed threatened or protected species; (iv) possessing or exercising physical control over any specimen of a listed threatened or protected species; (v) growing, breeding or in any other way propagating any specimen of a listed threatened or protected species, or causing it to multiply; (vi) conveying, moving or otherwise translocating any specimen of a listed threatened or protected species; (vii) selling or otherwise trading in, buying, receiving, giving, donating or accepting as a gift, or in any way acquiring or disposing of any specimen of a listed threatened or protected species; or (viii) luring or baiting a specimen in or from a national park or world heritage site; (ix) any other prescribed activity which involves a specimen of

- (c) intentionally disturb any species or specimen;
- (d) feed any species or specimen;
- (e) use any recording of the sound of a species or specimen or the imagery or scent of a species or specimen to attract animals;
- (f) remove any wood, sand, gravel, stone, seashell, guano or other material;
- (g) cut, damage, remove or destroy or be in possession of any plant or any part thereof, including dry wood or firewood;
- (h) intentionally cause pollution, deface cultural heritage resources, harm or cause death to any individual or population of any protected species;
- (i) significantly alter or change the sense of place or any environmental, cultural or spiritual values.

The regulations also provide for appropriation rules applicable to accessing a protected area as follows:

- 6(1) The holder of a right granted in terms of regulation 5(1) may, subject to any condition contained in a licence, permit or agreement, use any road, or path for the reasonable exercise of a right to use biological resources: Provided that—
- (a) a management authority may close any access road or limit the use thereof for management purposes;
 - (b) if a holder of a right fails to remove or repair any obstruction on an access road caused as a result of the exercise of a right, a management authority may undertake such removal or repair and recover the cost in this regard from the holder of the right;
 - (c) a management authority may impose restrictions on the type of vehicle, machinery or equipment which is permitted on an access road in order to prevent any environmental or other damage;
 - (d) the holder of a right must keep every access road used, reasonable wear excluded, in a good driving condition, and in the case where such holder fails to do so, the management authority may undertake the necessary repairs and recover the cost in this respect from the holder of the right; and

a listed threatened or protected species. In addition, (b) in relation to a specimen of an alien species or listed invasive species prohibitions are provided on (i) importing into a special nature reserve, national park or world heritage site, including introducing from the sea, any specimen of an alien or listed invasive species; (ii) possessing or exercising physical control over any specimen of an alien or listed invasive species; (iii) growing, breeding or in any other way propagating any specimen of an alien or listed invasive species, or causing it to multiply; (iv) conveying, moving or otherwise translocating any specimen of an alien or listed invasive species; and (v) selling or otherwise trading in, buying, receiving, giving, donating or accepting as a gift, or in any way acquiring or disposing of any specimen of an alien or listed invasive species; and (vi) any other prescribed activity which involves a specimen of an alien or listed invasive species." Further restrictions are provided for "(c) in relation to cultural heritage elements in terms of (i) touching, removing, altering or interfering with cultural resources; (ii) preventing participation in living cultural heritage and (iii) preventing the cultural or spiritual development of people, groups or communities."

(e) a holder of a right shall not create or construct any new access road for the removal of biological resources or for any other reason, without the written permission of a management authority.

Part 3 of the regulations, which provides for "access to protected, also recognises appropriation rules." Regulation 8, for example, provides that "any person who has been granted entry into a protected area is allowed admission only to a specific area and at designated times as determined by a management authority."⁴¹⁶ Regulation 9 "prohibits any person from entering or remaining in the protected area or a part thereof without the payment of an entrance fee."⁴¹⁷ The regulations also deal with restrictions on access⁴¹⁸ in terms of accommodation,⁴¹⁹ entry times and travel.⁴²⁰ Furthermore, the regulations restrict the use of biological resources⁴²¹ and regulate the use of land in the protected areas.⁴²²

Provision rules are recognised through the regulations on the use of biological resources in the protected area, which require a fee to be paid in order to do the following: accessing a licence, permit or agreement for the use of biological resources;⁴²³ the access to the area by local communities for biological resources⁴²⁴ and access by local communities for cultural, spiritual, heritage or religious purposes.⁴²⁵

Although GN R1061 in principle restricts access and prescribes the payment of fees, these regulations have to be read in light of the agreements between the communities and the three spheres of government through its representative SANParks.⁴²⁶

⁴¹⁶ Regulation 8(1) of GN R1061.

⁴¹⁷ Regulation 9(1) of GN R1061.

⁴¹⁸ Regulation 12 of GN R1061.

⁴¹⁹ Regulation 13 of GN R1061.

⁴²⁰ Regulation 14 of GN R1061.

⁴²¹ Regulation 45 of GN R1061, for example, "hunting, catching, capturing or killing any living specimen of a listed threatened or protected species by any means."

⁴²² Regulation 46 of GN R1061, for example, "restrictions on erecting, constructing or transforming any buildings in a special nature reserve, national park and world heritage site without a written approval by a management authority."

⁴²³ Regulation 5 of GN R1061

⁴²⁴ Regulation 31 of GN R1061.

⁴²⁵ Regulation 31 of GN R1061.

⁴²⁶ Section 3.4 of the Kalahari Park Management Plan 2016-2026.

The KTFCA Contract Park's appropriation rules include the following: (i) land in the Contract Park is to be used for conservation purposes, sustainable economic purposes, symbolic and cultural purposes that are all compatible with conservation; (ii) land in the Contract Park may not be used for residential purposes, agriculture and mining; and (iii) land in the Contract Park may be used for hunting by traditional means and culturally collecting wild foods and medicine.⁴²⁷ However, at the moment, the traditional use of wild natural resources in the Contract Park is still curtailed and hunting has not yet happened.⁴²⁸

In the KTFCA Contract Park the provision rules include the following: (i) the income generated by the !Xaus Lodge should be used for the maintenance of the lodge and general development of the Khomani San community and Mier community area in the form of housing and sanitation; and (ii) in the Commercial Preferential Zone the Khomani San community members are expected to exercise ecotourism rights in partnership with SANParks.⁴²⁹ In the rest of the KTFCA the appropriation rules include the following: (i) in the Commercial Preferential Zone the Khomani San community members have commercial and cultural rights and the Mier community only has access if granted by the Khomani San community and after paying an access fee; and (ii) in the Commercial Preferential Zone, traditional hunting is allowed and commercial hunting is prohibited for both the Khomani San and Mier communities.⁴³⁰ In the San Symbolic and Cultural Zone, only Khomani San community members are allowed access for purposes such as visiting culturally and symbolically important sites, food or medicine gathering and educational trips.⁴³¹ The Khomani San community members have to pay access fees to access the rest of the KTFCA to do their walkabouts for rekindling their cultural and spiritual connections to their ancestral land.⁴³²

In the Contract Park within the KTFCA it can be deduced that there is a lack of congruence between appropriation and provision rules and local conditions. This is evidenced by the fact that within the Contract Park the income generated by operating

⁴²⁷ See para 2.4 read with para 3.3.1 above.

⁴²⁸ See para 3.3.1 above.

⁴²⁹ See para 3.3.1 above.

⁴³⁰ See para 3.3.1 above.

⁴³¹ See para 3.3.1 above.

⁴³² See para 3.3.1 above.

!Xaus Lodge, does not accrue directly to the Khomani San community and Mier community households, but specifically to use within their commons.⁴³³ The income is reportedly used for the maintenance of the lodge and the general development of the Khomani San and Mier area.⁴³⁴ This situation does not match the local conditions, as the two communities have limited livelihood opportunities in this dryland area and income generated from lodge could positively impact on the livelihoods of the households of the communities.⁴³⁵

Incongruence between appropriation and provision rules and local conditions can also be deduced on the limit placed on the traditional use of wild plants in the Contract Park as well as the absence of hunting in the area, although the Park Agreement allows some hunting to take place in the area.⁴³⁶ This situation does not match local conditions as the Khomani San community traditionally relies on hunting and gathering for survival.⁴³⁷ Further, the incongruence between appropriation and provision rules and local conditions can be inferred by the arrangement placed by SANParks that the Khomani San community should pay access fees to enter the rest of the KTFCA; this arrangement potentially restricts access as most community members may be unable to raise the entry fees considering that they have to meet the costs of travelling from their farmlands located about sixty kilometres from the KTFCA as well as travelling within the KTFCA.⁴³⁸

3.3.2.3 Design Principle three: Collective-choice arrangements

In recognising collective-choice arrangements in the Contract Park, the Khomani San and Mier community member representatives together with SANParks representatives make up the JMB which manages the Contract Park.⁴³⁹ This JMB is responsible for formulating, implementing and monitoring an effective framework for the management and development of the Contract Park.⁴⁴⁰ The JMB also has the responsibility to inform

⁴³³ See para 3.3.1 above.

⁴³⁴ See para 3.3.1 above.

⁴³⁵ See para 3.3.1 above.

⁴³⁶ See para 3.3.1 above.

⁴³⁷ See para 1.2 above.

⁴³⁸ See para 3.3.1 above.

⁴³⁹ See para 2.4 above read with clause 38 of the Park Agreement.

⁴⁴⁰ Section 41.1.5 of the Park Agreement.

the members of the Khomani San and Mier communities of actual and intended developments in the KTFCA and to promote integrated management with the two communities.⁴⁴¹

This co-management occurring within the JMB mirrors co-management provided in section 42 of the NEMPAA, in which a local community group enters into an agreement with the government - in this case with SANParks - to manage resources collectively. However, the JMB is not a legal entity that can be sued over not meeting its contractual obligations.⁴⁴² For example, although the JMB has a right to approve management plans, SANParks is still the principal authority to make decisions on the use of natural resources in the KTFCA.⁴⁴³ It can be deduced from the above that, although community members such as the Khomani San and Mier community members have an opportunity through their representatives in the JMB to participate in modifying operational rules in the Contract Park that affect them, SANParks has the main authority over the operational rules.

Furthermore, while governance in the contract park through the JMB appears to recognise collective-choice arrangements, interviews conducted by Thondhlana *et al* within the KTFCA suggest otherwise.⁴⁴⁴ According to this research, "the Khomani San and Mier community, regardless of the fact that they were represented by some community members within the JMB, argued that there was a lack of information dissemination from the Financial Committee, Khomani San Park Committee and Mier community representatives regarding community projects such as the game farms and lodge in the Contract Park."⁴⁴⁵ The information relates to the annual budget, animal numbers, hunting quotas, selling of animals, amount of cash generated and community expenditure. The lack of transparency and accountability by the community representatives within the JMB to the Khomani San and Mier communities in respect of financial matters weakens the recognition of collective-choice arrangements as they do not fully integrate contributions from other relevant stakeholders in decision making.

⁴⁴¹ Section 41.1.1 of the Park Agreement.

⁴⁴² Section 39 of the Park Agreement.

⁴⁴³ Section 41.1.5 of the Park Agreement.

⁴⁴⁴ Thondhlana *et al* "Natural resource governance in Kgalagadi Transfrontier Park" 24.

⁴⁴⁵ Thondhlana *et al* "Natural resource governance in Kgalagadi Transfrontier Park" 24.

As pointed out in Chapter 1, the Khomani San who successfully instituted a land claim in the KTFCA was a heterogeneous community.⁴⁴⁶ The Park Agreement assumes that the decision making process to draft a constitution for the CPA, was undertaken by a traditional homogenous community. However, the Khomani San's decision making process is subject to conflicting views between the original claimants, their traditional leadership and those who later joined the land claim. The newcomers have a modern outlook to using land as opposed to the original land claimants.⁴⁴⁷ These groups are referred to as the traditional and modern Khomani San.⁴⁴⁸

According to Thondhlana *et al*⁴⁴⁹ "the framing of institutions and development of projects into one mould, by not differentiating different perceptions of land use by the modern and traditional Khomani San community members, are likely to have divisive effects among the communities, which could compromise collective action. For instance, SANParks primarily uses the traditionalist narrative in framing rules for resource use in the KTFCA." However, based by interviews conducted by Thondhlana *et al*,⁴⁵⁰ "the framing of the Khomani San culture as pristine, cohesive and undiluted was viewed by some Khomani San community members as a strategy by SANParks to gain the power to constrain resource use and marginalise some modernised Khomani San community members." Based on the analysis of Thondhlana *et al*,⁴⁵¹ "the traditionalist-modernist conflict is a product of and perpetuated by non-governmental organisations' objectives and institutions that classify communities based on cultural background." Thondhlana *et al*⁴⁵² state that "this lack of meaningful inclusion and unfairness in decision making often does not rest well with some members of the society, which perhaps explains the reported resentment towards collaborative governance within the Contract Park and communal land." This challenge can be rectified by engaging in meaningful participation by all community members within the commons.

⁴⁴⁶ Thondhlana *et al* "Natural resource governance in Kgalagadi Transfrontier Park" 20.

⁴⁴⁷ Thondhlana *et al* "Natural resource governance in Kgalagadi Transfrontier Park" 20.

⁴⁴⁸ Thondhlana *et al* "Natural resource governance in Kgalagadi Transfrontier Park" 20.

⁴⁴⁹ Thondhlana *et al* "Natural resource governance in Kgalagadi Transfrontier Park" 21.

⁴⁵⁰ Thondhlana *et al* "Natural resource governance in Kgalagadi Transfrontier Park" 21.

⁴⁵¹ Thondhlana *et al* "Natural resource governance in Kgalagadi Transfrontier Park" 21.

⁴⁵² Thondhlana *et al* "Natural resource governance in Kgalagadi Transfrontier Park" 20.

Collective-choice arrangements are recognised in the Kalahari Park Management Plan. Section 4 of the Kalahari Park Management Plan provides for consultation. It provides that "the goal of the park within the public participation process is to work directly with stakeholders to ensure that the stakeholder concerns and aspirations are consistently understood and considered."⁴⁵³ Stakeholders, both interested and affected, have always been included in the revision process of the park management plan since 2008 to the current one, by notifying them of participation processes through mechanisms suitable for the different stakeholder groups.⁴⁵⁴ According to the plan, the stakeholder participation process provides the opportunity for input from all stakeholders within reasonable timeframes, with emphasis on sharing of information and joint learning."⁴⁵⁵

3.3.2.4 Design Principle four: Monitoring

GN R1061 recognises monitoring in that regulation 34 provides the requirements that a person intending to carry out research and monitoring in a protected area should comply with.

In the Contract Park, the JMB has the responsibility of monitoring the compliance of the collective decisions made pertaining to the Contract Park.⁴⁵⁶ The JMB community representatives of both the Khomani San and Mier have a responsibility of monitoring the activities of the two communities to ensure that they comply with the Park Agreement, NEMPAA and NEMBA.⁴⁵⁷ In the rest of the KTFCA, SANParks monitors the activities of the Khomani San who have access to the rest of the KTFCA to ensure that they comply with the provisions of the above Acts.⁴⁵⁸

Further monitoring in the KTFCA is provided in the Kalahari Park Management Plan with specific reference to strategic adaptive management (hereafter SAM). The SAM's critical component is monitoring and evaluation of the consequences of management decisions and actions.⁴⁵⁹ SAM further involves "assessment of the outcome of management

⁴⁵³ Section 4 of the Kalahari Park Management Plan, 2016-2026.

⁴⁵⁴ Section 4 of the Kalahari Park Management Plan, 2016-2026.

⁴⁵⁵ Section 4 of the Kalahari Park Management Plan, 2016-2026.

⁴⁵⁶ See para 2.3.4 above read with section 41.1.5 of the Park Agreement.

⁴⁵⁷ See para 3.3.1 above.

⁴⁵⁸ See para 3.3.1 above.

⁴⁵⁹ Section 10.8 of the Kalahari Park Management Plan, 2016-2026.

interventions or assessing whether the intervention is on an appropriate trajectory to achieve the particular objective."⁴⁶⁰ In terms of the Kalahari Park Management Plan, "ongoing evaluation of emerging results against objectives is essential to allow strategy and methodology to be adjusted as new understanding and knowledge emerges."⁴⁶¹

3.3.2.5 Design Principle five: Graduated sanctions

GN R1061 provides for graduated sanctions in that any person in a protected area who fails to comply with any internal rules issued by the management authority will be guilty of an offence if the person:

(a)hinders, troubles, intimidates, or obstructs a management authority or an authorised official in the execution of its or his or her duties or the performance of its or his or her functions under these Regulations; or

(b)violates, refuses or fails to obey or comply with any prohibition, request or instruction imposed by these Regulations or by the management authority or authorised official.

The penalty for the above offence is imprisonment for a period not exceeding five years or to a fine or to both such fine and such imprisonment.⁴⁶²

In terms of the Contract Park and the rest of the KTFCA, resource users who violate the operational rules are likely to be assessed graduated sanctions as provided for under offences and penalties provisions in the NEMPAA and NEMBA respectively.⁴⁶³

3.3.2.6 Design Principle six: conflict-resolution mechanisms

The JMB is responsible for resolving conflicts between resource stakeholders in the Contract Park.⁴⁶⁴ This provides a lowcost and readily available conflict-resolution mechanism to mediate conflicts among resource users and between users and officials. The Park Agreement further provides for mediation for disputes between SANParks and the Khomani San community or Mier community or a dispute between the Khomani San

⁴⁶⁰ Section 10.8 of the Kalahari Park Management Plan, 2016-2026.

⁴⁶¹ Section 10.8 of the Kalahari Park Management Plan, 2016-2026.

⁴⁶² Regulation 64(1)(c) of GN R1061.

⁴⁶³ See Chapter 4 for a detailed discussion on this.

⁴⁶⁴ Clause 46.1 of the Park Agreement.

and Mier communities among themselves, which SANParks, the Khomani San or Mier communities are unable to settle in terms of the provisions of the Park Agreement.⁴⁶⁵ If the parties to the dispute are unable to settle the dispute in terms of mediation, the parties may pursue arbitration provided for in terms of clause 58 of the Park Agreement.⁴⁶⁶ However, based on empirical research conflict-resolution mechanisms are not being effectively being implemented as human-wildlife conflict is taking place within the area.⁴⁶⁷

3.3.2.7 Design Principle seven: Minimal recognition of rights

In the case of the Contract Park, the JMB can devise formal rules that relate to resource use, but SANParks still has the principal authority to formulate rules for resource use.⁴⁶⁸ Further in the Contract Park and the rest of the KTFCA, NEMPAA has to be followed as the Act, and its regulations constitute the formal rules relating to resource use.⁴⁶⁹ Hence in the KTFCA the rights of the Khomani San and Mier community members are minimally recognised and only if SANParks recognises them or if allowed in terms of legislation.

3.3.2.8 Design Principle eight: Nested enterprises

The design principle of nested enterprises is recognised in section 10 of the Kalahari Park Management Plan, which provides for bioregional plans.⁴⁷⁰ In terms of the Kalahari Park Management Plan "the purpose of the bioregional plan is to conserve natural systems and processes within and around the park to ensure a positive conservation outcome to the park and in the park buffer zone, by influencing developmental projects outside the park."⁴⁷¹ From the purpose of the bioregional plan provided in the Kalahari Park Management Plan nested enterprises are recognised, as "bioregional plans rely on the formation of partnerships with other like-minded organisations to maintain the

⁴⁶⁵ Clause 57.1 of the Park Agreement.

⁴⁶⁶ Clause 58.1 of the Park Agreement.

⁴⁶⁷ See para 1.2 above.

⁴⁶⁸ Clause 41 of the Park Agreement. See also Thondhlana *Dryland Conservation Areas* 135. See also Thondhlana *et al* 2015 *Land Use Policy* 12.

⁴⁶⁹ Clause 41 read with para 3.3 above. See para 4.3 below.

⁴⁷⁰ Section 10 of the Kalahari Park Management Plan, 2016-2026. The NEMBA also requires bioregional plans in terms of section 40.

⁴⁷¹ Section 10.2 of the Park Management Plan, 2016-2026.

faunal and floral assemblages and ecological processes representative of the area for the long-term beneficiation of the region and country."⁴⁷² Further, "during the drafting of bioregional plans to the drafters have to collaborate with relevant international, national, provincial and local government structures; non-governmental organisations and other stakeholders."⁴⁷³

Nested enterprises are also recognised in section 10 of the Kalahari Park Management Plan, where it provides for the mainstreaming of biodiversity programme. The purpose of this programme is "to engage and interact with local and district municipalities, non-governmental organisations, neighbours and surrounding communities bordering the park to ensure that biodiversity considerations of the park are taken into account as far as possible and as appropriate, in all developmental decisions."⁴⁷⁴ The governance of the commons within the KTFCA itself is dependent on various stakeholders at multiple levels who all collaborate in decision making.⁴⁷⁵

The joint park management plan (hereafter JPMP) established by both South Africa and Botswana serves as the strategic guiding framework for the governance, management and decision making related to the development and management of the KTFCA.⁴⁷⁶ In terms of the JPMP, "senior management from both countries constitutes the joint park management committee and they meet regularly to discuss operational issues."⁴⁷⁷ These meetings form the basis for joint operations and ultimately ensure that a coordinated approach is followed."⁴⁷⁸

The Kalahari Park Management Plan further provides for a stakeholder relationship programme.⁴⁷⁹ The purpose of this programme is to establish and maintain meaningful and beneficial relationships with a wide range of stakeholders that support SANParks' core business of biodiversity conservation and tourism.⁴⁸⁰ The stakeholder relationship

⁴⁷² Section 10.2 of the Kalahari Park Management Plan, 2016-2026.

⁴⁷³ Section 10.2 of the Kalahari Park Management Plan, 2016-2026.

⁴⁷⁴ Section 10.2.1 of the Kalahari Park Management Plan, 2016-2026.

⁴⁷⁵ Section 10 of the Kalahari Park Management Plan, 2016-2026.

⁴⁷⁶ Section 10.3.1 of the Kalahari Park Management Plan, 2016-2026.

⁴⁷⁷ Section 10.3.1 of the Kalahari Park Management Plan, 2016-2026.

⁴⁷⁸ Section 10.3.1 of the Kalahari Park Management Plan, 2016-2026.

⁴⁷⁹ Section 10.6.1 of the Kalahari Park Management Plan, 2016-2026.

⁴⁸⁰ Section 10.6.1 of the Kalahari Park Management Plan, 2016-2026.

programme includes a park advisory forum (hereafter PAF), which functions as an advisory body that meets quarterly."⁴⁸¹

The PAF "is a means of providing a legitimate platform to ensure stakeholder participation on matters of mutual relevance affecting the park."⁴⁸² The creation of the PAF is expected to facilitate constructive interaction between the park and surrounding community stakeholders and to build constituencies in support of the natural and cultural heritage conservation goals of the park."⁴⁸³ In terms of the Kalahari Park Management Plan, "organisations represented on the PAF include among others, the Mier local municipality, Khomani San, South African Police Service and community development officers." It can be argued that the formation of the PAF, which is a recent development in the current Kalahari Park Management Plan, facilitates the participation of all interested and affected parties on the South African side of the KTFCA in matters affecting them. It can further provide a platform for Khomani San and Mier communities to address issues related to governance and benefit sharing presented. It also allows all stakeholders to contribute their knowledge decision making aimed at addressing the challenges of an uncertain nature in the KTFCA and the surrounding areas.

Based on the analysis of the commons framework of the Contract Park in KTFCA, it has been gathered that within the Contract Park the design principles of the commons were found to be present within the Park Agreement and Kalahari Park Management Plan. It seems that the practical implementation on the ground was minimal due to lack of adequate community participation.⁴⁸⁴

3.4 Governance in the GLTFCA

3.4.1 Background

After the election of a democratic government in South Africa in 1994, the Makuleke community in 1995 prepared and submitted a claim for the restitution of their traditional

⁴⁸¹ Section 10.6.1 of the Kalahari Park Management Plan, 2016-2026.

⁴⁸² Section 10.6.1 of the Kalahari Park Management Plan, 2016-2026.

⁴⁸³ Section 10.6.1 of the Kalahari Park Management Plan, 2016-2026.

⁴⁸⁴ See para 3.3.2.3 above.

land in respect of the northern Pafuri region of the Kruger National Park.⁴⁸⁵ This land claim was resolved in 1998 by way of agreement amongst the following parties, namely SANParks, the Makuleke Community, the then Minister of Environmental Affairs and Tourism, the Minister of Public Works, the Minister of Land Affairs; the Minister of Minerals and Energy, the Minister of Agriculture, the Minister of Defence and the Member of the Executive Council for Agriculture, Land and Environment.⁴⁸⁶ As a result of the successful land claim, the Makuleke community was restored ownership of approximately 19 000 hectares situated in the Pafuri region which constitutes the commons.⁴⁸⁷

The Makuleke community entered into an agreement referred to as the Makuleke Land Claim Settlement Agreement (hereafter Settlement Agreement) with SANParks, which was ratified by the Land Claims Court in 1998.⁴⁸⁸ In terms of the Settlement Agreement, ownership and title were returned to the Makuleke people in the form of a Communal Property Association (hereafter Makuleke CPA).⁴⁸⁹ The land was formally transferred to the Makuleke CPA subject to the conditions that: "no mining or prospecting may be undertaken on the land; no part of the land may be used for residential purposes other

⁴⁸⁵ In terms of the *Restitution of Land Rights Act* 22 of 1994. Also see Child *et al Evolution and Innovation in Wildlife Conservation* 362; Paterson *Bridging the Gap Between Conservation and Land Reform* 247; Kepe *et al* 2005 *International Journal of Biodiversity Science and Management* 12-13; Steenkamp and Uhr *The Makuleke Land Claim* 1-25; Ramutsindela and Shabangu 2013 *Journal of Contemporary African Studies* 441-456; "Makuleke Land Claim Deal in South Africa" 15-24.

⁴⁸⁶ Find the summary of the agreement at PMG "Joint Meeting of Environmental Affairs & Tourism Portfolio Committee; Agriculture, Land & Environmental Affairs Select Committee Makuleke Land Claim" (17 February 1999) <https://pmg.org.za/committee-meeting/5638/>. Also see Child *et al Evolution and Innovation in Wildlife Conservation* 362; Paterson *Bridging the Gap Between Conservation and Land Reform* 247; Kepe *et al* 2005 *International Journal of Biodiversity Science and Management* 12-13.

⁴⁸⁷ Child *et al Evolution and Innovation in Wildlife Conservation* 362; Paterson *Bridging the Gap Between Conservation and Land Reform* 247. See also Kepe *et al* 2005 *International Journal of Biodiversity Science and Management* 12-13.

⁴⁸⁸ The Makuleke Community Claimant Concerning: Pafuri Area of the Kruger National Park and Environs, Soutpansberg District, Northern Province SALCC Case Number 90/98 decided 15 December 1998. <http://www.saflii.org/za/cases/ZALCC/1998/26.pdf>. Also see De Villiers *Land Claims and National Parks* 152; Grossman and Holden "Contract Parks in South Africa" 6; Paterson *Bridging the Gap Between Conservation and Land Reform* 248.

⁴⁸⁹ *Communal Property Association Act* 28 of 1996. Also see Grossman and Holden "Contract Parks in South Africa" 6. Paterson *Bridging the Gap Between Conservation and Land Reform* 248 states that "This process involved the formal deproclamation of the Pafuri Region as a Schedule 1 National Park (in terms of section 2(3) of the *National Parks Act*, 57 of 1976); the transfer of the land to the CPA in terms of a Deed of Grant; and the re-incorporation of the land into the KNP (in terms of an agreement concluded under section 2B(1)(b) of the *National Parks Act*). The erstwhile Minister of Land Affairs agreed to waive all transfer and stamp duties associated with the transfer of land to the CPA (clause 18)."

than that required for ecotourism purposes; no part of the land may be used for agriculture; the land must be used and maintained solely for conservation and associated commercial activities; no development may take place on the land before an environmental assessment being considered and approved by the competent authority, and SANParks has a pre-emptive right to purchase the land should the Makuleke CPA wish to sell it."⁴⁹⁰ In addition, the community agreed to have these conditions registered against the Deed of Grant, thereby ensuring their perpetuity.⁴⁹¹ Within the Contract Park luxury lodges namely the Outpost and Wilderness Lodge have been established and are operational, the Makuleke community earns dividends from these enterprises, and the lodges have created employment for community members.⁴⁹²

Furthermore, in terms of clause 24(1) of the Settlement Agreement, the Makuleke CPA agreed to contract the Pafuri Region back to SANParks for fifty years.⁴⁹³ The agreement is a flexible as it allows the Makuleke CPA or SANParks, on a five year notice to terminate the agreement after twenty years.⁴⁹⁴ If this occurs, the Pafuri Region would be excluded from the KNP.⁴⁹⁵ The settlement agreement also provides that the Makuleke CPA and SANParks may also by agreement, at least two years prior to the termination of the initial fifty year period, extend the duration of this arrangement for a further period of fifty years.⁴⁹⁶ For the duration of the arrangement discussed above, the land in the Pafuri Region that is in the KNP is managed by a JMB which consists of six members, three from the Makuleke CPA and three from SANParks and decisions will

⁴⁹⁰ De Villiers *Land Claims and National Parks* 158. See also Paterson *Bridging the Gap Between Conservation and Land Reform* 248; Grossman and Holden "Contract Parks in South Africa" 6; De Villiers *Maluleke land claim and the Kruger National Park* 317.

⁴⁹¹ De Villiers *Land Claims and National Parks* 158. See also Paterson *Bridging the Gap Between Conservation and Land Reform* 248; Grossman and Holden "Contract Parks in South Africa " 6; De Villiers 1998 *SA Public Law* 317.

⁴⁹² *Maluleke Rethinking Protected Area Co-management* 65.

⁴⁹³ Clause 24 (1) of the Settlement Agreement. Also see Paterson *Bridging the Gap Between Conservation and Land Reform* 248; De Villiers 1998 *SA Public Law* 318.

⁴⁹⁴ Clause 24 (1) of the Settlement Agreement. Also see Paterson *Bridging the Gap Between Conservation and Land Reform* 248; De Villiers 1998 *SA Public Law* 318.

⁴⁹⁵ Clause 23(1)(2) read with clause 24(1) and clause 40. Also see Paterson *Bridging the Gap Between Conservation and Land Reform* 249; De Villiers 1998 *SA Public Law* 318.

⁴⁹⁶ Clause 24(2) of the Settlement Agreement. Also see De Villiers *Land Claims and National Parks* 164; Paterson *Bridging the Gap Between Conservation and Land Reform* 250; De Villiers 1998 *SA Public Law* 318.

be made based on consensus.⁴⁹⁷ The JMB is responsible for the formulation, implementation and monitoring of an effective framework for the management and development of the Contract Park in compliance with the NEMPAA and NEMBA.⁴⁹⁸ In addition, the position of chairman rotates annually.⁴⁹⁹ Additional persons may be invited to meetings for their expertise and also as a way of involving more members of the community in the activities of the JMB.⁵⁰⁰

The JMB is essentially responsible for the day-to-day management and operations and to regulate all the conservation-related activities that are undertaken within the Pafuri Region of the KNP.⁵⁰¹ The management should be done in accordance with the Master Plan for the Conservation and Sustainable Development of the Makuleke Region of the KNP, as accepted by both parties.⁵⁰² The Master Plan provides a historical overview and the social background of the area; a general description of the area (location, climate, geology; hydrology; soils; biology, landscape types; infrastructure); a vision for the area; and a series of principles and objectives to guide the management of and development in the area.⁵⁰³ The settlement agreement stipulated that the powers to manage the region are divided into conservation and commercial categories.⁵⁰⁴

The Settlement Agreement provides that the community have additional rights in respect of the Pafuri Region, namely access; the establishment of a research facility, a museum and royal kraal for future tourist, religious and cultural activities; and the use of the natural resources situated in the Pafuri region.⁵⁰⁵ The scope of these rights is, however, generally determined by the JMB and subject to the Master Plan.⁵⁰⁶ Further, clause 34(1) of the Settlement Agreement states that all the income generated from

⁴⁹⁷ Clauses 25(2) and 25(8) of the Settlement Agreement. See also De Villiers *Land Claims and National Parks* 165.

⁴⁹⁸ Clauses 25(2) and 25(8) of the Settlement Agreement.

⁴⁹⁹ Clause 25(6) of the Settlement Agreement. Also see De Villiers *Land Claims and National Parks* 166.

⁵⁰⁰ Clause 25(6) of the Settlement Agreement. Also see De Villiers *Land Claims and National Parks* 166.

⁵⁰¹ Clauses 26(2) and 27(3) of the Settlement Agreement. Also see De Villiers *Land Claims and National Parks* 168.

⁵⁰² See also Clause 27(1) of the Settlement Agreement. Also see De Villiers *Land Claims and National Parks* 168.

⁵⁰³ See also Clause 27(1) of the Settlement Agreement. Also see De Villiers *Land Claims and National Parks* 169.

⁵⁰⁴ De Villiers 1998 *SA Public Law* 319.

⁵⁰⁵ Clause 33 of the Settlement Agreement. Also see De Villiers *Land Claims and National Parks* 176.

⁵⁰⁶ Clause 33 of the Settlement Agreement. Also see De Villiers *Land Claims and National Parks* 176.

permissible commercial activities in the Pafuri Region, excluding gate fees, accrue to the Makuleke CPA.⁵⁰⁷ In terms of clause 34(3) of the Settlement Agreement the Makuleke CPA should currently be liable for fifty percent of these costs provided that such an amount does not exceed fifty per cent of the Makuleke CPA's net profit derived from permissible commercial activities undertaken within the Pafuri Region.⁵⁰⁸ In terms of clause 34(5) of the Settlement Agreement, the Makuleke CPA is liable for all costs relating to the establishment and maintenance of infrastructure associated with these commercial activities.⁵⁰⁹

3.4.2 Commons framework

In this section the principles that constitute the commons framework as reflected in Chapter 2 shall be analysed with to the Settlement Agreement and the Kruger National Park Management Plan 2018-2028 (hereafter KNP Management Plan).

3.4.2.1 Design Principle one: Clearly defined boundaries and resource users

In terms of the settlement agreement, the Contract Park on the South African side of the GLTFCA is well defined and is situated in the Northern Pafuri Region of the Kruger National Park.⁵¹⁰ The Contract Park in the GLTFCA is characterised by identifiable owners, namely the Makuleke community, who have rights to withdraw resource units from the Pafuri region.⁵¹¹

3.4.2.2 Design Principle two: Congruence between appropriation and provision rules and local conditions

Section 3 of the KNP Park Management Plan provides that GN R1061 also apply to the Kruger National Park, which is home to the Contract Park, with respect to appropriation and provision rules.

⁵⁰⁷ De Villiers *Land Claims and National Parks* 176. See also Paterson *Bridging the Gap Between Conservation and Land Reform* 252; De Villiers 1998 SA Public Law 323.

⁵⁰⁸ De Villiers *Land Claims and National Parks* 177. See also Paterson *Bridging the Gap Between Conservation and Land Reform* 252.

⁵⁰⁹ De Villiers 1998 SA Public Law 323. See also Paterson *Bridging the Gap Between Conservation and Land Reform* 252.

⁵¹⁰ See para 3.4.1 above.

⁵¹¹ See para 3.4.1 above.

In terms of the Contract Park in the GLTFCA, the appropriation rules are the following: no mining or prospecting may be undertaken on the land; no part of the land may be used for residential purposes other than that required for ecotourism purposes; no part of the land may be used for agriculture; the land must be used and maintained solely for conservation and associated commercial activities; no development may take place on the land prior to an environmental assessment; all the income generated from permissible commercial activities in the Pafuri Region accrues to the Makuleke CPA; the Makuleke community can use resources in the Contract Park for purposes of hunting, collection of plants and firewood and the land in the Contract Park can be used for cultural and religious purposes.⁵¹²

In the GLTFCA Contract Park provision rules are as follows: The Makuleke CPA is liable for all costs relating to the establishment and maintenance of infrastructure associated with commercial activities in the Contract Park and gate fees in the Contract Park accrue to SANParks.⁵¹³ In terms of local conditions, the land that constitutes the Contract Park is high in biodiversity and conservation value.⁵¹⁴

In the case of the GLTFCA, it can be inferred that there is congruence between appropriation and provision rules and local conditions. This is evidenced by the fact that the Makuleke CPA benefits from all the income earned through commercial activities that relate to this biodiversity-rich area.⁵¹⁵ As such, it is equally fair that the community members are liable for the costs relating to the establishment and maintenance of commercial activities.⁵¹⁶

3.4.2.3 Design Principle three: Collective-choice arrangements

Collective-choice arrangements are recognised through the composition of the JMB as it consists of community members and members of SANPARKS in equal proportion.⁵¹⁷ Provisions on stakeholder participation in the KNP Management Plan take into account

⁵¹² See para 2.3.2 above read with para 3.4.1 above.

⁵¹³ See para 3.4.1 above.

⁵¹⁴ See para 3.4.1 above.

⁵¹⁵ See para 3.4.1 above.

⁵¹⁶ Maluleke Rethinking Protected Area Co-management 147.

⁵¹⁷ See para 2.3.3 above read with clauses 28(5), 27(3) and 27(4) of the Settlement Agreement.

the participation of local communities in decision making.⁵¹⁸ While governance within the Contract Park through the JMB appears to recognise collective-choice arrangements, interviews by Maluleke within the GLTFCA suggest otherwise. According to this research "the majority of Makuleke community members, regardless of the fact that they were represented by the Makuleke CPA within the JMB, argued that they did not meaningfully participate in the choice of community projects, as these projects were only presented to them after the JMB had ratified the decision taken on the kind of projects that the community would undertake on their land."⁵¹⁹ These projects included concession contracts with private companies and operating lodges that the community had to conclude. Only a few community members had an opportunity to decide with whom the Makuleke community would conclude the agreements."⁵²⁰

3.4.2.4 Design Principle four: Monitoring

As stated under the commons framework of the KTFCA, GN R1061 recognises monitoring in that regulation 34 provides the requirements that a person intending to carry out research and monitoring in a protected area should comply.

Monitoring is recognised in the Settlement Agreement as it provides that the JMB is responsible for the formulation, implementation and monitoring of an effective framework for the management and development of the Contract Park in compliance with the NEMPAA and NEMBA.⁵²¹ As indicated under the discussion of the KTFCA,⁵²² monitoring with regard to the commons in the GLTFCA is provided in the KNP Management Plan with specific reference to SAM, whose critical component is monitoring and evaluating the consequences of management decisions and actions.⁵²³

3.4.2.5 Design Principle five: Graduated sanctions

In terms of the Contract Park resource users who violate the operational rules are likely to be assessed for graduated sanctions as provided for under the penalties provisions in

⁵¹⁸ Section 4 of the KNP Management Plan, 2018-2028.

⁵¹⁹ Maluleke *Rethinking Protected Area co-management* 148.

⁵²⁰ Maluleke *Rethinking Protected Area co-management* 148.

⁵²¹ See para 2.4 above, read with para 3.4.1 above.

⁵²² See para 3.3.2.4 above.

⁵²³ Section 3.2 of the KNP Management Plan, 2018-2028.

the NEMPAA.⁵²⁴ Similarly stated under the discussion of the KTFCA, graduated sanctions applicable to the Contract Park are provided in GN R1061.⁵²⁵

3.4.2.6 Design Principle six: conflict-resolution mechanisms

The Settlement Agreement provides procedures on addressing conflict arising in the Contract Park over the breach of fundamental rights.⁵²⁶ Conflict may arise for instance when, SANParks is of the view that the activities in the Contract Park are being conducted against the spirit of the National Park and also if the local community is of the opinion that they are being locked into an agreement where SANParks opposes or undermines its commercial activities, in a manner that is not practically possible to remedy.⁵²⁷ In such instances, the matter will be referred to mediation, and if the parties cannot reach an agreement, then the contract will be cancelled.⁵²⁸ The mediation procedure is elaborate. For example, if the JMB cannot reach consensus at two consecutive meetings, then in terms of clause 38 of the Settlement Agreement, either party may declare a deadlock. Thereafter the matter will be referred to the Chief Executive of SANParks and the Makuleke CPA in an attempt to resolve the dispute.⁵²⁹ If the parties agree, it is deemed a decision of the JMB.⁵³⁰ Further, if the agreement is not reached, either party has a right to refer the matter to mediation.⁵³¹ If the parties do not agree on a mediator, clause 43(2) of the Settlement Agreement stipulates that the national director of the Independent Mediation Service of South Africa is approached to nominate a mediator. If the parties fail to resolve the conflict using mediation, then clause 44 of the Settlement Agreement provides that the matter can be referred to arbitration. However, based on empirical research, conflict-resolution mechanisms are not effectively being implemented as human-wildlife conflict is taking place within the area.⁵³²

⁵²⁴ See para 2.5 read with para 3.4.1 above.

⁵²⁵ Regulation 61, see para 3.3.2.5.

⁵²⁶ Clause 37 of the Settlement Agreement. See also De Villiers *Land Claims and National Parks* 71.

⁵²⁷ Clause 37 of the Settlement Agreement. See also De Villiers *Land Claims and National Parks* 71.

⁵²⁸ Clause 37 of the Settlement Agreement. See also De Villiers *Land Claims and National Parks* 71.

⁵²⁹ De Villiers *Land Claims and National Parks* 72.

⁵³⁰ De Villiers *Land Claims and National Parks* 72.

⁵³¹ In terms of clause 43(1) of the Settlement Agreement

⁵³² See para 1.2 above.

3.4.2.7 Design Principle seven: Minimal recognition of rights

In the Contract Park, the local community members have rights in terms of the NEMPAA to organise institutions for commercial activities.⁵³³

3.4.2.8 Design Principle eight: Nested enterprises

The KNP Management Plan through its integrated land use and regional planning management programme recognises nested enterprises.⁵³⁴ The purpose of this programme is "to inform multi-sectoral regional integrated development land use planning and management processes in support of the Kruger National Park, by strengthening and enabling partnerships and the implementation of cooperative programmes in pursuance of sustainable and socio-economic outcomes."⁵³⁵ This process involves that Park management should engage with local municipalities and the three district municipalities⁵³⁶ in the revision of spatial development frameworks, integrated development plans and environmental management frameworks."⁵³⁷ In addition, the Park management must develop robust and innovative approaches towards regional stewardship support, park incorporation and land consolidation, using different models to forge partnerships with the provincial conservation agencies, communities and the private sector.⁵³⁸

The Park Management Plan further includes contractual and cooperative conservation arrangements.⁵³⁹ The purpose of these programmes is "to support the implementation of associated contractual and cooperative arrangements for conservation areas by providing a framework for a coordinated and uniform approach to guide these

⁵³³ Section 42 of the NEMPAA read with 3.4.1 above.

⁵³⁴ Section 10.2.1 of the KNP Management Plan, 2018-2028.

⁵³⁵ Section 10.2.1 of the KNP Management Plan, 2018-2028.

⁵³⁶ In terms of section 2.8 of the KNP Management Plan, 2018-2028, the park is situated within the following district and local authority boundaries: "(i) Ehlanzeni District Municipality which includes, Bushbuckridge Local Municipality; Mbombela Local Municipality; and Nkomazi Local Municipality. Mopani District Municipality which includes, Ba-Phalaborwa Local Municipality; Greater Giyani Local Municipality; and Mopani Local Municipality. Vhembe District Municipality which includes, Musina Local Municipality; Collins Chabane Local Municipality; and Thulamela Local Municipality."

⁵³⁷ Section 10.2.1 of the KNP Management Plan, 2018-2028.

⁵³⁸ Section 10.2.1 of the KNP Management Plan, 2018-2028.

⁵³⁹ Section 10.2.2 of the KNP Management Plan, 2018-2028.

conservation arrangements within the open and adjacent Greater Kruger Area."⁵⁴⁰ Additionally, "the integration of the Park within the broader bioregion and regional economy can increase the sustainability of the park through a greater variety of profitable economic activities within and outside the park."⁵⁴¹ Further, "this may also result in the conservation of a larger regional area of biodiversity and heritage importance."⁵⁴² This can happen as a result of "aligning and partnering with communities, the private sector and relevant conservation-related agencies or sectors."⁵⁴³ This may "contribute to improved management of the area's biodiversity and heritage importance and the increased appreciation of the value of conservation through the contribution to government's desired development objectives."⁵⁴⁴

The Park Management Plan includes a programme on stakeholder relationship and engagement.⁵⁴⁵ The purpose of this programme is "to establish and maintain meaningful and beneficial relationships with a wide range of stakeholders."⁵⁴⁶ This complies with the NEMPAA, which promotes the participation of local communities in the management of protected areas, inclusive of their commons.⁵⁴⁷ In line with the stakeholder relationship and engagement programme, "the Kruger National Park strategically and operationally participates in discussions at national, provincial and local spheres, with traditional authorities and CPAs, several water management and river forums, a range security clusters, local and regional tourism operators and partners, several communities and youth organisations, a range of conservation authorities and entities, UNESCO, the GLTFCA, agricultural, commercial and retail sectors in the local and regional landscape, conservation, education and health NGOs, local and international training, as well as research institutions and media houses."⁵⁴⁸

Based on the analysis of the commons framework in the Contract Park within the GLTFCA, it has been gathered that the Contract Park constitutes a form of commons.

⁵⁴⁰ Section 10.2.2 of the Park Management Plan, 2018-2028.

⁵⁴¹ Section 10.2.2 of the Park Management Plan, 2018-2028.

⁵⁴² Section 10.2.2 of the Park Management Plan, 2018-2028.

⁵⁴³ Section 10.2.2 of the KNP Management Plan, 2018-2028.

⁵⁴⁴ Section 10.2.2 of the KNP Management Plan, 2018-2028.

⁵⁴⁵ Section 10.7.3 of the KNP Management Plan, 2018-2028.

⁵⁴⁶ Section 10.7.3 of the KNP Management Plan, 2018-2028.

⁵⁴⁷ Section 42 of the NEMPAA.

⁵⁴⁸ Section 10.7.3 of the KNP Management Plan, 2018-2028.

This is so as the design principles that constitute the commons framework were found in the Settlement Agreement and KNP Park Management Plan.

3.5 Governance in the GMTFCA

3.5.1 Background

The South African side of the GMTFCA is dominated by private game and commercial agricultural farms.⁵⁴⁹ SANParks and the private landowners within the GMTFCA concluded contractual agreements.⁵⁵⁰ The "Mapungubwe National Park and World Heritage Site Park Management Plan of 2019-2029 (hereafter Mapungubwe Park Management Plan) provide that contractual agreements remain one of the options available for communities and private landowners to become part of the park and to improve the ecosystem services and connectivity of the park, whilst contributions to other core functions such as responsible tourism, socio-economic benefits and management considerations, for example safety and security, invasive alien species management and other risk factors, are also considered."⁵⁵¹ In this regard the National Parks Trust of South Africa, the World Wildlife Fund and De Beers⁵⁵² have made land acquired by the trust available for inclusion into the park.⁵⁵³ These contractual agreements arose out of the importance of creating the Mapungubwe National Park, which forms part of the GMTFCA.⁵⁵⁴ In terms of the contractual agreements, SANParks

⁵⁴⁹ Sinthumule 2017 *Africa Today* 61.

⁵⁵⁰ Sinthumule *Land Use Change* 72.

⁵⁵¹ Section 2.5 of the Mapungubwe Park Management Plan 2019-2029. Also see <https://www.gov.za/documents/world-heritage-convention-act-proclamation-mapungubwe-cultural-landscape-world-heritage-0> [Accessed 13 October 2020]; GN 1051 in GG 30442 of 9 November 2007; <http://mapservice.environment.gov.za/PAR/map.aspx>.

⁵⁵² Sinthumule 2018 *Development and Society* 269 states that: "In June 1990, De Beers Consolidated Mines established the 36 000ha Venetia Limpopo Nature Reserve. This was a turning point because the idea of a park was raised afresh by De Beers on 30 December 1993 through a letter to the Minister of Environmental Affairs. At a meeting of the National Parks Board (now SANParks) held in June 1994, the Board resolved to pursue the objective of proclaiming Mapungubwe area as a national park. This dream became a reality on 9 April 1998 when the park was officially declared a National Park. The ultimate objective stated at the time of its official opening was that the park should become a major component of the TFCA shared by South Africa, Botswana and Zimbabwe."

⁵⁵³ Sinthumule 2018 *Development and Society* 269.

⁵⁵⁴ Sinthumule *Land Use Change* 72.

takes full responsibility for conservation and management of biodiversity in the area, while ownership of the land remains with the owners of the land.⁵⁵⁵

According to Sinthumule,⁵⁵⁶ "the agreement between SANParks and the private landowners does not entirely remove property borders *per se*; it rather only softens them, which means that landowners still know where property borders are located even though the management of their land is shared with SANParks. Other agreements within the GMTFCA include the leasing of farms to SANParks by private landowners as a form of de-bordering in which property borders are transformed so as to change their functional roles as barriers.⁵⁵⁷ Landowners undertake the lease agreement on the condition that they get benefits similar to those they were getting from their farm before entering into a lease agreement.⁵⁵⁸ This means that property borders are symbolically removed for wildlife, but practically they remain."⁵⁵⁹

Furthermore, as mentioned in Chapter 1, farmworkers, of whom some are permanent residents in the area because they were born on the farms and some who have stayed on the farms for more than ten years, constitute the local communities on the South African side of the GMTFCA.⁵⁶⁰ In Mapungubwe, farmworkers depend entirely on commercial irrigation farms because they are the main employers. Commercial irrigation farms in the area are therefore an essential source of livelihood farmworkers.⁵⁶¹ However, SANParks has been buying and continues to buy land from private landowners to consolidate the core area of South Africa's contribution to the Greater Mapungubwe TFCA.⁵⁶²

⁵⁵⁵ Sinthumule *Land Use Change* 72.

⁵⁵⁶ Sinthumule *Land Use Change* 72.

⁵⁵⁷ Sinthumule *Land Use Change* 73 states that, "around October 1997 the National Parks Trust acquired Riedel, which was later leased to SANParks for a period of 99 years starting from April 2001 with an option to renew for further 25 years. Sinthumule further states that on the 15th November 1998, Peace Parks Foundation purchased Rhodes drift which was leased to SANParks for a period of 99years. This development was followed by the signing of Heads of Agreement by Nicky Oppenheimer (chairman of De Beers) and Mavuso Msimang (then CEO of SANParks) on the 8th of July 1999. This agreement allows SANParks a 99-year lease over Schroda farms for a once off payment of R1000."

⁵⁵⁸ Sinthumule *Land Use Change* 73.

⁵⁵⁹ Sinthumule *Land Use Change* 73.

⁵⁶⁰ See para 1.2. above.

⁵⁶¹ Sinthumule 2017 *Africa Today* 61.

⁵⁶² Sinthumule 2017 *Africa Today* 61.

As indicated in Chapter 1, the selling of commercial irrigation farms by landowners to SANParks directly affects farmworkers because they become jobless and no longer have a source of income. They have to relocate to another area because their services are no longer required once the farm has been sold and converted into a conservation space.⁵⁶³ The farmworkers who reside permanently in Mapungubwe are unaware of the GMTFCA and consequently do not attend meetings of the Trilateral Technical Committee of the GMTFCA.⁵⁶⁴ This lack of knowledge and participation over the GMTFCA by the farmworkers shows that community members who are important stakeholders and have a direct interest in the resources within the GMTFCA have largely been ignored in the process of its establishment.⁵⁶⁵

Moreover, as stated in Chapter 1, other challenges occurring on the South African side of the GMTFCA include the farmer-wildlife conflict that is occurring in the area due to the conservation and irrigation land use activities occurring side by side that are not compatible with each other.⁵⁶⁶ Similar to the GLTFCA and KTFCA, other challenges in the GMTFCA relate to climate change, such as rising temperatures, shifts in seasonal weather patterns and water shortages, contrasted with floods and persistent drought leading to wildlife and domestic animal deaths.⁵⁶⁷

3.5.2 Commons framework

In this section the principles that constitute the commons framework as reflected in Chapter 2 shall be analysed with respect to the Mapungubwe National Park and World Heritage Site Management Plan of 2019-2029.

3.5.2.1 Design Principle one: Clearly defined boundaries and resource users

The Mapungubwe Park Management Plan defines the territory of the South African side of the GMTFCA that consists of Mapungubwe National Park,⁵⁶⁸ which partially consists of

⁵⁶³ See para 1.2 above.

⁵⁶⁴ See para 1.2 above.

⁵⁶⁵ See para 1.2 above.

⁵⁶⁶ See para 1.2 above.

⁵⁶⁷ See para 1.2. above.

⁵⁶⁸ See para 3.5.1 above.

leased land owned by private owners and the Venetia Limpopo Nature Reserve.⁵⁶⁹ Further, private landowners constitute the resource users who can withdraw resource flows from the area.⁵⁷⁰

3.5.2.2 Design Principle 2: Congruence between appropriation and provision rules and local conditions

Section 3 of the Mapungubwe Park Management Plan similarly as to the other two protected areas, refer to GN R1061 in relation to the internal rules.⁵⁷¹ GN R1061, as discussed under the KTFCA and GLTFCA includes appropriation and provision rules that can be applied in within the areas of the contractual agreement that fall within the GMTFCA and would not be discussed here.⁵⁷²

SANParks has full responsibility for conservation and management of biodiversity on the South African side of the GMTFCA.⁵⁷³ In terms of provision rules, private landowners enter into lease agreements, provided they still get similar benefits they were getting from their farms before entering such agreements.⁵⁷⁴ The ownership of the leased land remains with the private land owner and the lease agreement between the SANParks and private land owners does not completely remove property borders, private landowners still know where their property borders are located even though the management of their land is shared with SANParks.⁵⁷⁵

There is congruence between appropriation and provision rules and local conditions as SANParks has full responsibility to conserve and manage biodiversity, while the private landowners retain ownership of their land and get the same benefits they were obtaining from their farmland before leasing them.⁵⁷⁶

⁵⁶⁹ See para 3.5.1 above.

⁵⁷⁰ See para 3.5.1 above.

⁵⁷¹ Section 3.4 of the Mapungubwe Park Management Plan, 2019-2029.

⁵⁷² See para 3.5.1 above.

⁵⁷³ See para 3.5.1 above.

⁵⁷⁴ See para 3.5.1 above.

⁵⁷⁵ See para 3.5.1 above.

⁵⁷⁶ See para 3.5.1 above.

3.5.2.3 Design Principle three: Collective-choice arrangements

Similarly identified in the KTFCA and GLTFCA,⁵⁷⁷ collective-choice arrangements are recognised in section 4 of the Mapungubwe Park Management Plan, provides for consultation.⁵⁷⁸ The aim of the park is to constitute a public participation process by "working directly with stakeholders to ensure that stakeholder concerns and aspirations are consistently understood and considered."⁵⁷⁹ The Mapungubwe Park Management Plan provides that "stakeholders, both interested and affected, should be included in the revision process of the park management plan."⁵⁸⁰ The stakeholders need to be notified "of participation processes through mechanisms suitable for the different stakeholder groups."⁵⁸¹ The stakeholder participation process provides an "opportunity for input from all stakeholders within reasonable timeframes, with the emphasis on sharing of information and joint learning."⁵⁸²

The Mapungubwe Park Management Plan also recognises collective-choice arrangements within its "stakeholders structure programme, whose purpose is to establish and maintain purposeful and beneficial relationships with a wide range of stakeholders inclusive of the recognised Mapungubwe descendants, some of who are farmworkers in the area."⁵⁸³ This programme "contributes towards strengthening stakeholder-park relations by empowering stakeholders and local communities to participate in decision-making processes related to management and development issues in parks."⁵⁸⁴

The private landowners have the opportunity to decide on the operational rules applying to their land in the lease agreement.⁵⁸⁵ Except if included in the lease agreement, farmworkers who constitute the local community on the South African side of the

⁵⁷⁷ See para 3.5.1 above.

⁵⁷⁸ Section 4 of the Mapungubwe Park Management Plan, 2019-2029.

⁵⁷⁹ Section 4 of the Mapungubwe Park Management Plan, 2019-2029.

⁵⁸⁰ Section 4 of the Mapungubwe Park Management Plan, 2019-2029.

⁵⁸¹ Section 4 of the Mapungubwe Park Management Plan, 2019-2028.

⁵⁸² Section 4 of the Mapungubwe Park Management Plan, 2019-2029.

⁵⁸³ Section 10.6.1 of the Mapungubwe Park Management Plan, 2019-2029. This programme in line with the NEMPAA in section 42 that seeks to promote the participation of local communities in the management of protected areas.

⁵⁸⁴ Section 10.6.1 of the Mapungubwe Park Management Plan, 2019-2029.

⁵⁸⁵ See para 3.5.1 above.

GMTFCA and who may lose part of their source of livelihood when farmland is leased to SANParks, are unable to decide on the operational rules.⁵⁸⁶

3.5.2.4 Design Principle four: Monitoring

As stated under the commons framework of the KTFCA and GLTFCA, GN R1061 recognises monitoring in that regulation 34 provides the requirements that a person intending to carry out research and monitoring in a protected area should comply with.

On the land subject to contractual arrangements, the private landowners are responsible for monitoring that SANParks is complying with the conditions of the lease agreements in terms of benefits. At the same time, SANParks is responsible for monitoring that the private landowners adhere to rules pertaining to conservation in the area, during the duration of the lease agreement.⁵⁸⁷

Similarly stated in the analysis of the KTFCA and GLTFCA,⁵⁸⁸ monitoring and review are recognised in the Mapungubwe Park Management Plan, with specific reference to the SAM. The SAM "includes monitoring and evaluation of the consequences of management decisions and actions."⁵⁸⁹ Monitoring in terms of the SAM involves an assessment of the outcome of management interventions of whether the intervention is on an appropriate trajectory for achieving the particular objective.⁵⁹⁰

3.5.2.5 Design Principle five: Graduated sanctions

During the duration of the lease agreement, resource users who violate the operational rules are likely to be assessed graduated sanctions as provided for under offences and penalties provisions in the NEMPAA, NEMBA and GN R1061 respectively.⁵⁹¹

⁵⁸⁶ See para 3.5.1 above.

⁵⁸⁷ See para 3.5.1 above.

⁵⁸⁸ See para 3.5.1 above.

⁵⁸⁹ Section 3.2 of the Mapungubwe Park Management Plan, 2019-2029.

⁵⁹⁰ Section 3.2 of the Mapungubwe Park Management Plan, 2019-2029.

⁵⁹¹ See para 3.5.1 above.

3.5.2.6 Design Principle six: conflict-resolution mechanisms

From the increase in farmer-wildlife conflict occurring within the South African side of the GMTFCA from neighbouring Botswana, it can be deduced that the conflict-resolution is not being effectively implemented.⁵⁹²

3.5.2.7 Design Principle seven: Minimal recognition of rights

On the South African side of the GMTFCA, the private landowners incorporated their minimal recognition rights in the lease agreements with SANParks by ensuring that they benefit from their land the same way they did before entering into a lease.⁵⁹³

3.5.2.8 Design Principle eight: Nested enterprises

The Mapungubwe Park Management Plan refers to a cooperative management programme within the Mapungubwe National Park.⁵⁹⁴ The purpose of this programme is to "conserve systems and processes within and around the park to ensure a positive conservation outcome in the park and its buffer zone."⁵⁹⁵ This process will be achieved by influencing developmental processes in the buffer zone and by adding enough land to the protected area estate.⁵⁹⁶ Through the cooperative management programme SANParks aims to engage and collaborate with relevant international, national, provincial, district and local government structures, NGOs and landowner groups, to ensure that biodiversity considerations are taken into account as far as possible and as appropriate, into developmental decisions."⁵⁹⁷ However, based on the reports on empirical research undertaken within the contractual parks in the GMTFCA, farmworkers do not participate in TTC meetings.⁵⁹⁸

From the above discussion, it can be deduced that the Mapungubwe National Park, including the land subject to contractual agreements within it, constitute a form of commons. This is so as most of the design principles that constitute the commons

⁵⁹² See para 3.5.1 above.

⁵⁹³ See para 3.5.1 above.

⁵⁹⁴ Section 10.2.3 of the Mapungubwe Park Management Plan, 2019-2029.

⁵⁹⁵ Section 10.2.3 of the Mapungubwe Park Management Plan, 2019-2029.

⁵⁹⁶ Section 10.2.3 of the Mapungubwe Park Management Plan, 2019-2029.

⁵⁹⁷ Section 10.2.3 of the Mapungubwe Park Management Plan, 2019-2029.

⁵⁹⁸ See para 1.2 above.

framework are recognised in the Mapungubwe Park Management Plan that applies to the contractual agreements in the GMTFCA. However, although provisions recognising conflict-resolution mechanisms are in the governance framework based on the reports on empirical research, conflict-resolution mechanisms are not effectively implemented as farmer-wildlife conflict is taking place within the area.⁵⁹⁹ Further, although the Mapungubwe Park Management Plan recognises the collective-choice arrangements through provisions on the participation of community members, farmworkers who constitute the local communities in the GMTFCA cannot meaningfully participate in terms of decisions that affect resource management as they have no knowledge of the GMTFCA and do not participate in GMTFCA TTC meetings.⁶⁰⁰

3.6 Social-ecological resilience in TFCAs

From the discussion in Chapter 2, it can be deduced that social-ecological resilience applies to the TFCAs as all the Park Management Plans recognised them as social-ecological systems⁶⁰¹ which include resource systems, resource units, governance systems, resource users where human and natural systems are interrelated.⁶⁰² These areas are characterised by the multiple-resource uses of communities and private landowners.⁶⁰³ Human interventions with nature can alter the natural state of TFCAs through, for example, unsustainable land-use practices such as human-wildlife conflict that is occurring within the selected TFCAs discussed in this thesis.⁶⁰⁴ These interventions have the effect of impacting on the social-ecological resilience of linked social-ecological systems to adapt, absorb and transform in the face of disturbance and still maintain functions in the face of external pressures such as the impacts of climate change in the form of droughts or flooding.⁶⁰⁵ This process, is facilitated by adaptive governance where a diversity of stakeholders shares a resource, rights and responsibilities at multiple levels and scales while taking into account diversity of

⁵⁹⁹ See para 1.2 read with para 3.5 above.

⁶⁰⁰ See para 1.2 read with para 3.5 above.

⁶⁰¹ Section 3.2 of the Kalahari Park Management Plan 2016-2026, KNP Management Plan 2018-2028 and Mapungubwe Park Management Plan 2019-2029.

⁶⁰² See para 2.6 above.

⁶⁰³ See para 1.1 read with 3.2 above.

⁶⁰⁴ See para 1.2 above.

⁶⁰⁵ See para 2.4 above.

knowledge and information sharing; and (iii) include social-learning, monitoring and review.⁶⁰⁶

In the paragraphs below, an analysis shall therefore be conducted to determine whether the elements that foster social-ecological resilience can be found within the governance documents applicable to the commons within the selected TFCAs.

3.6.1 Social-ecological resilience in the Commons in the KTFCA, GLTFCA and GMTFCA

3.6.1.1 Capacity of a linked social-ecological system to adapt in the face of disturbance and still maintain functions

Natural resource conservation is a means that can facilitate resilience building to ensure that ecosystems can adapt to disturbances while still maintaining its functions. GN R1061 applies to all three protected areas and provides for biodiversity conservation in protected areas.⁶⁰⁷ The Kalahari Park Agreement recognises conservation as it provides that the land in the Contract Park will also be used for conservation purposes.⁶⁰⁸ As is the case in the GLTFCA Settlement Agreement⁶⁰⁹ and the land subject to contractual agreements within the GMTFCA.⁶¹⁰

The capacity of social-ecological systems to adapt to change is recognised in the Kalahari Park Management Plan,⁶¹¹ KNP Management Plan⁶¹² and the Mapungubwe Park Management Plan⁶¹³ through SAM, which has emerged as SANParks approach of choice to deal with complexity and multi-stakeholder tensions that characterise park management decisions.⁶¹⁴ SAM "begins with determining the desired future state of a

⁶⁰⁶ See para 2.6 above.

⁶⁰⁷ See paras 3.3.2.2, 3.4.2.2 and 3.5.2.2 above.

⁶⁰⁸ See para 3.3.1.2 above.

⁶⁰⁹ See para 3.4.1.2 above.

⁶¹⁰ See para 3.5.1.2 above.

⁶¹¹ Section 3.2 of the Kalahari Park Management Plan 2016-2026, KNP Management Plan 2018-2028 and Mapungubwe Park Management Plan 2019-2029.

⁶¹² Section 3.2 of the Kalahari Park Management Plan 2016-2026, KNP Management Plan 2018-2028 and Mapungubwe Park Management Plan 2019-2029.

⁶¹³ Section 3.2 of the Kalahari Park Management Plan 2016-2026, KNP Management Plan 2018-2028 and Mapungubwe Park Management Plan 2019-2029.

⁶¹⁴ Section 3.2 of the Kalahari Park Management Plan 2016-2026, KNP Management Plan 2018-2028 and Mapungubwe Park Management Plan 2019-2029.

particular social-ecological system.⁶¹⁵ The aim of this step is to build a sense of common purpose among all relevant stakeholders and to develop a collective roadmap for moving from a current reality to a more desirable social-ecological system.⁶¹⁶ This desired state or vision needs to be described within the context of associated stakeholders and their respective values, as well as social environmental, ecological, technological, political and economic influences.⁶¹⁷ The description of the future state is further enriched by deliberating the distinctive and special features (called vital attributes) of the park.⁶¹⁸ Further, the vision, together with the vital attributes of the system to be managed, informs the setting of objectives.⁶¹⁹ A nested hierarchy of objectives starts with high-level objectives that are deconstructed into a series of lower-level objectives and, ultimately, management options for achieving those objectives.⁶²⁰ The "alternative management options are considered by looking at resources, constraints, potential threats and risks associated with a particular management option, while anticipating likely results."⁶²¹ Subsequently, "from these options the most appropriate is selected, followed by a planning stage and implementation."⁶²²

3.6.1.2 Collaboration by diversity of stakeholders sharing a resource, rights and responsibilities at multiple levels and scales taking into account diversity of knowledge and information sharing

In all the protected areas, a diversity of stakeholders share resources at multiple levels. The stakeholders collaborate as is evident from the JMB.⁶²³ The cooperation by a diversity of stakeholders sharing resources at multiple levels are recognised in the

⁶¹⁵ Section 3.2 of the Kalahari Park Management Plan 2016-2026, KNP Management Plan 2018-2028 and Mapungubwe Park Management Plan 2019-2029.

⁶¹⁶ Section 3.2 of the Kalahari Park Management Plan 2016-2026, KNP Management Plan 2018-2028 and Mapungubwe Park Management Plan 2019-2029.

⁶¹⁷ Section 3.2 of the Kalahari Park Management Plan 2016-2026, KNP Management Plan 2018-2028 and Mapungubwe Park Management Plan 2019-2029.

⁶¹⁸ Section 3.2 of the Kalahari Park Management Plan 2016-2026, KNP Management Plan 2018-2028 and Mapungubwe Park Management Plan 2019-2029.

⁶¹⁹ Section 3.2 of the Kalahari Park Management Plan 2016-2026, KNP Management Plan 2018-2028 and Mapungubwe Park Management Plan 2019-2029.

⁶²⁰ Section 3.2 of the Kalahari Park Management Plan 2016-2026, KNP Management Plan 2018-2028 and Mapungubwe Park Management Plan 2019-2029.

⁶²¹ Section 3.2 of the Kalahari Park Management Plan 2016-2026, KNP Management Plan 2018-2028 and Mapungubwe Park Management Plan 2019-2029.

⁶²² Section 3.2 of the Kalahari Park Management Plan 2016-2026, KNP Management Plan 2018-2028 and Mapungubwe Park Management Plan 2019-2029.

⁶²³ See para 3.3.1.8 above.

Kalahari Park Management Plan,⁶²⁴ the GLTFCA Settlement Agreement,⁶²⁵ the programme on stakeholder relationship and engagement in the KNP Management Plan,⁶²⁶ as well as the Mapungubwe Park Management Plan.⁶²⁷

In the KTFCA Contract Park diversity of knowledge is recognised as members Khomani San and Mier communities are represented within the JMB, as such their indigenous knowledge is taken into account in decision making.⁶²⁸ However, since resource use by community members is only limited to hunting and gathering within the KTFCA, it can be argued that only indigenous knowledge is recognised and modern knowledge is excluded, as activities of the modern Khomani San in the form of livestock rearing and housing are not recognised.⁶²⁹ This shows the failure to recognise the heterogeneous nature of community members as land use in the area assumes all community members are a homogenous traditional community.⁶³⁰ The Kalahari Park Management Plan recognises a diversity of knowledge as its stakeholder participation process recognised all forms of knowledge, indigenous, ordinary and expert, as well as the diversity of values and opinions that exist between stakeholders.⁶³¹

Information sharing is recognised in clause 37 of the Park Agreement as it obligates the Khomani San and Mier communities and SANParks to supply information which may affect the rights and interests of other principal parties, about plans for the development of, and other activities within the Contract Park.⁶³² The Kalahari Park Management Plan further recognises "information sharing as it provides for an information management programme."⁶³³ The "purpose of this programme is to establish and maintain a database of park information."⁶³⁴ In terms of the information

⁶²⁴ See para 3.3.1.8 above.

⁶²⁵ See para 3.4.1.2 above.

⁶²⁶ See para 3.4.2.8 above.

⁶²⁷ See para 3.5.2.8 above - including collaboration by a diversity of stakeholders sharing a resource at multiple levels through its stakeholder engagement programme which involves the interaction at multiple levels of local or district authorities, local communities, private landowners, conservation organisations and others with an interest in the area.

⁶²⁸ See clauses 42 and 29.3.4 of the Park Agreement.

⁶²⁹ See para 3.3 above.

⁶³⁰ See para 1.2 above.

⁶³¹ Section 4 of the Kalahari Park Management Plan, 2016-2026.

⁶³² Clause 37.1 of the Park Agreement.

⁶³³ Section 10.7.5 of the Kalahari Park Management Plan, 2016-2026.

⁶³⁴ Section 10.7.5 of the Kalahari Park Management Plan, 2016-2026.

management programme, park management requires that appropriate data and information is collected, maintained and made readily accessible to staff responsible for all aspects of management."⁶³⁵ The data collected "is essential for formulating effective long-term management objectives, plans, programmes and systems and also for educating and informing residents, associations, user groups, local authorities, provincial and national decision and policymakers, international organisations and aid or donor agencies."⁶³⁶

On the South African side of the GLTFCA, a diversity of knowledge is recognised in the combination of indigenous knowledge and modern knowledge as the JMB governing the Contract Park includes the Makuleke CPA which ensures that indigenous knowledge is integrated with the decision making process.⁶³⁷ The KNP Park Management Plan recognises a diversity of knowledge as its stakeholder participation process recognises all forms of knowledge, indigenous, ordinary and expert, as well as the diversity of values and opinions that exist between stakeholders.⁶³⁸ The KNP Management Plan further recognises information sharing through its information and records management programme.⁶³⁹ The purpose of this Programme is to "preserve the institutional memory of SANParks by establishing a database of park information."⁶⁴⁰

The Mapungubwe National Park Management Plan recognises a diversity of knowledge as it refers to "the integration of indigenous knowledge within the contractual Park."⁶⁴¹ However, practically on the South African side of the GMTFCA farmworkers as part of the local communities do not know about the GMTFCA and have not participated in GMTFCA TTC meetings.⁶⁴² As such, their indigenous knowledge is not necessarily integrated within the commons at these meetings or in plans.⁶⁴³

⁶³⁵ Section 10.7.5 of the Kalahari Park Management Plan, 2016-2026.

⁶³⁶ Kalahari Park Management Plan, 2016-2026.

⁶³⁷ See para 3.4.1 for above.

⁶³⁸ Section 4 of the KNP Park Management Plan, 2018-2028.

⁶³⁹ Section 10.8.5 of the KNP Park Management Plan 2018-2028.

⁶⁴⁰ Section 10.8.5 of the KNP Park Management Plan 2018-2028.

⁶⁴¹ Section 10.2.2 and 10.5 of the Mapungubwe Park Management Plan, 2019-2029.

⁶⁴² See para 1.2 read with para 3.5.1 above.

⁶⁴³ See para 1.2 read with para 3.5.1 above.

Information sharing is recognised in the Mapungubwe Park Management Plan through the information and records management programme.⁶⁴⁴ The purpose of this programme is to "preserve the institutional memory of SANParks by establishing a database of park information."⁶⁴⁵ In terms of this programme "information and records management are applied to promote accountability, transparency and good governance."⁶⁴⁶ Further, "the information is collected, preserved and made accessible to a range of internal and external stakeholders, which include local communities within the commons for the smooth running of operations at SANParks."⁶⁴⁷ Further, information is recognised in the programme on communication.⁶⁴⁸ The purpose of this programme is to "create and maintain a positive image for the park to all its stakeholders."⁶⁴⁹ Additionally, "the programme also aims to provide key stakeholders, inclusive of local community members, the public and staff, with relevant and accurate information pertaining to the operations in the Park, through media relations and events initiatives."⁶⁵⁰ Further, "the communication programme is intended to ensure transparency and ongoing stakeholder relationship building."⁶⁵¹

3.6.1.3 Social-learning, monitoring and review

Social-learning is recognised in the Kalahari Park Management Plan with specific reference to SAM, which is designed to "be adaptive (facilitate learning whilst doing) and participatory (facilitate engagement and co-learning with stakeholders)."⁶⁵² As indicated in the commons framework, monitoring is recognised in the Park Agreement and Kalahari Park Management Plan.⁶⁵³ However, provisions on review are only recognised in the Kalahari Park Management Plan.

⁶⁴⁴ Section 10.8.5 of the Mapungubwe Park Management Plan, 2019-2029.

⁶⁴⁵ Section 10.8.5 of the Mapungubwe Park Management Plan, 2019-2029.

⁶⁴⁶ Section 10.8.5 of the Mapungubwe Park Management Plan, 2019-2029.

⁶⁴⁷ Section 10.8.5 of the Mapungubwe Park Management Plan, 2019-2029.

⁶⁴⁸ Section 10.8.9 of the Mapungubwe Park Management Plan, 2019-2029.

⁶⁴⁹ Section 10.8.9 of the Mapungubwe Park Management Plan, 2019-2029.

⁶⁵⁰ Section 10.8.9 of the Mapungubwe Park Management Plan, 2019-2029.

⁶⁵¹ Section 10.8.9 of the Mapungubwe Park Management Plan, 2019-2029.

⁶⁵² Section 3.2 of the Kalahari Park Management Plan, 2016-2026.

⁶⁵³ See para 3.3.1.4 above.

Social-learning is recognised in the KNP Management Plan with specific reference to the SAM, which is designed to be "adaptive (facilitate learning whilst we are doing) and participatory (facilitate engagement and co-learning with stakeholders)."⁶⁵⁴

As indicated in the commons framework, monitoring is recognised in the Settlement Agreement of the Contract Park as it provides that the JMB is responsible for the formulation, implementation and monitoring of an effective framework for the management and development of the Contract Park in compliance with the NEMPAA and NEMBA.⁶⁵⁵

Similarly, the Mapungubwe Park Management Plan recognises social-learning through the SAM that is similarly recognised within the KTFCA and GLTFCA.⁶⁵⁶ As stated before the Mapungubwe Park Management Plan includes measures pertaining to monitoring and review.⁶⁵⁷

3.7 Conclusion

From the analysis of the Contract Parks on the South African side of the KTFCA, GLTFCA and GMTFCA various similarities and differences can be gathered from the background of the establishment of these areas. The Contract Parks in the KTFCA and GLTFCA were formed as a result of successful land claims done by community representatives based on the *Restitution of Land Rights Act*, who entered into contractual agreements with government through SANParks to co-manage the area.⁶⁵⁸ This is different from the contractual agreements between the GMTFCA and private landowners who lease land to the area.⁶⁵⁹

Furthermore, similarities can be gathered from the co-management agreements within the KTFCA and GLTFCA as the Contract Parks are subject to governance through a JMB which consists of members from the local community and SANParks as the main

⁶⁵⁴ Section 3.2 of the KNP Park Management Plan 2018-2028.

⁶⁵⁵ See para 3.4.1.4 above.

⁶⁵⁶ Section 3.2 of the Mapungubwe Park Management Plan, 2019-2029.

⁶⁵⁷ See para 3.5.1.4 above.

⁶⁵⁸ See para 3.3.1 read with para 3.4.1 above.

⁶⁵⁹ See para 3.5.1 above.

conservation authority.⁶⁶⁰ However, in the GMTFCA, SANParks is the conservation authority and the farmworkers who constitute the local community members have no knowledge concerning the establishment of the GMTFCA.⁶⁶¹

In the three Contract Parks above, it was gathered that all the elements of the commons and the social-ecological resilience definition were generally found within the fragmented governance framework.⁶⁶² However, reports on empirical research undertaken in these areas revealed that while the governance documents required the participation of all stakeholders in resource management, local communities especially within the KTFCA and GMTFCA, do not meaningfully participate largely due to a lack of information within these areas.⁶⁶³ As such there is a need to ensure all resource stakeholders, inclusive of local communities, to be fully involved in the governance of their natural resources be able to tackle socio-ecological resilience challenges such as climate change impacts in the form of flooding and droughts, human-wildlife conflict and land use conflict that are occurring within these areas.⁶⁶⁴

⁶⁶⁰ See para 3.3.1 read with para 3.4.1 above

⁶⁶¹ See para 3.5.1 above.

⁶⁶² See paras 3.3.1, 3.4.1, 3.5.1 and 3.6.1 above.

⁶⁶³ See para 3.6 above.

⁶⁶⁴ See para 1.2 above.

CHAPTER 4: African regional and South African law applicable to the commons and social-ecological resilience in commons within TFCAs

4.1 Introduction

This Chapter identifies and analyses the current legal framework that governs commons and social-ecological resilience in TFCAs, in African regional law as well as South African national law.⁶⁶⁵ South Africa as a member of the African Union and SADC must adhere to the Conventions and Protocols it signed and ratified.⁶⁶⁶ The aim of this chapter is to

⁶⁶⁵ See para 1.1 above.

⁶⁶⁶ Sections 231-233 of the Constitution deal with adoption of international law instruments as well as their application in South Africa. See, for example, *Fuel Retailers Association of Southern Africa v Director –General: Environmental Management, Department of Agriculture, Conservation and Environment, Mpumalanga Province and Others* 2007 6 SA 4 (CC) where the Constitutional Court used international law to interpret the concept of sustainable development. With regard to the African Union the *African Charter* and the *Revised African Convention* will be discussed, while in the case of SADC the analysis will be based on the *SADC Protocol on Wildlife Conservation*, *SADC Protocol on Forestry*, *SADC Protocol Tourism*, *SADC Protocol on Environmental Management*, the *RBS*, the *SADC RB Plan* and the *RISDP* – see para 1.1, 1.5 and 2.4 above. These documents have been chosen as they contain provisions applicable to community participation of governance in the commons. It is acknowledged that other international and regional instruments are also applicable. Due to the scope of the thesis, only a few documents were selected to discuss in detail. Additional instruments at the international and regional level which may contain elements pertaining to the commons and social-ecological resilience, although not analysed within this Chapter in detail include: *Convention on Biological Diversity Guidelines on Biodiversity and Tourism Development* (hereafter *CBD Guidelines*) entered into force on 29 December 1993. South Africa signed the CBD on 4 June 1993 and ratified the CBD on 2 November 1995. As such these *CBD Guidelines* which contain provisions that assist state parties to the CBD, public authorities and stakeholders at all levels which include local communities within selected TFCAs discussed in this study, to apply the provisions of the Convention to the sustainable development and management of tourism policies, strategies, projects and activities. The *Plan of Action on Customary Sustainable Use of Biological Diversity* states that: "the objective of this plan of action is to promote, within the framework of the CBD the full and effective participation of indigenous and local communities at all stages and levels of implementation." As the Plan is related to the CBD, based on this the South African government as a state party to the CBD should ensure the the full and effective participation of local communities pertaining to the sustainable use of biological diversity. The *Addis Ababa Principles and Guidelines for the Sustainable Use of Biodiversity* states that: "the principles provide a framework to assist governments, resource managers, indigenous and local communities, the private sector and other stakeholders on how to ensure that their use of the components of biodiversity will not lead to the long-term decline of biological diversity." As the principles are related to the CBD, the South African government as a state party to the CBD, should ensure that it complies with these principles, together with other resource stakeholders of biological diversity within its borders such as the local community members and other private land owners within selected TFCAs discussed in this thesis. *The Durban Declaration on taking action for environmental sustainability and prosperity in Africa* which provides for the collective decision taken by ministers of all 54 African states at the African Ministerial Conference on the Environment held in November 2019 to "addresses action for environmental sustainability; the circular economy; the blue economy; biodiversity; land

use the principles and elements of the commons and social-ecological resilience distilled in Chapter 2 respectively and to analyse the South African legal frameworks against these frameworks in order to determine whether the South African law reflects the principles and elements of the commons and social-ecological resilience in relation to the selected TFCAs.⁶⁶⁷ The African Union and SADC documents will be analysed in so far they contain measures that support TFCAs, as well as elements of the commons and social-ecological resilience. The South African law will also be measured against this framework.

4.2 African union and SADC

4.2.1 Measures pertaining to appropriation and provision rules and local conditions

Some of the African Union's documents make provision for appropriation and provision rules, although not in relation to the commons as such. The *African Charter*, for example, recognises an environmental right in article 24 of the *African Charter*.⁶⁶⁸ The

degradation, desertification and drought; climate change; plastic pollution; and informed decision-making." The government of South Africa as a stakeholder in this event should comply to the collective decisions agreed to at the meeting. The *Pan-African Action Agenda on Ecosystem Restoration for Increased Resilience* which provides that the production of the Agenda was facilitated by, "the Secretariat of the CBD in cooperation with UN Environment and various other partners and stakeholders proposes policy measures, strategic actions, cooperation mechanisms and on-the-ground actions to advance land and ecosystem restoration in Africa." The South African government as a state party to the CBD should ensure that it complies with the proposals within its borders that ensure ecosystem restoration and resilience, The *African Union's Agenda 2063* which states "the Agenda is Africa's blueprint and master plan for transforming Africa into the global powerhouse of the future. It is the continent's strategic framework that aims to deliver on its goal for inclusive and sustainable development."

⁶⁶⁷ See para 2.2 read with para 2.4 above.

⁶⁶⁸ Article 24 of the *African Charter*. See also also Du Plessis and Du Plessis "Transfrontier Conservation Areas and the Protection of Rights" 270; Du Plessis "Sustainability interests from the perspective of the African Charter" 41-42; Erinosh 2013 *African Journal of International and Comparative Law* 387; Glazewski *Environmental law in South Africa* 68; Ougergouz *African Charter on Human and Peoples' Rights* 37; Amechi 2009 *LEAD Journal* 62; Churchill "Environmental Rights in Existing Human Rights Treaties" 90; Van Der Linde and Louw 2003 *AHRLJ* 178 and Scholtz "Human Rights and the environment in the African Union context" 109. In terms of section 231(2) an international agreement binds South Africa only after it has been approved by resolution in both the National Assembly and the National Council of Provinces. The legal basis for the application of international instruments in South Africa is recognised in section 231 of the *Constitution of the Republic of South Africa*, 1996. Regarding this, Ferreira and Ferreira-Snyman 2014 *PELJ* 1472-1473 state: "section 231(3) provides that some international agreements, such as those of a technical, administrative or executive nature, or those which do not require either ratification or accession, bind South Africa without approval by the National Assembly and the National Council of Provinces. According to section 231(4) any international agreement becomes law in South Africa when it is enacted into law by national legislation, excluding a so-called self-executing provision of an agreement, unless it is

environmental right in article 24 is a collective right as it provides that "all peoples shall have a right to a general satisfactory environment favourable to their development." South Africa through its spheres of government is obligated by the *African Charter* have to ensure "an environment generally satisfactory" to South Africa's people.⁶⁶⁹ The signatory states have a positive duty to enforce such right, and how they do so will depend on specific circumstances of each state party.⁶⁷⁰ Article 24 should also be read in conjunction with article 26 of the Charter which states that: "States Parties to the present Charter... shall allow the establishment and improvement of appropriate national institutions entrusted with the promotion and protection of the rights and freedoms guaranteed by the present Charter."⁶⁷¹ It can therefore be deduced that the *African Charter* requires the South African government to provide conditions that enable the promotion of "an environment generally satisfactory to development". This would imply that local communities, private land owners and other interested and affected parties may rely on this regard to ensure that not only the environment is protected but that there will be some opportunities for them to benefit from the TFCA.⁶⁷² The *Revised African Convention* includes a similar right in that the right of all peoples to a satisfactory environment favourable to their development is protected.⁶⁷³

Article 24 African Charter was dealt with in the decision of the African Commission in *Social and Economic Rights Action Centre for Economic and Social Rights (SERAC) v Nigeria, African Commission on Human and Peoples' Rights*.⁶⁷⁴ This decision was

inconsistent with the Constitution or an act of Parliament." In addition to this, Ferreira and Ferreira-Snyman 2014 *PELJ* 1473 state that "section 232 determines that customary international law is law in South Africa unless it is inconsistent with the Constitution or an act of Parliament."

⁶⁶⁹ Du Plessis and Du Plessis "Transfrontier Conservation Areas and the Protection of Rights" 270. See also Du Plessis "Sustainability interests from the perspective of the African Charter" 41-42.

⁶⁷⁰ Du Plessis *South Africa's Constitutional Environmental Right* 109.

⁶⁷¹ Du Plessis *South Africa's Constitutional Environmental Right* 109. See also article 26 of the *African Charter*; Giorgetta in Schrijvers and Weiss *International Law* 387.

⁶⁷² Scholtz "Human Rights and the environment in the African Union context" 109; Van Der Linde and Louw 2003 *AHRLJ* 167; Ebeku 2003 *AHRLJ* 149 and Shelton 2002 *ASIL* 937.

⁶⁷³ See para 2.4 read with article 111(1) of the *Revised African Convention*.

⁶⁷⁴ *Social and Economic Rights Action Centre for Economic and Social Rights (SERAC) v Nigeria, African Commission on Human and Peoples' Rights* Comm No 155/96 (2001) para 53. With regard to the case read Du Plessis "Sustainability interests from the perspective of the African Charter" 41-42; Erinoshio 2013 *African Journal of International and Comparative Law* 387; Glazewski *Environmental law in South Africa* 68; Ouguergouz *African Charter on Human and Peoples' Rights* 37; Amechi 2009 *LEAD Journal* 62; Churchill "Environmental Rights in Existing Human Rights Treaties" 90; Van Der Linde and Louw 2003 *AHRLJ* 178 and Scholtz "Human Rights and the environment in the African Union context" 109.

pursuant to a complaint brought against the Federal Republic of Nigeria alleging that the military government of Nigeria, through its involvement in oil production in Ogoniland violated article 24 of the African Charter.⁶⁷⁵ The Communication provided the African Commission with an opportunity to interpret the content of this right formally.⁶⁷⁶ The African Commission found that the environmental right imposes clear positive and negative obligations upon government as, "it requires the State to take reasonable and other measures to prevent pollution and ecological degradation, to promote conservation, and to secure ecologically sustainable development and use of natural resources."⁶⁷⁷ The wording is similar to section 24 of the South African Constitution that places a similar obligation on government.⁶⁷⁸ All resource use would therefore still be subject to the obligation to protect the environment and to prevent ecological degradation.

The *Revised African Convention* obligates member states such as South Africa to "take effective measures to prevent land degradation, and to develop long-term integrated strategies for the conservation and the sustainable management of land resources, including soil, vegetation and related hydrological processes."⁶⁷⁹ South Africa is further required to adopt measures to address erosion and misuse of land and natural resources as well as the deterioration of their physical, chemical and biological economic properties.⁶⁸⁰ South Africa could ensure this by making use of scientific research as well as local knowledge and experience when land use plans in the Contract

⁶⁷⁵ Scholtz "Human Rights and the environment in the African Union context" 109. See also Van Der Linde and Louw 2003 *AHRLJ* 167; Ebeku 2003 *AHRLJ* 149 and Shelton 2002 *ASIL* 937.

⁶⁷⁶ Du Plessis and Du Plessis "Transfrontier Conservation Areas and the Protection of Rights" 270. See also Du Plessis "Sustainability interests from the perspective of the African Charter" 41-42; Scholtz "Human Rights and the environment in the African Union context" 109.

⁶⁷⁷ *SERAC* para 52. See also Scholtz "Human Rights and the environment in the African Union context" 109; Du Plessis and Du Plessis "Transfrontier Conservation Areas and the Protection of Rights" 272. See also Du Plessis "Sustainability interests from the perspective of the African Charter" 41-42 and Van Der Linde and Louw 2003 *AHRLJ* 178.

⁶⁷⁸ See para 4.2.2 and 4.2.8 below.

⁶⁷⁹ Article VI(1) of the Revised African Convention. See also Erinoshio 2013 *African Journal of International and Comparative Law* 390.

⁶⁸⁰ Article VI(2) of the Revised African Convention. See also Erinoshio 2013 *African Journal of International and Comparative Law* 390.

Parks or surrounding areas are developed.⁶⁸¹ In the GMTFCA conservation and agriculture, for example, occur side by side.⁶⁸²

The *Revised African Convention* similarly indicates that governments should:⁶⁸³

- (i) improve soil conservation and introduce sustainable farming and forestry practices, which ensure long-term productivity of the land;
- (ii) control erosion caused by land misuse and mismanagement which may lead to longterm loss of surface soils and vegetation cover; and
- (iii) control pollution caused by agricultural activities, including aquaculture and animal husbandry.

The South African government would have to use its species and genetic diversity as well as the utilisation of vegetation within the TFCAs in a manner that promotes the recognition of articles 22 (on the right to development) and 24 of the *African Charter*.⁶⁸⁴

As stated above, the African Union documents refer to measures that can be regarded as provision rules in general, that can be applied to the TFCAs, Contract Parks and surrounding areas as commons. The *Revised African Convention*, for example, regulate vegetation cover as article VIII requires "South Africa as a member state of the Convention to take all necessary measures for the protection, conservation, sustainable use and rehabilitation of vegetation cover."⁶⁸⁵ Within the TFCAs, the Contract Parks and the surrounding areas, government is therefore obligated to "adopt scientifically-based and conservation, utilisation and management plans for forests woodlands, rangelands, wetlands and other areas with vegetation cover," which will include sound traditional practices.⁶⁸⁶ These actions should be well-matched to the local conditions, taking into account "the social and economic needs of the people concerned, the importance of the vegetation cover for the maintenance of water balance of an area, the productivity of

⁶⁸¹ Article VI(3)(a) of the Revised African Convention. See also Erinosho 2013 *African Journal of International and Comparative Law* 390.

⁶⁸² See para 1.2 above.

⁶⁸³ Article VI (3)(b)(i)-(iii) of the *Revised African Convention*. See also Erinosho 2013 *African Journal of International and Comparative Law* 390.

⁶⁸⁴ Article V(1) of the *Revised African Convention*.

⁶⁸⁵ Article VIII(1) of the *Revised African Convention*.

⁶⁸⁶ Article VIII(1)(a) of the *Revised African Convention*.

soils and the habitat requirements of species."⁶⁸⁷ South Africa should accordingly ensure that the measures that are devised to protect, conserve and sustainably use resources within the commons take into account the realities of the communities who rely on natural resources in these areas for livelihood purposes such as the hunting of animals and gathering of plants and ensure that these practices do not detrimentally impact on "the protection, conservation, sustainable use and rehabilitation of vegetation cover."⁶⁸⁸

The *Revised African Convention* further requires the South African government in its selected TFCAs to do the following:⁶⁸⁹

- (i) take concrete steps or measures to control fires, forest exploitation, land clearing for cultivation grazing by domestic and wild animals and invasive species;
- (ii) establish forest reserves and carry out afforestation programmes where necessary;
- (iii) limit forest grazing to season and intensities that will not prevent forest regeneration.

The *Revised African Convention* deals furthermore with species and genetic diversity. Article IX, for example, places an obligation on South Africa as a member state to the Convention to "maintain and enhance species and genetic diversity of plants and animals whether they are terrestrial, fresh-water or marine."⁶⁹⁰ In so doing, the South African government is required to establish and implement policies for the conservation and sustainable use of such resources.⁶⁹¹ These provision rules should be matched with the local conditions such as giving attention to "socially, economically and ecologically valuable species which are" threatened.⁶⁹² South Africa as a state party is further obligated to manage plant and plant populations inside its conservation areas according

⁶⁸⁷ Article VIII(1)(a) of the *Revised African Convention*.

⁶⁸⁸ See Chapter 5 for a detailed discussion on this.

⁶⁸⁹ Article V(1)(b)-(d) of the *Revised African Convention*.

⁶⁹⁰ Article XI(1) of the *Revised African Convention*. See also Erinoshio 2013 *African Journal of International and Comparative Law* 390.

⁶⁹¹ Article XI(1) of the *Revised African Convention*.

⁶⁹² Article XI(1) of the *Revised African Convention*.

to the objectives of such areas.⁶⁹³ In relation to the TFCAs it would be in accordance with their management plans.⁶⁹⁴

The *Revised African Convention* regulates hunting and the collection of plants which is a land use activity practiced by community groups within the TFCAs.⁶⁹⁵ South Africa as a party to the Convention is therefore required to adopt legislation regulating the hunting and gathering of plants in terms of which permits are required and with a view of ensuring the hunting and gathering of plants is sustainable.⁶⁹⁶

It can be argued that there is congruence between the appropriation and provision rules and local conditions with respect to the use of vegetation in the *Revised African Convention* as it requires the government of South Africa to benefit from the use of its vegetation cover while taking into account the importance of vegetation to the social and economic needs of its peoples; at the same time ensuring the vegetation is sustainably used. There is also congruence between the appropriation and provision rules and local conditions with respect to species and genetic diversity in the *Revised African Convention* as it requires the government of South Africa to implement policies that are directed towards the conservation and sustainable use of its plant and animal life within the country given special attention to threatened species. The implementation of such policies by government may hopefully allow community groups which rely on plant and animal life for survival to do so in a manner that promotes conservation and sustainable resource use within the commons. South Africa has further to ensure that sustainable development takes place within the TFCAs, by engaging in developmental activities taking into account environmental, social and economic factors.

⁶⁹³ Article IX(2)(a) of the *Revised African Convention*.

⁶⁹⁴ See paras 3.3.2, 3.4.2, 3.5.2 and 3.6.1 above

⁶⁹⁵ See para 1.2 above read with Chapter 5.

⁶⁹⁶ Article IX(3)(a)-(b) of the *Revised African Convention*. The issuance of permits regulating hunting and gathering has been applied by the South African government as evident in Chapter 4, this ensures that local resource users hunt and gather in a sustainable manner. See para 4.2.2 below.

SADC documents also include rules that can be interpreted as appropriation and provision rules as well as the regulation of local conditions. The *SADC Protocol on Wildlife*, for example, provides in article 3 that:⁶⁹⁷

Each State Party shall ensure the conservation and sustainable use of wildlife resources under its jurisdiction. Each State Party shall ensure that activities within its jurisdiction or control do not cause damage to the wildlife resources of other states or in areas beyond the limits of national jurisdiction.

South Africa as a party to the Protocol has to adopt legal instruments that will affect the conservation goals laid out in the Protocol.⁶⁹⁸ South Africa must also harmonise its legal instruments to support the goals of the Protocol,⁶⁹⁹ such as management programmes for conservation and integration of the programmes within the country's development plans.⁷⁰⁰ The *SADC Protocol on Environmental Management* recognises appropriation rules in article 3 as it obligates member states like South Africa, to use their natural resources to meet their developmental needs sustainably and responsibly and to ensure that activities within its jurisdiction or control do not cause damage to the environment and natural resources of other states.⁷⁰¹

The *SADC Protocol on Wildlife* also requires the South African government to introduce provision rules doing the following to ensure the conservation and sustainable use of wildlife:⁷⁰²

- (a) the establishment of protective measures for wildlife and their habitat to ensure viable wildlife populations;
- (b) preventing the over-exploitation and extinction of species;
- (c) control measures regarding the taking of wildlife; and

⁶⁹⁷ See para 2.4 above read with article 3(1) of the *SADC Protocol on Wildlife*. See also Lubbe "Southern African Community Environmental law" 107; Ruppel 2012 *SADCLJ* 260.

⁶⁹⁸ Article 6(1) of the *SADC Protocol on Wildlife*. See also Lubbe "Southern African Community Environmental law" 107; Ruppel 2012 *SADCLJ* 260.

⁶⁹⁹ Article 6(2) of the *SADC Protocol on Wildlife*. See also Lubbe "Southern African Community Environmental law" 107; Ruppel 2012 *SADCLJ* 260.

⁷⁰⁰ Article 7(1) of the *SADC Protocol on Wildlife*. See also Lubbe "Southern African Community Environmental law" 107; Ruppel 2012 *SADCLJ* 260.

⁷⁰¹ Article 3(2) of the *SADC Protocol on Environmental Management*.

⁷⁰² Article 7(3) of the *SADC Protocol on Wildlife*. See also Lubbe "Southern African Community Environmental law" 107; Ruppel 2012 *SADCLJ* 260.

- (d) regulating measures for trade in wildlife and its products in relation to international agreements.

South Africa must share information with stakeholders and other countries so as to establish common approaches in respect of wildlife conservation and sustainable use.⁷⁰³

Parties to the Protocol are required to create, for example, a regional database on the status and management of wildlife.⁷⁰⁴ The *SADC Protocol on Environmental Management* obligates member states to take the following measures:⁷⁰⁵

- (i) To conserve ecosystems, including their biodiversity and unique habitats, which provide goods and services that support livelihoods of people and enhance aesthetic values of the SADC Region;
- (ii) To take measures to ensure and promote sustainable management and utilisation of transboundary biological diversity including natural forests, wildlife, fisheries, aquatic ecosystems, wetlands, agro-biodiversity and genetic resources;
- (iii) To adopt the necessary legislative and administrative measures to protect and manage natural heritage for the benefit of present and future generations;
- (iv) To ensure and safeguard equitable access and sharing of benefits deriving from genetic and biological resources of a regional and transboundary nature;
- (v) To eradicate, control and prevent the introduction of invasive and alien species;
- (vi) To put in place sound biotechnology and biosafety policies to manage living or genetically modified organisms;
- (vii) To take measures to secure and manage ecosystems to provide natural buffering mechanisms to risks posed by climate change through ecosystems based approaches.

The *SADC Protocol on Environmental Management* recognises that states need to manage natural ecosystems,⁷⁰⁶ against, for example, climate change or human-wildlife

⁷⁰³ Article 8(1) of the *SADC Protocol on Wildlife*. See also Lubbe "Southern African Community Environmental law" 107; Ruppel 2012 *SADCLJ* 260.

⁷⁰⁴ Article 8(1) of the *SADC Protocol on Wildlife*. See also Lubbe "Southern African Community Environmental law" 107; Ruppel 2012 *SADCLJ* 260.

⁷⁰⁵ Article 8(1)–(7) of the *SADC Protocol on Environmental Management*.

⁷⁰⁶ Article 8(7) of the *SADC Protocol on Environmental Management*.

conflict.⁷⁰⁷ Article 10 of the obligates member states to take measures to combat desertification and land degradation,⁷⁰⁸ such as controlling soil erosion; ensuring that land tenure systems are environmental sustainable; promoting sustainable forestry and land use practices; promoting environmentally sustainable land use planning; integrated water-shed management; fire management, remediation, reclamation and rehabilitation of degraded ecosystems; and integrated financing for sustainable land management.⁷⁰⁹

Article 12 of the *SADC Protocol on Environmental Management* addresses climate change measures:⁷¹⁰

- (a) adopting the necessary legislative and administrative measures to enhance adaptation to the impacts of climate change bearing in mind the diverse gender differentiated levels of vulnerabilities;
- (b) taking nationally appropriate voluntary climate change mitigation measures;
- (c) addressing the negative impacts of climate change, on among others:
 - (i) food security and nutrition;
 - (ii) water resource;
 - (iii) health;
 - (iv) economic activities, particularly agriculture, tourism, energy and industrial development; reducing emissions from deforestation and forest degradation;
 - (v) fisheries and coastal management;
 - (vi) infrastructure;
 - (vii) poverty eradication;
 - (viii) gender equality initiatives;
 - (ix) taking measures to develop early warning systems and disaster management strategies; and
 - (x) participating in sub-regional and international climate change meeting, conferences, summits, workshops and seminars in order to access the benefits of technology transfer, financing and capacity building and influence policy and decision-making processes.

From the above paragraphs, it can be argued that there is congruence in the *SADC Protocol on Wildlife* of appropriation and provision rules, as the Protocol indicates that a state party should enable the conservation and sustainable use of wildlife resources.

⁷⁰⁷ See para 1.2 above.

⁷⁰⁸ Article 10 of the *SADC Protocol on Environmental Management*.

⁷⁰⁹ Article 10(a)(g) of the *SADC Protocol on Environmental Management*.

⁷¹⁰ See para 1.2 above and article 12(a)-(c) of the *SADC Protocol on Environmental Management*.

As a minimum South Africa should therefore include measures in legislation or management plans that provide for appropriation rules including (a) rules of access, for instance, walking in a commons, such as times of entry and restrictions on modes of entry within a commons; (b) rules of resource withdrawal, such as hunting and gathering of plants granted to all resource owners within a commons; (c) limits on resource quantities to be withdrawn at a given time; provision rules that pertain to (d) costs of maintaining infrastructure relating to commercial activities in a commons; (e) entrance fees to access the commons; and (f) acquisition of permits that allow a resource user to engage in resource withdrawal in a commons, for example hunting, catching, collecting, picking or gathering a specific protected species. The legislation or management plans should also ensure that there is congruence between the appropriation and provisioning rules by (a) ensuring that measures devised to ensure natural resource use, conservation and protection in the commons take into account the social and economic realities of resource users within the commons; and (b) ensuring that the withdrawal rights of resources users in the commons do not have detrimental effects on the conservation, protection and sustainable use of resources in the commons.

4.2.2 Collective-choice arrangements

It can be argued that collective-choice arrangements were recognised in the *Endorois* case. The Commission's interpretation of the right to development recognises the participation of affected communities.⁷¹¹ The participation of communities in decision making was also recognised in the case of the *African Commission on Human and People's Rights v Republic of Kenya* (hereafter *Ogiek*) in the African Court on Human and Peoples' Rights (hereafter African Court), in interpreting article 14 (the right to land) and article 22 (the right to development) of the *African Charter*, which the Kenyan government allegedly violated.⁷¹² In this case, "the Kenyan government issued an

⁷¹¹ See para 2.4.8 read with *Endorois* para 289. See also Scholtz "Human Rights and the environment in the African Union context" 115 and Ntoubandi and Adjovi "Wide human rights spectrum and climate change in Africa" 265-266.

⁷¹² *Ogiek* para 20. Ntoubandi and Adjovi "Wide human rights spectrum and climate change in Africa" 266.

eviction notice to the Ogiek community living in the Mau forest.⁷¹³ Allegedly, although the eviction was apparently aimed to protect the environment, its ultimate purpose was to initiate large-scale logging.⁷¹⁴ The Kenyan government had failed to effectively consult with the Ogiek community before evicting them from their ancestral lands in the Mau forest."⁷¹⁵ Similar to the position of the African Commission in *Endorois*, the African Court in *Ogiek* submitted that article 22 of the *African Charter* should be interpreted in a manner recognising the participation of affected communities as it is associated with the right to development.⁷¹⁶

The African Commission furthermore recognises collective-choice arrangements in its resolution 153.⁷¹⁷ This resolution, based on articles 24 and 22 in the *African Charter*, obligates South Africa and all member states to the Charter to "ensure that human rights safeguards, such as free, prior and informed consent, be included into any adopted legal text on climate change."⁷¹⁸ This is relevant to the selected TFCAs as impacts of climate change such as droughts and flooding are occurring in these areas and impact on the survival of animal and plant life upon which local communities rely on for survival and activities such as tourism.⁷¹⁹

Prior, informed consent interpreted as an integral part of the right to development in the *Endorois* and *Ogiek* cases places an obligation on the South African government as a party to the *African Charter* to ensure local communities within their jurisdictions participate through obtaining their free, prior and informed consent in respect of any

⁷¹³ *Ogiek* para 22. Ntoubandi and Adjovi "Wide human rights spectrum and climate change in Africa" 266.

⁷¹⁴ *Ogiek* para 22. Ntoubandi and Adjovi "Wide human rights spectrum and climate change in Africa" 266.

⁷¹⁵ See para 131 and 210 of the African Commission on Human and People's Rights v Republic of Kenya No. 006/2012.

⁷¹⁶ *Ogiek* para 22. Ntoubandi and Adjovi "Wide human rights spectrum and climate change in Africa" 266.

⁷¹⁷ The African Commission on Human and Peoples Rights Resolution 153 (XLVI) 09. This resolution was adopted on the 46th Ordinary Session held from 11 to 25 November 2009 in Banjul, The Gambia.

⁷¹⁸ See also Scholtz "Human Rights and the environment in the African Union context" 416-417; Ruppel *Climate Change Law and Policy Positions in the African Union*; Pallangyo *Climate Change in Africa* 271-272. See also the case of *Baleni and Others v Minister of Mineral Resources and Others* [2019] 1 All SA 358 (GP); 2019 (2) SA 453 (GP).

⁷¹⁹ See para 1.2 above.

development on their resources.⁷²⁰ This provides a preventative measure "against forced relocation, unfair dispossession of properties, loss of livelihoods and similar violations as a result of climate impacts."⁷²¹

Resolution 153 calls upon governments to "take all necessary measures to ensure that the African Commission is included in the negotiating team on climate change."⁷²² The presence of the Commission in the negotiating team means that the rights of local community groups to meaningfully participate in climate change issues is recognised as the African Commission is mandated to ensure their rights are protected and promoted.⁷²³

In addition to climate change, article XVII of the *Revised African Convention*⁷²⁴ requires "that access to indigenous knowledge and its use be subject to prior and informed consent of the concerned communities and to specific regulations recognising their rights to, and appropriate economic value of such knowledge." The South African government has to develop measures that further allow meaningful participation of local communities in the management of resources they depend on for survival.⁷²⁵

In the case of SADC, the *SADC Protocol on Forestry* recognises collective choice arrangements in article 3(2)(g) which states that:

In order to achieve the objectives of the Protocol state parties should cooperate in respecting the rights of communities and facilitate their participation in forest policies, development, planning and management with particular attention to the need to protect traditional forest-related knowledge and to develop adequate equitable sharing benefits derived from forest resources and traditional forest-related knowledge without prejudice to property rights.

⁷²⁰ Pallangyo *Climate Change in Africa* 271-272. See also para 4.4.3 below where prior and informed consent in the South African context is discussed.

⁷²¹ Pallangyo *Climate Change in Africa* 271-272.

⁷²² The African Commission on Human and Peoples Rights Resolution 153 (XLVI) 09. See also Scholtz "Human Rights and the environment in the African Union context" 416-417; Pallangyo *Climate Change in Africa* 271-272.

⁷²³ Article 45 of the *African Charter*.

⁷²⁴ See para 2.4.8 above read with article XVII of the *Revised African Convention*.

⁷²⁵ Article XVII(3) of the *Revised African Convention*.

Article 4 of the *Protocol* furthermore, obliges South Africa and other state parties to recognise that communities are entitled to effective involvement in the sustainable management of forests and forest resources on which they depend.⁷²⁶ Similarly "interested and affected parties have the right to participate in decision making regarding natural forests and forests on public or state land."⁷²⁷ The *SADC Protocol on Environmental Management* also obligates state parties to enhance the involvement of all stakeholders, in particular the affected local communities in the decision making processes.⁷²⁸

From the above it can therefore be deduced that the South African legislation should include measures pertaining to (a) the meaningful participation of local community members with respect to any development taking place within their commons; (b) the prior and informed consent of a local community group that owns a commons should be obtained before engaging in any development on their commons; and (c) traditional knowledge should be recognised in the given prior and informed consent by a local community group within its commons.

4.2.3 Monitoring

Monitoring is recognised in the interpretation given by the African Commission in the *SERAC* case.⁷²⁹ The Commission stated that "government's compliance with article 16 (the right to enjoy the best attainable state of physical and mental health) and article 24 of the *African Charter* would mean ordering or at least permitting the independent scientific monitoring of threatened environments."⁷³⁰

Article XIV of the *Revised African Convention* provides for regular environmental monitoring in respect to activities likely to affect natural resources, ecosystems and the

⁷²⁶ See para 2.7.4 above read with article 4(10) *SADC Protocol on Forestry*. See also Ruppel 2012 *SADCLJ* 255; Lubbe "Southern African Community Environmental law" 112.

⁷²⁷ Article 11(c) *SADC Protocol on Forestry*. See also Ruppel 2012 *SADCLJ* 255; Lubbe "Southern African Community Environmental law" 112.

⁷²⁸ Article 9(2) of the *SADC Protocol on Environmental Management*.

⁷²⁹ See para 2.4.3 above read with *SERAC* para 53.

⁷³⁰ *SERAC* para 53. See also Scholtz "Human Rights and the environment in the African Union context" 109; Du Plessis and Du Plessis "Transfrontier Conservation Areas and the Protection of Rights" 272. See also; Du Plessis "Sustainability interests from the perspective of the African Charter" 41-42 and Van der Linde and Louw 2003 *AHRLJ* 178.

environment.⁷³¹ In addition, the government of South Africa is obligated to monitor the state of its natural resources, including those found within the TFCAs, as well as the impact of development activities and projects upon such resources.⁷³²

The *SADC Protocol on Wildlife* recognises monitoring in article 5, which makes provision for institutional arrangements. Regarding this, the Committee of Senior Officials is responsible for monitoring and evaluating all aspects related to the implementation and workings of the Protocol.⁷³³

The *SADC Protocol on Forestry* recognises monitoring in article 8 of the *SADC Protocol on Forestry* which obligates state parties to regularly review and evaluate the effectiveness of national forest policies and programmes and where appropriate revise them to ensure that they are consistent and effectively implement the Protocol.⁷³⁴ It can be argued that monitoring is recognised in article 9 of the *SADC Protocol on Forestry* which obliges state parties to undertake and regularly update a national assessment of forests which includes all forest resources and all forest lands regardless of ownership;⁷³⁵ and undertake an assessment of forest resources in terms of usage, value, quantum and location, changes in forest cover and health.⁷³⁶ In article 11 of the *SADC Protocol on Forestry*, monitoring is recognised as state parties are obligated to ensure that no competent authority may make a decision on whether or not to grant authorisation on any projects involving afforestation, reforestation, measures to change species composition of existing forests and any activity significantly affecting forests without a full assessment being conducted on environmental and social impacts on such projects.⁷³⁷

⁷³¹ Article XIV(2)(b) of the *Revised African Convention*. Also see para 2.4 above.

⁷³² Article XIV(2)(c) of the *Revised African Convention*.

⁷³³ Article 5(5) of the of the *SADC Protocol on Wildlife*. See also Lubbe "Southern African Community Environmental law" 107; Ruppel 2012 *SADCLJ* 261.

⁷³⁴ See para 2.4.4 above read with article 8(2) of the *SADC Protocol on Forestry*.

⁷³⁵ Article 9(1)(a) of the *SADC Protocol on Forestry*. See also Ruppel 2012 *SADCLJ* 255; Lubbe "Southern African Community Environmental law" 112.

⁷³⁶ Article 9(1)(b) of the *SADC Protocol on Forestry*. See also Ruppel 2012 *SADCLJ* 255; Lubbe "Southern African Community Environmental law" 112.

⁷³⁷ Article 11(1)(d)-(e) of the *SADC Protocol on Forestry*. See also Ruppel 2012 *SADCLJ* 255; Lubbe "Southern African Community Environmental law" 112.

The concept of monitoring is more prevalent in SADC documents than in the African Union documents. The *SADC Protocol on Environmental Management*, for example, recognises monitoring in article 3 which requires the monitoring of social, economic and environmental impacts of activities, including benefits and disadvantages to be considered, evaluated and decisions made based on such considerations and assessments. Monitoring is also recognised in article 4 which places an obligation on state parties to fulfil the objectives of the *SADC Protocol on Environmental Management* to monitor environmental trends, the implementation of transboundary programmes and the implementation of early warning systems and environmental risk assessments.⁷³⁸ The *Protocol* further obligates state parties to take measures to manage and control the transboundary effects of air pollution through the development of air quality monitoring systems.⁷³⁹ State parties must also monitor and exchange information on transboundary movement of waste and hazardous substances⁷⁴⁰ and develop appropriate indicators for the monitoring of key environmental trends in the SADC region.⁷⁴¹

State parties may agree on the management plans for shared resources or transboundary issues that also provides for monitoring.⁷⁴² State parties have to agree on harmonised or integrated systems to monitor natural resources and environmental programmes, agreed scientific methodologies and preparation of the best scientific advice on sustainable levels of exploitation.⁷⁴³ State parties must in addition develop, implement, enforce, monitor and evaluate management plans to ensure that they are consistent with the objectives of the Protocol.⁷⁴⁴

SADC policy also provides for monitoring. For example, the Regional Biodiversity Strategy⁷⁴⁵ (*RBS*) provides as one of its strategic goals, "the establishment of a

⁷³⁸ Article 4(2)(j) of the *SADC Protocol on Environmental Management*.

⁷³⁹ Article 5(b) of the *SADC Protocol on Environmental Management*.

⁷⁴⁰ Article 13(9) of the *SADC Protocol on Environmental Management*.

⁷⁴¹ Article 13(16) of the *SADC Protocol on Environmental Management*.

⁷⁴² Article 14(3) of the *SADC Protocol on Environmental Management*.

⁷⁴³ Article 14(3)(b) of the *SADC Protocol on Environmental Management*.

⁷⁴⁴ Article 14(7) of the *SADC Protocol on Environmental Management*.

⁷⁴⁵ See https://www.sadc.int/documents-publications/show/SADC_Regional_Biodiversity_Strategy.pdf. "The RBS was signed on 2008-02-01. The strategy aims to provide a framework for cooperation and implementation of provisions toward sustaining the region's biodiversity."

biodiversity inventory and monitoring programme that covers key species of flora, fauna and habitats.⁷⁴⁶ The goal is to be implemented by means of review and harmonisation of the current biodiversity inventory and monitoring methods in order to accommodate transboundary initiatives.⁷⁴⁷ Indigenous knowledge has to be incorporated into the biodiversity inventory and monitoring systems at local level."⁷⁴⁸ Similarly to the Protocol above, the *RBS* emphasises the importance of conducting environmental impact assessments of biodiversity in relation to transboundary development initiatives, coastal and marine ecosystems, wetlands and large national projects.⁷⁴⁹

South Africa's legislation will have to reflect at least the following in terms of monitoring, namely (a) scientific monitoring of biodiversity, forests, ecosystems and environments; (b) monitoring of the development, implementation, enforcement and evaluation of management plans with respect to the commons; and (c) the incorporation of traditional knowledge into biodiversity inventory and monitoring systems in the commons.

4.2.4 *Graduated sanctions*

The *African Charter* does not explicitly provide clear sanctions on non-compliance with the provisions of the Charter.⁷⁵⁰ However, in terms of article 45 of the *African Charter*, which sets out the mandate of the African Commission, the Commission when hearing a case on the violation of rights such as the *SERAC* case submits its views on the matter or makes recommendations to governments.⁷⁵¹

The *Revised African Convention* provides that in terms of article XXIII the Conference of the Parties (hereafter COP), which is the decision making body of the *Revised African Convention* will be responsible for formulating sanctions that pertain to non-compliance with the Convention.⁷⁵² It would be the states that would formulate its own sanctions for violations in terms of its environmental legislation.

⁷⁴⁶ *RBS* 22.

⁷⁴⁷ *RBS* 22, "including coastal and marine ecosystems and wetlands."

⁷⁴⁸ *RBS* 22.

⁷⁴⁹ *RBS* 22.

⁷⁵⁰ See para 2.4.5 above.

⁷⁵¹ Article 45(1)(a) of the *African Charter*.

⁷⁵² See para 2.4.5 above read with article XXIII and XXVI of the *Revised African Convention*. See also Erinoshio 2013 *African Journal of International and Comparative Law* 394.

The *SADC Protocol on Wildlife* also recognises sanctions in article 12 as it provides that "sanctions may be imposed against any state party which persistently fails, without good reason, to fulfil obligations assumed under Protocol; or implements policies which undermine the objectives and principles of this Protocol."⁷⁵³ In addition, "the Council is responsible for determining whether any sanction should be imposed against a state party and makes the recommendation to the Summit if it decides that a sanction is called for."⁷⁵⁴ Further, "the Summit decides, on a case-by-case basis, the appropriate sanction to be imposed."⁷⁵⁵

At a minimum, the South African legislation should as a minimum at least provide for sanctions for non-compliance with the Wildlife Protocol's measures as embedded into legislation or management plans in a transboundary context in the selected TFCAs.

4.2.5 Conflict-resolution mechanisms

The *African Charter* through its provisions on the duties of the African Commission recognises conflict-resolution mechanisms.⁷⁵⁶ Regarding this, "the Commission has a responsibility to formulate and lay down principles and rules aimed at solving legal problems relating to human and peoples' rights and fundamental freedoms upon which African governments, like South Africa may base their legislation."⁷⁵⁷

The *Revised African Convention* in article VII recognises conflict-resolution mechanisms with regard to water disputes.⁷⁵⁸ In terms of this article "in the case of disputes on surface or underground water resources and related ecosystems, including transboundary wetlands, the parties have to act in consultation, and if the need arises, set up inter-State Commissions to resolve disputes arising from the use of these resources."⁷⁵⁹ Article XXX of the *Revised African Convention* provides that "in the event that a dispute cannot be settled, either party may refer the matter to the Court of

⁷⁵³ See para 2.4 read with article 12(1)(a)-(b) of the *SADC Protocol on Environmental Management*. See also Lubbe "Southern African Community Environmental law" 107.

⁷⁵⁴ Article 12(2) of the *SADC Protocol on Environmental Management*.

⁷⁵⁵ Article 12(2) of the *SADC Protocol on Environmental Management*.

⁷⁵⁶ See para 2.4.6 above read with article 45 (1)(b) of the *African Charter*.

⁷⁵⁷ Article 45 (1)(b) of the *African Charter*.

⁷⁵⁸ See para 2.46 above read with article VII of the *Revised African Convention*. See also Tulane 1997 *Journal of International and Comparative Law* 29.

⁷⁵⁹ Article VII(3) of the *Revised African Convention*.

Justice of the African Union, whose decisions on the subject will be final and not subject to appeal.⁷⁶⁰ The African Court of Justice, which was merged with the African Court on Human and Peoples' Rights in 2008, is to assume jurisdiction over matters concerning the Convention.⁷⁶¹ In the case of TFCAs, the constituting documents contain dispute resolution mechanisms.⁷⁶²

The *African Union Panel of the Wise* is an establishment that ensures conflict resolution.⁷⁶³ Article 11(2) of the *Protocol Relating to the Establishment of the African Union Peace and Security Council*, provides that the Panel is composed of five highly respected members from various segments of society who have made outstanding contribution to peace, security and development on the African continent.⁷⁶⁴ In addition, article 11 (2) of the *Protocol* provides that Panel members are selected by the Chairperson of the Commission after consultations with the Member States concerned, on the basis of regional representation to serve for a renewable period of three years.⁷⁶⁵ In order to ensure conflict resolution, the Panel of the Wise coordinates with the Peace and Security Council and the Chairperson of the African Commission through the Special Envoys or Representatives and other emissaries, through facilitating the establishment of channels of communication, engaging parties involved in a dispute with the view of preventing such dispute from escalating into conflict.⁷⁶⁶ As South Africa as a member of the African Union, can engage in the expertise of the Panel of the Wise to resolve disputes occurring within its TFCAs, to ensure that the challenges occurring among resource stakeholders in these areas will not escalate into a conflict.⁷⁶⁷

The SADC documents also provide for conflict resolution mechanisms in a transboundary context. For example, article 13 of the *SADC Protocol on Wildlife*

⁷⁶⁰ Article XXX(2) of the *Revised African Convention*.

⁷⁶¹ Erinosh 2013 *African Journal of International and Comparative Law* 395.

⁷⁶² See paras 3.3.2., 3.4.2 and 3.5.2 above.

⁷⁶³ See https://media.africaportal.org/documents/The_African_Union_Panel_of_the_Wise.pdf states: "the African Union Panel of the Wise is provided for by Article 11 of the *Protocol Relating to the Establishment of the African Union Peace and Security Council* and is tasked with supporting the Peace and Security Council and the Chairperson of the Commission in the area of conflict prevention."

⁷⁶⁴ See also Oluborode *The African Union Peace and Security Architecture* 23.

⁷⁶⁵ See also Oluborode *The African Union Peace and Security Architecture* 23.

⁷⁶⁶ Oluborode *The African Union Peace and Security Architecture* 25.

⁷⁶⁷ See para 1.1 above for a detailed discussion on challenges in the study area.

provides that "any dispute arising from the interpretation or application of this Protocol which cannot be settled amicably shall be referred to the Tribunal for adjudication."⁷⁶⁸ The *SADC Protocol on Forestry* regulates that any dispute arising from the interpretation or application of the Protocol, which cannot be settled amicably should be referred to the Tribunal.⁷⁶⁹ It is important to note that the Tribunal is currently not operation.⁷⁷⁰

The *SADC Protocol on Environmental Management* obligates state parties to resolve any dispute arising between themselves regarding the application, interpretation or implementation of the protocol amicably.⁷⁷¹ In the event that disputing state parties are unable to amicably resolve a dispute in terms of article 32(1) the dispute is to be referred to the Committee of Ministers Responsible for the Environment for amicable settlement.⁷⁷² In addition to this, any dispute arising from the interpretation and application the Protocol which cannot be settled amicably in terms of article 32(1) and (2), is to be referred to the SADC Tribunal which is currently not operation.⁷⁷³

In addition to sanctions for non-compliance to the conventions or protocols as set out above, the South African legislation or management plans of the TFCAs should ideally also make provision for conflict resolution mechanisms in a transboundary context.

The African law makes provision for conflict-resolution but with regard to conflict among state parties. There is no general provision with respect to conflict-resolution that recognises easily accessible low-cost local arenas to resolve conflicts among resource users in a common or between resource users and management officials in these areas.

⁷⁶⁸ See para 2.4.6 above read with article 13 of the *SADC Protocol on Wildlife*

⁷⁶⁹ Article 23 of the *SADC Forestry Protocol* read with <https://ijrcenter.org/regional-communities/southern-african-development-community-tribunal/> [Accessed 11 November 2019].

⁷⁷⁰ See <https://ijrcenter.org/regional-communities/southern-african-development-community-tribunal/> [Accessed 11 November 2019].

⁷⁷¹ Article 32(1) of the *SADC Protocol on Environmental Management*.

⁷⁷² Article 32(2) of the *SADC Protocol on Environmental Management*.

⁷⁷³ Article 32(3) of the *SADC Protocol on Environmental Management* read with <https://ijrcenter.org/regional-communities/southern-african-development-community-tribunal/> [Accessed 11 November 2019].

4.2.6 Minimal recognition of rights

The principle of minimal recognition of rights was recognised in the *Endorois* case.⁷⁷⁴ As stated above, the Commission affirmed that consultation with the community is associated with the right to development.⁷⁷⁵ The Commission also submitted that this consultation should be in accordance with culturally appropriate procedures.⁷⁷⁶ It can be argued that the requirement of consultation based on the culture of the community, recognises minimal recognition rights of the community to formulate their own rules without the interference of the government.⁷⁷⁷

Article XII of the *Revised African Convention*⁷⁷⁸ obligates member parties like South Africa, through its spheres of government to promote the establishment by local communities of areas managed by them primarily for the conservation and sustainable use of their natural resources.⁷⁷⁹ Article XVII requires the South African government to take legislative and other measures to ensure that traditional rights and intellectual property rights of local communities including the rights of farmers are respected in accordance with the provisions of this Convention.⁷⁸⁰

In the SADC context, the *SADC Protocol on Wildlife* obligates state parties to establish or introduce mechanisms for community-based wildlife management,⁷⁸¹ while the *SADC*

⁷⁷⁴ Centre for Minority Rights Development (Kenya) and Minority Rights Group International on behalf of Endorois Welfare Council v Kenya No. 276/2003 para 1 provides a summary of the disputes states that "the Endorois community allege violations resulting from the displacement of the Endorois community, an indigenous community, from their ancestral lands, the failure to adequately compensate them for the loss of their property, the disruption of the community's pastoral enterprise and violations of the right to practise their religion and culture, as well as the overall process of development of the Endorois people."

⁷⁷⁵ *Endorois* para 289. See also Scholtz "Human Rights and the environment in the African Union context" 114, who states that "the communities in *Endorois* sought a declaration that Kenya was in violation of their right to practice of religion, right to property, right to participation in cultural life and education, right to dispose freely of wealth and natural resources and the right to development;" Lubbe *A legal framework for transfrontier biodiversity conservation in SADC* 280; Ntoubandi and Adjovi "Wide human rights spectrum and climate change in Africa" 265-266.

⁷⁷⁶ *Endorois* para 289.

⁷⁷⁷ Tadeo 2010 *AHRLJ* 332. See also Wicomb and Smith 2011 *AHRLJ* 444.

⁷⁷⁸ See para 2.4 above read with article XII of the *Revised African Convention*.

⁷⁷⁹ Article XII(3) of the *Revised African Convention*.

⁷⁸⁰ Article XVII(1) of the *Revised African Convention*. This provision is noteworthy as some of the stakeholders in the commons in the selected TFCAs include local community groups and farmers - see para 1.2 above read with Chapter 5.

⁷⁸¹ See para 2.4 above read with article 7(4) *SADC Protocol on Wildlife*. See also Ruppel 2012 *SADCLJ* 260.

Protocol on Environmental Management provides for the inclusion and application of indigenous knowledge systems and structures in decision making.⁷⁸²

South African legislation and the management plans of the TFCAs should at least (a) recognise the rights of communities in relation to their right to be consulted – also in a culturally appropriate manner; (b) allow communities to establish areas for conservation and use of natural resources; (c) introduce measures pertaining to community-based wildlife management, and (d) include recognition for the application of indigenous knowledge systems and structures in relation to decision making.

4.2.7 Nested enterprises

The *Revised African Convention* recognises nested enterprises in article VII of the *Revised African Convention* which provides for the cooperation by states where water resources traverse national boundaries.⁷⁸³ This cooperation includes consultation amongst member states and the establishment of inter-state commissions for the joint management and conservation of the shared resource.⁷⁸⁴ This provision is applicable as the commons discussed in this thesis constitute land that is subject to shared governance by other member states to the selected TFCAs and where water scarcity is an issue.⁷⁸⁵

Article XI of the *Revised African Convention* further obligates states to cooperate, through the establishment of multilateral agreements, in combating illegal trade in wild fauna and flora.⁷⁸⁶ Article XXII places a duty on states to cooperate in the management, development and conservation of transboundary natural resources, which is one of the aims of the TFCAs.⁷⁸⁷ Article XXII of the *Revised African Convention*⁷⁸⁸ requires the

⁷⁸² Article 19(2)(c) the *SADC Protocol on Environmental Management*.

⁷⁸³ See para 3.2 above.

⁷⁸⁴ Article VII(3) of the *Revised African Convention*.

⁷⁸⁵ See Chapters 1 and 5 for a detailed discussion.

⁷⁸⁶ XI(2) of the *Revised African Convention*.

⁷⁸⁷ Article XXII(2)(c) of the *Revised African Convention* 28. See para 1.1 on TFCAs.

⁷⁸⁸ See para 2.4.8 above read with article XXII of the *Revised African Convention*.

parties concerned to cooperate in the conservation, development and management of such areas.⁷⁸⁹

SADC documents also reflect the concept of nested enterprises. The *SADC Protocol on Wildlife* provides, amongst its objectives, for the conservation of shared wildlife resources through the establishment of TFCAs.⁷⁹⁰ South Africa and other state parties have to promote transfrontier conservation and management programmes.⁷⁹¹

The *SADC Protocol on Wildlife* elaborates on 'common approaches' and emphasises the need for harmonisation of the law, the exchange of information, capacity building and community involvement in wildlife management.⁷⁹² In addition it obligates state parties to establish programmes and enter into agreements in order to promote the cooperative management of shared wildlife and wildlife habitats across international borders.⁷⁹³ Wildlife management takes place in the TFCAs as shared resources that straddle borders.⁷⁹⁴

The *SADC Protocol on Forestry* encourages state parties to cooperate in partnership with non-governmental organisations, inter-governmental organisations and other entities or institutions.⁷⁹⁵ In addition, nested enterprises are recognised in article 8 of the *SADC Protocol on Forestry*, which further obligates "state parties to ensure that the national procedures and processes for presenting and revising national forest plans, classifying forests and establishing management plans for forests and protected areas containing forests involve the following: (a) consultation and co-ordination where appropriate, joint decision making between all relevant sectors of government,

⁷⁸⁹ Article XXII(2)(e) of the *Revised African Convention*. TFCa governance is nested as it involves various stakeholders at multiple levels - see para 2.4 above.

⁷⁹⁰ Article 4(f) of the *SADC Protocol on Wildlife*. See also Lubbe "Biodiversity Conservation in Transfrontier Conservation Areas" 223; Lubbe *Straddling Borders and Legal Regimes* 141; Lubbe *A Legal Framework for transfrontier biodiversity conservation* 164.

⁷⁹¹ Article 7(8) of the *SADC Protocol on Wildlife*. From the discussion in Chapter 2, it was indicated that the governance of TFCAs was subject to various stakeholders at multiple levels who all collaborate in decision making – para 1.2 above.

⁷⁹² Article 4(a)-(g) of the *SADC Protocol on Wildlife*. See also Lubbe "Biodiversity Conservation in Transfrontier Conservation Areas" 223; See also Lubbe *Straddling Borders and Legal Regimes* 141; Lubbe *A Legal Framework for transfrontier biodiversity conservation* 164.

⁷⁹³ Article 7(5)(a) of the *SADC Protocol on Wildlife*.

⁷⁹⁴ See para 1.1 read with 2.6 above.

⁷⁹⁵ See para 2.4.8 above read with article 4(12) *SADC Protocol on Forestry*. See also Ruppel 2012 *SADCLJ* 255; Lubbe "Southern African Community Environmental law" 112.

including the authorities responsible for conserving biological diversity and land use planning; and (b) the consultation with affected communities and private sector enterprises engaged in forestry and forest related activities and all other relevant stakeholders and where appropriate."⁷⁹⁶ State parties "also have to enter into agreements to promote integrated and cooperative management of transboundary forests and protected areas."⁷⁹⁷ The cooperative management in terms of transboundary forests is that of forestry management as a shared resource that the straddle borders of countries.

The *SADC Protocol on Environmental Management* obliges parties to ensure the participation of all interested and affected parties in environmental governance.⁷⁹⁸ Member states have to promote intergovernmental coordination with a view to harmonise, policies, legislation and actions (such as law enforcement and natural resources governance) relating to the environment.⁷⁹⁹ Article 13(3) places a further obligation on state parties to take appropriate measures to harmonise standards, processes and procedures with particular reference to regional and transboundary environmental governance.⁸⁰⁰

Member states have to achieve the Protocol's objectives which include (a) enhancing environmental protection; (b) promoting equitable and sustainable utilisation of cultural and natural resources; (c) promoting shared management of transboundary resources and (d) promoting effective management and response to climate change impacts. The cooperation envisaged in article 4 is to be facilitated by promoting complementarity in implementing transboundary environmental management activities.⁸⁰¹ The reference to promoting shared management of transboundary resources in article 4 translates to recognition of areas such as TFCAs.⁸⁰²

⁷⁹⁶ Article 8(3)(a)-(b) *SADC Protocol on Forestry*.

⁷⁹⁷ Article 14 of the *SADC Protocol on Forestry*. See also Ruppel 2012 *SADCLJ* 254; Lubbe "Southern African Community Environmental law" 111.

⁷⁹⁸ Article 3(6)(a) of the *SADC Protocol on Environmental Management*.

⁷⁹⁹ Articles 3(8) and 4(2)(1) of the *SADC Protocol on Environmental Management*.

⁸⁰⁰ Article 13(3) of the *SADC Protocol on Environmental Management*.

⁸⁰¹ Article 4(2)(h) of the *SADC Protocol on Environmental Management*.

⁸⁰² See para 2.6.3.2 above.

The *SADC Protocol on Environmental Management* also refers to climate change in that state parties should cooperate in developing and implementing coordinated and where feasible joint climate change mitigation and adaptation strategies as well as implementing coordinated environmental disaster management responses.⁸⁰³ They also need to address issues of climate change of a transboundary nature through:⁸⁰⁴

participating in sub-regional and international climate change meetings, conferences and summits, workshops and seminars in order to access benefits related to technology transfer, financing and capacity building and influence policy and decision-making processes.

The Protocol provides further that member states may through bilateral and plurilateral means introduce instruments for coordination, cooperation or integration of shared resources, climate change, conservation, monitoring and research that includes but is not limited to:

specialist scientific advisory groups; joint programmes and projects; joint technical advisory committee; joint ministerial commission with powers to allocate shared resources among states and agree on management measures; collaboration in law enforcement; and implementation of management plans for activities with potential transboundary environmental impacts and the monitoring and evaluation thereof.⁸⁰⁵

From the above discussion, it can be deduced that there should be provisions allowing the transboundary protection and governance of (a) shared water resources; (b) wild life resources and habitats; (c) forestries; and (d) natural resources. Should South Africa ratify the *SADC Protocol on Environmental Management* it will have to provide measures for intergovernmental coordination and environmental governance, involving all stakeholders, in relation to shared natural resources.

⁸⁰³ Article 4(2)(1) of the *SADC Protocol on Environmental Management*.

⁸⁰⁴ Article 12(e) of the *SADC Protocol on Environmental Management*.

⁸⁰⁵ Article 14(2)(a)-(f) of the *SADC Protocol on Environmental Management*.

In the next paragraph it will be considered whether the South African law framework recognises the commons framework and whether it contains provisions as set out in the conventions and protocols that South Africa ratified.⁸⁰⁶

4.3 South African legal framework: commons

The Constitution, NEMA, NEMBA, NEMPAA, NFA, CPA, *Northern Cape Nature Conservation Act* (hereafter NCNCA);⁸⁰⁷ *Mpumalanga Nature Conservation Act* (hereafter MNCA);⁸⁰⁸ the *Limpopo Environmental Management Act* (hereafter LEMA),⁸⁰⁹ CBNRM *Guidelines*, NBSAP, the Draft NBF, the NPAES and SBZ⁸¹⁰ have been chosen as they contain provisions applicable to the TFCAs, Contract Parks and surrounding areas as commons. It will first be determined whether these documents provide for the elements of the commons.

4.3.1 Design Principle one: Clearly defined boundaries and resource users

In relation to the commons in the selected TFCAs, NEMPAA is directly applicable and recognises clearly defined boundaries in relation to protected areas.⁸¹¹ In this regard clearly defined boundaries of the commons within the South African side of the KTFCA, GLTFCA as exhibited within the park management plans are recognised in the amendment of schedule 2 to the NEMPAA.⁸¹² The Schedule specifically provides for parcels of land that constitute the Kalahari Gemsbok National Park,⁸¹³ Kruger National Park⁸¹⁴ and Mapungubwe National Park⁸¹⁵ and provide for clearly defined boundaries of the commons within these parks. Further, the NEMPAA include promoting the participation of local communities in the management of protected areas.⁸¹⁶

⁸⁰⁶ See para 2.4 above.

⁸⁰⁷ The South African side of the KTFCA lies in the Northern Cape Province.

⁸⁰⁸ The South Africa side of the GLTFCA spans across the Limpopo and Mpumalanga provinces.

⁸⁰⁹ The South African side of the GMTFCA lies in the Limpopo province.

⁸¹⁰ See para 1.1 above.

⁸¹¹ Section 9 of the NEMPAA relates to protected areas as including national parks, nature reserves, world heritage sites and mountain catchment areas. Also see NEMPAA norms and standards in GN 382 in GG 39878 of 31 March 2016.

⁸¹² Section 20(6) of the NEMPAA. GN 2 in GG 39728 of 25 February 2016.

⁸¹³ GN 2 in GG 39728 of 25 February 2016.

⁸¹⁴ GN 2 in GG 39728 of 25 February 2016.

⁸¹⁵ GN 2 in GG 39728 of 25 February 2016.

⁸¹⁶ Section 2(f) of the NEMPAA.

The CPA Act applies to communities who received land subject to restitution under the *Restitution of Land Rights Act 22 of 1994*. The successful land claim defines the boundaries of the land of the communities involved. Concerning the second part of the design principle, the boundaries of the property is the land subject to governance by the said community property association. The CPA Act allows communities to form juristic persons, namely a communal property association, in order to acquire, hold and manage property on a basis agreed to by members of the community in terms of a written constitution.⁸¹⁷ The CPA communities constitute the individuals or households who have rights over the land subject to the common property association.⁸¹⁸

In relation to the commons framework principles set out in chapter two as well as the African regional documents, the South African law sufficiently addresses design Principle 1, through the amendment of schedule 2 to the NEMPAA which clearly identifies areas of land within the selected TFCAs constituting the commons. However, South African law fails to specifically identify the resource users within these areas, as they are broadly referred to as communities in the NEMPAA and CPA Act. The definition of communities in South African legislation is not always clear.⁸¹⁹

4.3.2 Design Principle two: Congruence between appropriation and provision rules and local conditions

- *Appropriation rules*

The Constitution recognises appropriation rules in section 24 of the Constitution which provides for the environmental right.⁸²⁰ Section 24(a) is at the disposal of all natural persons within the territory of South Africa.⁸²¹ Section 24(a) implies a duty on all (state and civil society in the vertical/dichotomy) to refrain from acting in a fashion that may

⁸¹⁷ Section 9 of the CPA Act.

⁸¹⁸ Section 1 of the CPA.

⁸¹⁹ See in this regard Du Plessis and Pienaar "Illegal Mining: The Continued Struggle for Mineral Resources, Communities and the Environment" 79—105.

⁸²⁰ See para 2.4 above. Also see Kidd *Environmental Law* 22; Burns "Green Rights and an Environmental Management System" 16-17; Currie and De Waal *Bill of Rights* 521-530; Glazewski *Environmental Law* 67-68; Currie and De Waal *Constitutional and Administrative Law* 386-387.

⁸²¹ Feris in Currie and De Waal *Bill of Rights* 522-523. Also see Kidd *Environmental Law* 22.

be detrimental to their health or well-being.⁸²² According to Du Plessis⁸²³ "that which will be 'harmful' should in each instance be informed by the scope and meaning of the notions of 'health' and/or 'well-being'".⁸²⁴

The three spheres of government (national, provincial and local) have a duty to uphold (respect, protect, promote and fulfil) the obligations spelt out in section 24.⁸²⁵ As such these authorities may, for example, not take any arbitrary political or other decisions within their executive or legislative power that hamper or could potentially violate the environmental right.⁸²⁶

As stated in the case of *HTF Developers (Pty) Ltd v Minister of Environmental Affairs and Tourism and Others*⁸²⁷ section 24(b) gives content to the entrenched right envisaged in section 24(a). Section 24(b) determines that "everybody also has the right to have their environment protected."⁸²⁸ This means for instance that local community groups and private owners within the commons in the selected TFCAs are afforded constitutional remedies in the case where there is an omission to protect or conserve their environment. Section 24(b) expects of government to take positive action in the form of 'reasonable legislative and other measures' towards fulfilment of the environmental right.⁸²⁹ In terms of section 24(b)(i)-(iii) these legislative and other measures should prevent pollution of environmental media and the decay of ecological systems; promote conservation of natural resources/environmental media and secure ecologically sustainable development and the use of natural resources but without

⁸²² Du Plessis *South Africa's Constitutional Environmental Right* 350-351. See also Currie and De Waal *Bill of Rights* 190-228.

⁸²³ Du Plessis *South Africa's Constitutional Environmental Right* 351.

⁸²⁴ See *Hichange Investments (Pty) Ltd v Cape Produce Co (Pty) Ltd t/a Pelts Products and others* 2004 2 SA 393 (E).

⁸²⁵ Du Plessis *South Africa's Constitutional Environmental Right* 352; also see Feris "Environmental rights protected in the Constitution of the Republic of South Africa" 219-239 for the application of the environmental right in the local sphere.

⁸²⁶ Du Plessis *South Africa's Constitutional Environmental Right* 352.

⁸²⁷ 2006 5 SA 512 (T) 518 at par 17.

⁸²⁸ Du Plessis *South Africa's Constitutional Environmental Right* 353.

⁸²⁹ Du Plessis *South Africa's Constitutional Environmental Right* 353. See also *HTF Developers (Pty) Ltd v Minister of Environmental Affairs and Tourism and Others* 2006 5 SA 512 (T) 517 at para 16" in terms of which the court here attempted to give an indication as to what could be embraced by 'other measures' in section 24(b). The court also emphasised that the executive, and the legislative branch of government are responsible for the fulfilment of section 24."

disregard of simultaneous economic and social development.⁸³⁰ In the event that the state fails to take measures that are reasonably suitable to achieve this aim, it will constitute a violation of this right that must be restored.⁸³¹

In *MEC for Agriculture Conservation, Environment and Land Affairs v Sasol Oil (Pty) Ltd and Another*⁸³² the court reiterated the view that "section 24(b) imposes positive obligations on the state to protect the environment through reasonable legislative and other measures." According to Du Plessis, "mere legislative measures by themselves are not likely to constitute constitutional compliance."⁸³³ As such "the state is obliged to act to achieve the intended results, and the legislative measures will invariably have to be supported by appropriate, well-directed policies and programmes implemented by the executive."⁸³⁴ Du Plessis⁸³⁵ states that "these policies and programmes must be reasonable both in their conception and their implementation."⁸³⁶

Section 24 of the Constitution is further expanded upon in the NEMA, which gives effect to section 24.⁸³⁷ It can be argued that the section 2 sustainable development principles in the NEMA constitute appropriation rules applying to all organs of state that make decisions that may affect the environment. The section 2 principles that will apply to the commons in the selected TFCAs will include for example section 2(4), with specific reference to avoiding disturbance of ecosystems and loss of biodiversity, avoiding degradation of the environment, avoiding disturbance of cultural resources and developing, using and exploiting renewable resources and ecosystems in a manner that does not jeopardise their integrity.⁸³⁸

⁸³⁰ Du Plessis *South Africa's Constitutional Environmental Right* 353.

⁸³¹ Du Plessis *South Africa's Constitutional Environmental Right* 353.

⁸³² 2006 5 SA 483 (SCA) 489 par 15.

⁸³³ Du Plessis *South Africa's Constitutional Environmental Right* 355.

⁸³⁴ Du Plessis *South Africa's Constitutional Environmental Right* 355.

⁸³⁵ Du Plessis *South Africa's Constitutional Environmental Right* 355.

⁸³⁶ Du Plessis *South Africa's Constitutional Environmental Right* 355.

⁸³⁷ See preamble of the NEMA.

⁸³⁸ In terms of section 2 (4)(a) of the NEMA 'Sustainable development requires the consideration of all relevant factors including the following:

"(i) that the disturbance of ecosystems and loss of biological diversity are avoided, or, where they cannot be altogether avoided, are minimised and remedied;(ii) that pollution and degradation of the environment are avoided, or, where they cannot be altogether avoided, are minimised and remedied;

The NEMPAA is envisaged as a form of implementing legislation to achieve the progressive realisation on the environmental right in section 24 of the Constitution.⁸³⁹ By linking the NEMPA to section 24, it follows that the trusteeship role of the state includes the constitutional obligation to respect, protect, promote and fulfil the rights in section 24.⁸⁴⁰ Further, the NEMPAA is to be interpreted and applied in accordance with the principles in and be read in conjunction with the applicable provisions of the NEMA.⁸⁴¹ In relation to any protected area, like the commons in the selected TFCAs, the NEMPAA must also be read, interpreted and applied in conjunction the NEMBA.⁸⁴² The NEMPAA makes provision for appropriation rules in section 45 which places restrictions in terms of human access to special nature reserves,⁸⁴³ while section 46 provides that access to nature reserves, national parks and world heritage sites is allowed with the written permission of the management authority.⁸⁴⁴ The NEMPAA also places restrictions on the flying of an aircraft over a special nature reserve, national park or world heritage site at an altitude less than 1500 feet over the highest point in site.⁸⁴⁵ Mining and prospecting activities are also prohibited in the protected areas without the written permission of the Minister or cabinet member responsible for minerals and energy affairs; or in a world heritage site, especially protected forest area, forest nature reserve and wilderness forest area.⁸⁴⁶

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- (iii) 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;
 - (iv) that waste is avoided, or where it cannot be altogether avoided, minimised and reused or recycled where possible and otherwise disposed of in a responsible manner;
 - (v) 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;
 - (vi) 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;
 - (vii) 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
 - (viii) 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."

⁸³⁹ Section 3 of the NEMPAA. See also Paterson "Protected Areas" 1125.

⁸⁴⁰ Section 7(2) of the Constitution read with section 3 of the NEMPAA. Also see Strydom and King "Protected Areas" 1125; Van der Schyff 2013 *SALJ* 369–389; Blackmore "Public trust doctrine" 1-9.

⁸⁴¹ Strydom and King "Protected Areas" 1125.

⁸⁴² Section 6 of the NEMPAA. Also see Strydom and King "Protected Areas" 1125.

⁸⁴³ Section 45(1) of the NEMPAA. See also Kidd *Environmental Law* 119.

⁸⁴⁴ Section 46(1) of the NEMPAA. See also Kidd *Environmental Law* 119.

⁸⁴⁵ Section 46(1) of the NEMPAA.

⁸⁴⁶ Section 48(1) of the NEMPAA.

The NEMBA is the main instrument regulating the protection and conservation in South Africa. The NEMBA is to be implemented and interpreted in accordance with the sustainable development principles set out in section 2 of NEMA.⁸⁴⁷ The NEMBA makes provision for appropriation in sections 53 and 57. Section 53 imposes obligations upon persons undertaking listed activities impacting on threatened ecosystems⁸⁴⁸ to undertake an environmental impact assessment,⁸⁴⁹ while section 57 requires those seeking to undertake restricted activities⁸⁵⁰ impacting on a threatened or protected species⁸⁵¹ to have a permit to do so. The importing, growing, transporting and selling of alien species⁸⁵² is not allowed without permission and a

⁸⁴⁷ Section 7 of the NEMBA.

⁸⁴⁸ Section 53(1) of the NEMBA.

⁸⁴⁹ Done in terms of section 24 of NEMA, read with GN R984-985 in GG 38282 of 4 December 2014, as amended.

⁸⁵⁰ Section 57(1) of the NEMBA. In terms of section 1 of the NEMBA restricted activity is defined as follows: "(a) in relation to a specimen of a listed threatened or protected species, means- (i) hunting, catching, capturing or killing any living specimen of a listed threatened or protected species by any means, method or device whatsoever, including searching, pursuing, driving, lying in wait, luring, alluring, discharging a missile or injuring with intent to hunt, catch capture or kill any such specimen; (ii) gathering, collecting or plucking any specimen of a listed threatened or protected species; (iii) picking parts of, or cutting, chopping off, uprooting, damaging or destroying, any specimen of a listed threatened or protected species; (iv) importing into the Republic, including introducing from the sea, any specimen of a listed threatened or protected species; (v) exporting from the Republic, including re-exporting from the Republic, any specimen of a listed threatened or protected species; (vi) having in possession or exercising physical control over any specimen of a listed threatened or protected species; (vii) growing, breeding or in any other way propagating any specimen of a listed threatened or protected species, or causing it to multiply; (viii) conveying, moving or otherwise translocating any specimen of a listed threatened or protected species; (ix) selling or otherwise trading in, buying, receiving, giving, donating or accepting as gift, or in any way acquiring or disposing of any specimen of a listed threatened or protected species; or (x) any other prescribed activity which involves a specimen of a listed threatened or protected species; and (b) in relation to a specimen of an alien species or listed invasive species, means- (i) importing into the Republic, including introducing from the sea, any specimen of an alien or listed invasive species; (ii) having in possession or exercising physical control over any specimen of an alien or listed invasive species; (iii) growing, breeding or in any other way propagating any specimen of an alien or listed invasive species, or causing it to multiply; (iv) conveying, moving or otherwise translocating any specimen of an alien or listed invasive species; (v) selling or otherwise trading in, buying, receiving, giving, donating or accepting as a gift, or in any way acquiring or disposing of any specimen of an alien or listed invasive species; or (vi) any other prescribed activity which involves a specimen of an alien or listed invasive species."

⁸⁵¹ GN R151 in GG 29657 of 23 February 2007 applies to threatened or protected species. "In terms of section 56 of the NEMBA a species can be listed as threatened or protected if they are critically endangered, endangered, vulnerable and protected. Further, in terms of GN R151 endangered species are "indigenous species facing a high risk of extinction in the wild in the near future, although they are not a critically endangered species; vulnerable species which constitute indigenous species facing a high risk of extinction in the wild in the medium-term future, although they are not a critically endangered and protected species are indigenous species of high conservation value or national importance that require national protection."

⁸⁵² Section 1 of the NEMBA defines "alien species" as "(a) a species that is not an indigenous species; or (b) an indigenous species translocated or intended to be translocated to a place outside its natural

broad duty of care is imposed on persons who are so permitted.⁸⁵³ Further, the NEMBA requires anyone who intends to engage in bioprospecting activities involving indigenous biological resources and indigenous genetic resources to obtain a permit, in order to do so.⁸⁵⁴

The NFA mostly deals with appropriation rules. Section 7 requires a licence or exemption for purposes of cutting, disturbing, damaging or destroying of any indigenous living tree, or the removal or receipt of any such tree from a natural forest.⁸⁵⁵ The cutting, disturbing, damaging or destroying any forest produce, or removal of any forest produce from a protected area is only allowed in specified circumstances.⁸⁵⁶ A license is also required for purposes of cutting, disturbing, damaging, destroying or removing any protected trees or collecting, removing, transporting, exporting, purchasing, selling, donating or in any other manner acquiring or disposing off any protected tree.⁸⁵⁷

In terms of provincial legislation, the NCNCA, MNCA and LEMA make provision for appropriation rules, in relation to restrictions on hunting,⁸⁵⁸ catching fish,⁸⁵⁹ and the sustainable utilisation of plants.⁸⁶⁰ The MNCA also contains restrictions on hunting,⁸⁶¹

distribution range in nature, but not an indigenous species that has extended its natural distribution range by natural means of migration or dispersal without human intervention." Also see GN R598 in GG 37885 of 1 August 2014 - regulations on alien and invasive species.

⁸⁵³ Sections 65-69 of the NEMBA provide for alien species control measures and sections 70-77 for invasive species measures. Section 1 of the NEMBA defines "invasive species" as "any species whose establishment and spread outside its natural distribution range – (a) threaten ecosystems, habitats or other species or have demonstrable potential to threaten ecosystems, habitats or other species; and (b) may result in economic or environmental harm or harm to human health." Also see GN R598 in GG 37885 of 1 August 2014 regulations on alien and invasive species.

⁸⁵⁴ Section 81(1)(a)-(b) of the NEMBA. In terms of section 1 of the NEMBA bioprospecting with to indigenous biological resources, means "any research on, or development or application of, indigenous biological resources for commercial or industrial exploitation. Also see GN 447 in GG 388809 of 19 May 2015 which applies to bioprospecting, access and benefit sharing."

⁸⁵⁵ Section 7(1) of the NFA. See also Kidd *Environmental Law* 126; Paterson "Protected Areas" para 12.7.3.1.

⁸⁵⁶ Section 10(1) of the NFA. See also Kidd *Environmental Law* 126; Paterson "Protected Areas" para 12.7.3.1.

⁸⁵⁷ Section 15(1) of the NFA. See also Kidd *Environmental Law* 126; Paterson "Protected Areas" para 12.7.3.1.

⁸⁵⁸ Section 3 of the NCNCA.

⁸⁵⁹ Sections 32-38 of the NCNCA.

⁸⁶⁰ Section 49(1)–58(1) of the NCNCA.

⁸⁶¹ Section 8 of the MNCA.

fishing⁸⁶² and the harvesting of indigenous plants.⁸⁶³ The LEMA places restrictions on fishing⁸⁶⁴ and the use of indigenous plants.⁸⁶⁵

- *Provision rules*

As stated, the environmental legislation discussed above, also include provision rules. The provision rules in the NEMBA, for example, include the payment of fees to access national botanical gardens, herbaria and other places under its control,⁸⁶⁶ and the payment of processing fees for renewing or amending a permit,⁸⁶⁷ while the NEMPAA requires written permission to allow a person or organ of state to fly an aircraft over a special nature reserve, national park or world heritage site and through the protected airspace after prescribed fees have been paid.⁸⁶⁸ Further, provision rules are recognised in the NEMPAA as SANParks in its management of protected areas, including the commons within the selected TFCAs, has authority to determine and collect fees to enter the areas for any other service rendered.⁸⁶⁹

In relation to the commons framework principles set out in Chapter 2 and the African law discussed above, South African law generally recognises appropriation rules within its ambit which include (a) rules of access for instance restrictions over the mode of transportation allowed within a national park, in which the commons discussed in this study are found; (b) rules of resource withdrawal that apply to the commons, for instance (i) avoiding the disturbance of ecosystems and loss of biodiversity; (ii) avoiding the degradation of the environment; (iii) avoiding the disturbance of cultural resources and (iv) the sustainable use of natural resources. South African law also recognises provision rules (a) through the requirements to pay access fees within national parks; and (b) the payment of fees for the processing of permit renewals and amendments.

⁸⁶² Sections 52 and 67 of the MNCA.

⁸⁶³ Section 70 of the MNCA.

⁸⁶⁴ Section 54 of the LEMA.

⁸⁶⁵ Section 64(1) of the LEMA.

⁸⁶⁶ Section 12(h)(i) of the NEMBA.

⁸⁶⁷ Section 93A(2) of the NEMBA.

⁸⁶⁸ Section 47(3A)(b)(ii) of the NEMPAA.

⁸⁶⁹ Section 55(2)(j) of the NEMPAA.

From the analysis of the South African law above it can be gathered that there is congruence of appropriation and provision rules with local conditions. This can be inferred from the obligations set out in section 24 of the Constitution, in terms of which the state through its three spheres required to devise legislative measures to prevent environmental degradation, promote nature resource conservation and secure ecologically sustainable development and the use of natural resources but without disregard of simultaneous economic and social development. The formulation of these legislative measures by the state, are clearly evident in the law that is applicable to resource governance in the commons, through various provisions recognising appropriation and provision rules. The congruence of these rules with local conditions is recognised as section 24, as it allows the use of natural resources, in a manner that promotes economic development. In terms of this local community members who rely on natural resources present in the commons for survival area able to do so, at the same time ensuring that they do so in a sustainable manner.

4.3.3 Design Principle three: Collective-choice arrangements

Collective-choice arrangements include for example, the ability for any person or community to enter environmental management cooperation agreements recognised in section 35 of the NEMA,⁸⁷⁰ as well as agreements between a management authority like SANParks to co-manage protected areas with an organ of state, a local community, an individual or other party in terms of section 42 of the NEMPAA.⁸⁷¹ Provision for community participation is recognised in the NEMBA with respect to the issuing of bioprospecting permits,⁸⁷² material transfer agreements,⁸⁷³ benefit sharing agreements⁸⁷⁴

⁸⁷⁰ See para 2.7.4 above read with section 35(1) of the NEMA. See also Kidd *Environmental Law* 43; Scholtz 2004 *SAJELP* 31; Du Plessis and Du Plessis "Striking the sustainability balance" 435; Oosthuizen *et al* "National Environmental Management Act" 197.

⁸⁷¹ Section 42 (1)(a) of the NEMPAA. See also Kidd *Environmental Law* 118.

⁸⁷² Section 82 of the NEMBA. In terms of the section, the NEMBA requires "the permit applicant to disclose all material information about the bioprospecting project to identified stakeholders, who in the commons would be the local community members in a commons, to obtain prior consent for accessing indigenous biological resources and or use of traditional knowledge from local community members." Also see Regulation 7 of GN 447 in GG 388809 of 19 May 2015.

⁸⁷³ Section 82 of the NEMBA. In terms of regulation 38(1) of GN 447 in GG 388809 of 19 May 2015, "parties to a material transfer agreement are the applicant of the permit and the stakeholder or stakeholders, in the case of the commons would be community members in a commons, contemplated in section 82(1)(a) of the NEMBA for the provision of access to the indigenous genetic and biological resources to which the application for any of the permits relates."

and the establishment of a bioprospecting trust fund.⁸⁷⁵ The NFA makes provision for community forestry agreements between the Minister responsible for the environment and communities.⁸⁷⁶

In relation to the communities whose land is restituted, section 9 of the CPA Act provides for a fair and inclusive decision making process and states that all members of a CPA should be afforded a fair opportunity to participate in the following:⁸⁷⁷ (i) any decision making process of the association;⁸⁷⁸ (ii) any decision to amend the constitution or dissolve the association;⁸⁷⁹ (iii) the termination of any member of the association after matter is heard at fair hearing.⁸⁸⁰ Section 9(e) of the CPA Act further provides that each member of a CPA should have fair access to the property of the association by ensuring that the association manages the property owned, controlled or held by it for the benefit of its members in a participatory and non-discriminatory manner. For 'collective-choice arrangements' it then means that members of the CPA can participate in formulating rules of resource use on their shared land.

The courts have assisted in recognising collective-choice arrangements for example, in the case of *Balení and Others v Minister of Mineral Resources and Others*⁸⁸¹ (hereafter *Balení*). The case involved applicants who are a community of informal land rights holders as contemplated in the *Interim Protection of Informal Rights to*

⁸⁷⁴ Section 82 of the NEMBA. In terms of regulation 39(1) of GN 447 in GG 388809 of 19 May 2015, "parties to a benefit-sharing agreement are the applicant and the stakeholder or stakeholders, in the case of the commons would be community members in a commons, contemplated in section 82(1)(a) and (b) of the NEMBA for the provision of or access to the indigenous genetic and biological resources or associated traditional knowledge to which the application for any of the permits relates."

⁸⁷⁵ Section 85 of the NEMBA. In terms of this section a "Bioprospecting Trust Fund is established into which all moneys arising from benefit-sharing agreements and material transfer agreements, and which are due to stakeholders in the case of a commons namely the local community members, must be paid, and from which all payments to, or for the benefit of, stakeholders must be made." In terms of regulation 40 of GN 447 in GG 388809 of 19 May 2015, "the Director-General who is responsible for managing the Fund should inform the parties to the benefit-sharing agreement of, any money received in respect of such agreement; the amount due to each stakeholder or stakeholders in terms of such agreement; and distribute all monies received in accordance with the benefit-sharing agreement."

⁸⁷⁶ Part 3 of the NFA. See also Kidd *Environmental Law* 126.

⁸⁷⁷ See para 2.7.4 below.

⁸⁷⁸ Section 9(1)(a)(i) of the CPA Act.

⁸⁷⁹ Section 9(1)(a)(ii) of the CPA Act.

⁸⁸⁰ Section 9(1)(a)(iii) of the CPA Act.

⁸⁸¹ *Balení and Others v Minister of Mineral Resources and Others* 73768/2016 2018 ZAGPPHC 829; 2019 1 All SA 358 (GP); 2019 2 SA 453 (GP) 22 November 2018.

Land Act 31 of 1996 (hereafter IPILRA). They reside in an area called Umgungundlovu, which is an area within Xolobeni, in the Eastern Cape.⁸⁸² The court set a new precedent that "where an application for a mining right is made over land where a community has informal land rights, the Minister is required to obtain prior and informed consent from the informal land right holders before granting a mining right."⁸⁸³ This power also extends to other communities under customary law, such as those in the commons in the TFCAs discussed in this thesis.⁸⁸⁴ As such, it can be argued "that the requirement of prior and informed consent will also apply to the meaningful participation of local resource users in decisions that affect the management of natural resources such as their land."⁸⁸⁵

Local communities should be involved in policy development as set out in the CBNRM *Guidelines*.⁸⁸⁶ The participation of members of traditional community members in decision making within a traditional council is recognised in section 3 of the TLGFA, while provincial stewardship programmes are recognised in the NBF in that conservation authorities enter into agreements with private and communal landowners to protect and manage land in biodiversity priority areas.⁸⁸⁷

With respect to the commons framework principles provided in chapter two, although the South African legislation provides for collective-choice agreements. The law is still lacking with regard to the lack of adequate provisions in the law that promote the active involvement of communities, in modifying the law applicable to the commons, as it is part of the operational rules of the commons. Further, the courts pronounced on the prior and informed choice principle that is also included in article XVII of the *Revised African Convention* discussed above. This principle is of importance as it gives communities within the commons to meaningfully participate in decision making, with respect to any development on their commons.⁸⁸⁸ However, in South African law there

⁸⁸² *Baleni* para 9-10.

⁸⁸³ *Baleni* para 64-82.

⁸⁸⁴ *Baleni* para 79-84.

⁸⁸⁵ See para 2.7.4 below.

⁸⁸⁶ CBNRM *Guidelines* 58.

⁸⁸⁷ NBF 2009 15.

⁸⁸⁸ [https://www.sahrc.org.za/home/21/files/National%20Hearing%20Report%20on%20the%20Humn%20Rights%20of%20the%20Khoi-San%20-%2014%20March%202018%20\(003\).pdf](https://www.sahrc.org.za/home/21/files/National%20Hearing%20Report%20on%20the%20Humn%20Rights%20of%20the%20Khoi-San%20-%2014%20March%202018%20(003).pdf) [Accessed 13 October 2020] states that 'Free' requires "the absence of coercion, intimidation or

is no specific legislation that would require prior and informed consent if the land rights are not informal.

4.3.4 Design Principle four: Monitoring

Monitoring is recognised through provisions that provide for environmental monitoring, investigation and assessment in sections 12, 24(4) and 24Q of the NEMA,⁸⁸⁹ sections 11, 38, 49 and 76 of the NEMBA,⁸⁹⁰ section 43 of the NEMPAA and its norms and standards for the management of protected areas in South Africa,⁸⁹¹ as well as section 6(1) of the NFA.⁸⁹²

The CPA Act obligates an association or provisional association registered in terms of it, to furnish documents and information to the Director-General at prescribed times to enable him or her to monitor compliance with the provisions of the relevant CPA constitution and the Act.⁸⁹³ In terms of provincial legislation only the LEMA provides for monitoring.⁸⁹⁴ The NBSAP introduces the monitoring of progress of the three spheres of government towards the achievement of its strategic objectives in relation to maintaining an effective Scientific Authority that monitors the legal and illegal trade in species listed as threatened or protected in section 56 of the NEMBA,⁸⁹⁵ and mainstreaming biodiversity into national, provincial, municipal development planning

manipulation"; "prior" implies "the need for consent to be sought before any conclusion, authorisation or commencement of an activity has taken place"; and finally, "informed" necessitates "the provision of information in a form which is accessible and understandable".

⁸⁸⁹ See para 2.4 above read with sections 12(e), 24(4)(b)(v) and 24Q(b) of the NEMA.

⁸⁹⁰ Sections 11(1)(a)–(b), 38, 49(1) and 76 (4) of the NEMBA. See also Kidd *Environmental Law* 104.

⁸⁹¹ Section 43(1) of the NEMPAA. See also NEMPAA norms and standards in GN 382 in GG 39878 of 31 March 2016.

⁸⁹² Section 4(6) of the NFA.

⁸⁹³ See para 2.4.4 read with section 11(1) of the CPA Act.

⁸⁹⁴ NEMPAA norms and standards in GN 382 in GG 39878 of 31 March 2016. In terms of these norms and standards monitoring is recognised in norm 11.1 which provides that "the protected area should have an approved management plan in place that is consistent with the objectives of the NEMPAA. With regards to this norm, the standard is that the management of a protected area contributes to the maintenance of ecological processes. Monitoring is specifically recognised in the first indicator of the standard as it provides that the management of a protected area should include an adaptive management framework to ensure monitoring of ecological processes. The NEMPAA norms and standards define "adaptive management framework" as a formal process for continually improving management policies and practices by learning from their outcomes. In addition, monitoring is also recognised in the fourth indicator of norm 11.1 which provides that the management of a protected areas should have a monitoring system in place. Monitoring are also recognised under norm 12.1 which requires a protected area to have an approved monitoring programme that supports their respective management plans."

⁸⁹⁵ NBSAP 21.

and monitoring .⁸⁹⁶ The Draft NBF recognises monitoring by the Department of Environmental Affairs, Forestry and Fisheries.⁸⁹⁷ The NPAES regards monitoring as a priority of action for performance monitoring and reporting,⁸⁹⁸ while the SBZ refers to the introduction of monitoring as a guiding principle on evaluation and review.⁸⁹⁹

The South African legislation, in a similar fashion to African law makes provision for monitoring but with regard to specific issues, such as environmental monitoring as well as performance monitoring and the compliance to the law. However, as required by the commons principles set out in chapter two, there is an absence of general monitoring provisions which recognise the involvement of monitors who are part of community of a commons, to set out specific rules of compliance within the commons and monitor compliance of these rules.

4.3.5 Design Principle five: Graduated sanctions

Graduated sanctions in the form of provisions on offences and penalties are recognised in the South African law in sections 49A and 49B of the NEMA,⁹⁰⁰ section 101 of the NEMBA,⁹⁰¹ section 89 of the NEMPAA,⁹⁰² and section 58 of the NFA.⁹⁰³

The CPA Act recognises graduated sanctions through its provisions on offences and penalties.⁹⁰⁴ Regarding this, the CPA Act provides that "a person shall be guilty of an offence if he or she does the following: (a) breaches the provision of a constitution or

⁸⁹⁶ NBSAP 12.

⁸⁹⁷ Draft NBF 69.

⁸⁹⁸ NPAES 58-59.

⁸⁹⁹ SBZ 10.

⁹⁰⁰ See para 2.4 above read with section 49A(1) of the NEMA. See also Oosthuizen *et al* "National Environmental Management Act" 205.

⁹⁰¹ Section 102 of the NEMBA. In terms of this section subsection (1) provides that "a maximum fine of R10 million, or ten years imprisonment, or both can be imposed for committing an offence in terms of s 101 of NEMBA. While subsection (2) provides that that a fine of R10 million or "equal to three times the commercial value of the specimen in terms of which the offence was committed, whichever is the greater, can be imposed for committing an offence in terms of s 101 of NEMBA."

⁹⁰² Section 89(1)–(2) of the NEMPAA. In terms of this section, "the minimum penalty is a fine not exceeding R 5 million or imprisonment for a period not exceeding five years and, and a maximum sentence of a fine not exceeding R10 million or imprisonment for a period not exceeding ten years or in both instances to both a fine and such imprisonment."

⁹⁰³ Section 58(4) of the NFA. In terms of this section "the minimum sentence for a first conviction is a fine or community service of up to 6 six months, or both the fine and community service. In the case of a maximum sentence, the Act provides for a fine or imprisonment for up to three years or both fine and imprisonment."

⁹⁰⁴ See para 2.4.5 above.

purports to grant any person rights and access in respect to property belonging to an association;⁹⁰⁵ (b) acts in breach of the fiduciary relationship contemplated;⁹⁰⁶ (c) abuses any power or authority vested in him or her by the members of the association or provisional association by doing anything or refraining from doing anything or threatening to do or refrain from doing anything, in such a manner that the benefits or rights of a member are prejudiced or threatened;⁹⁰⁷ (d) incites or attempts to incite any person to commit the offences described;⁹⁰⁸ and (e) grants or purports to grant to any person other than a member of a provisional association any right in respect of the rights of a provisional association."⁹⁰⁹

With respect to penalties the CPA Act provides that the "Director-General shall, if so requested by the committee or the association do the following: (a) take the necessary steps to establish to his or her satisfaction whether the membership of a person has been duly terminated in terms of the constitution;⁹¹⁰ and (b) if he or she is satisfied that the membership of the person concerned has been so terminated, issue a certificate to that effect."⁹¹¹ In terms of the CPA Act any person convicted of a guilty offence stated above, will "be liable to a fine or to imprisonment for a period not exceeding ten years or to both such fine and imprisonment."⁹¹²

South African law, unlike the African regional law, discussed above, contains provisions that recognise sanctions likely to be imposed on community members within the commons, depending on the seriousness and context of the offence, by the officials who are accountable to the community members. However, minimal recognition, in terms of which community members in a commons can impose sanctions on community members who violate rules, is recognised only in the CPA Act. The African regional law has no provision that can apply to the commons, as its sanctions are only limited to state parties.

⁹⁰⁵ Section 14(1)(a) of the CPA Act.

⁹⁰⁶ Section 14(1)(b) of the CPA Act.

⁹⁰⁷ Section 14(1)(c) of the CPA Act.

⁹⁰⁸ Section 14(1)(d) of the CPA Act.

⁹⁰⁹ Section 14(1)(e) of the CPA Act.

⁹¹⁰ Section 14(2)(a) of the CPA Act.

⁹¹¹ Section 14(2)(b) of the CPA Act.

⁹¹² Section 14(3) of the CPA Act.

4.3.6 Design Principle six: Conflict-resolution mechanisms

The conflict-resolution mechanisms, include, for example, provisions on conciliation in sections 17 and 18 of the NEMA⁹¹³ and arbitration.⁹¹⁴ Provisions recognising conflict-resolution are also found in section 8(1) of the NEMBA,⁹¹⁵ section 7 of the NEMPAA,⁹¹⁶ section 45 of the NFA,⁹¹⁷ section 4 of the WHCA⁹¹⁸ and section 21 of the TLGFA.⁹¹⁹

⁹¹³ In terms of section 17(1). The NEMA provides that "any minister, MEC or Municipal Council may refer a matter to conciliation and provides requirements in this regard. This may occur when a dispute arises regarding the exercising of a function by a minister, MEC or municipal council which significantly affect the environment or when appeal is pending (under any law) regarding the protection of the environment. Section 18(1) provides that once a matter is referred to conciliation, the director-general appoints a conciliator acceptable to the parties. Thereafter, in terms of section 18(2) the conciliator must attempt to resolve the dispute, by obtaining relevant information documentary or other, mediating differences and utilising another method she or he may find appropriate. In doing so, due consideration must be given to the national environmental management principles (section 2 of NEMA) during the conciliation process. Further, in terms of section 18(7) the conciliator has a reporting obligation to the director general regarding the process." Also see Oosthuizen *et al*/"National Environmental Management Act" 155.

⁹¹⁴ Section 1 of the NEMA read with section 40 of the *Arbitration Act* 42 of 1965. Also see section 19 of the NEMA which provides for "arbitration in the case that conciliation fails Parties to a dispute may appoint as arbitrator a person from the panel of arbitrators established in terms of section 21."

⁹¹⁵ In terms of conflict-resolution section 8 states

"(1) In the event of any conflict between a section of this Act and-

(a) other national legislation in force immediately prior to the date of commencement of this Act, the section of this Act prevails if the conflict specifically concerns the management of biodiversity or indigenous biological resources;(b) provincial legislation, the conflict must be resolved in terms of section 146 of the Constitution; and

(c) a municipal by-law, the section of this Act prevails.

(2) In the event of any conflict between subordinate legislation issued in terms of this Act and-

(a) an Act of Parliament, the Act of Parliament prevails;

(b) provincial legislation, the conflict must be resolved in terms of section 146 of the Constitution; and

(c) a municipal by-law, the subordinate legislation issued in terms of this Act prevails.

(3) For the proper application of subsection (2)(b) the Minister must, in terms of section 146(6) of the Constitution, submit all subordinate legislation"

⁹¹⁶ In terms of conflict-resolution section 7 states

"(1) In the event of any conflict between a section of this Act and –

(a) other national legislation, the section of this Act prevails if the conflict specifically concerns the management or development of protected areas;

(b) provincial legislation, the conflict must be resolved in terms of section 146 of the Constitution; and

(c) a municipal by-law, the section of this Act prevails.

(2) In the event of any conflict between subordinate legislation issued in terms of this Act and – (a) an Act of Parliament, the Act of Parliament prevails;

(b) provincial legislation, the conflict must be resolved in terms of section 146 of the Constitution; and

(c) a municipal by-law, the subordinate legislation issued in terms of this Act prevails."

⁹¹⁷ Section 45(1) of the NFA. The section provides for "the establishment of a panel of facilitators, mediators and arbitrators who may be selected for purposes of dispute resolution."

⁹¹⁸ Section 4(1)(l) of the WHCA. In terms of this section "actual or potential conflicts of interest between organs of state, an organ of state and an Authority or Authorities, should be resolved through appropriate conflict resolution procedures and the principles of co-operative government in accordance with the Constitution."

The CPA Act similarly provides for dispute resolution mechanisms.⁹²⁰ In terms of this section, the Director-General may of his or her own accord or upon request by a community, an association, a provisional association or any member appoint a conciliator acceptable to the parties to a dispute to assist in resolving a dispute between an association or provisional association and its members.⁹²¹ Such conciliator appointed is directed to attempt to solve such dispute through mediation,⁹²² fact-finding relevant to the resolution of the dispute,⁹²³ making a recommendation to parties in dispute,⁹²⁴ and in any manner considered appropriate.⁹²⁵

With respect to the commons principles set out in chapter two, South African legislation extensively makes provision for conflict-resolution. With specific reference to the commons the TLGFA and CPA Act makes provision for dispute resolution amongst community members, locally in terms of the customs of the community concerned. This allows for access to readily available, low cost dispute resolution for community members within a commons.⁹²⁶

⁹¹⁹ Section 21(1)(a)(b) of the TLGFA. In terms of this section "whenever a dispute or claim concerning customary law or customs arises between or within traditional communities or other customary institutions on a matter arising from the implementation the Act, members of such a community and traditional leaders within the traditional community or customary institution concerned must seek to resolve the dispute or claim internally and in accordance with customs before such dispute or claim may be referred to the Commission. Additionally, in terms of section 21(2)(a) "In the event that that the dispute is not resolved, the TLGFA requires it to be referred to the relevant provincial house of traditional leaders, which must seek to resolve the dispute or claim in accordance with its internal rules and procedures." Further, section 21(2)(b) provides that in the event that the provincial house of traditional leaders is unable to resolve a dispute or claim as provided for in paragraph the dispute or claim must be referred to the Premier of the province concerned, who must resolve the dispute or claim after having consulted the parties to the dispute or claim and the provincial house of traditional leaders concerned. Section 21(3) provides that in the event that a dispute or claim that cannot be resolved it must be referred to the Commission."

⁹²⁰ See para 2.4 above.

⁹²¹ Section 10(2) of the CPA Act.

⁹²² Section 10(3)(a) of the CPA Act.

⁹²³ Section 10(3)(b) of the CPA Act.

⁹²⁴ Section 10(3)(c) of the CPA Act.

⁹²⁵ Section 10(3)(d) of the CPA Act.

⁹²⁶ This is unlike African regional law which only caters for conflict resolution amongst state parties to the law.

4.3.7 Design Principle seven: Minimal recognition of rights

Community-based natural resource management is recognised in the NEMPAA,⁹²⁷ the NFA⁹²⁸ and the CBNRM *Guidelines*.⁹²⁹

The CPA allows community members to formulate their own constitution based on their own rules and they can manage their land with limited any state interference.⁹³⁰

In relation to the commons framework principles set out in chapter two, South African law in a similar manner to African law, contains a few provisions recognising the minimal recognition of rights. This is largely due to the state having the authority to determine the governance of natural resources in the law applicable to the commons. As such community members are required to act within the parameters of the law even as they apply their customs in governing their resources.

4.3.8 Design Principle eight: Nested enterprises

The principle of nested enterprises includes, for example, provisions that impose positive duties on all three spheres of government, in terms of the duty to respect, protect, promote and fulfil the environmental right.⁹³¹ This is evident in the court's view in the case of *Grootboom v Oostenberg Municipality*⁹³² in which it was argued that all the three spheres of government are all to some degree responsible for the execution of the constitutional duty to respect, protect promote and fulfil the environmental right.⁹³³

⁹²⁷ See section 41(2)(f). In terms of this section "a management plan should provide for community-based natural resource management where this is appropriate."

⁹²⁸ Section 17(9). In terms of this section "the Minister may enter into an agreement with the owner or any other interested persons for the management of forests."

⁹²⁹ CBNRM Guidelines 7. The guidelines define CBNRM as "a way by which communities work together to protect their natural resources, based on their traditional knowledge, so that they can use these natural resources to improve their lives and that of generations to follow. Hence as communities manage land based on their customs CBNRM is realised."

⁹³⁰ Section 9(1)(a)(i)(ii) of the CPA Act.

⁹³¹ Section 24 of the Constitution. See also Du Plessis "Local environmental governance" 286; Liebenberg 2006 *Stellenbosch Law Review* 33-34.

⁹³² 2000 3 BCLR 277 (CC) paras 82-83.

⁹³³ *Le Sueur v Ethekwini Municipality* [2013] ZAKZPHC para 40. Also see *Wary Holdings (Pty) Ltd v Stalwo (Pty) Ltd* 2009 1 SA 337 (CC); *Fuel Retailers Association of Southern Africa v Director-General: Environmental Management, Department of Agriculture, Conservation and Environment, Mpumalanga Province* 2007 6 SA 4 (CC).

Furthermore, nested enterprises are recognised through provisions on cooperative governance in section 40 of the Constitution which provides that "whilst the South African government consists of distinctive national, provincial and local spheres, these spheres are interdependent and interrelated and must observe and adhere to the constitutional provisions on cooperative governance."⁹³⁴ This means that the "spheres and line functions are required to cooperate in mutual trust and good faith based on interrelated and coordinated mutual and reciprocal relationships."⁹³⁵ This cooperation should "take place in a sense (within each sphere between, for example, the legislative and the executive branches of provincial government and between different departments); vertically (between all three spheres of government and between the various departments in each sphere); and between a sphere and organ of state that is not part of that particular sphere."⁹³⁶ As such, all governance activities, including the commons in the selected TFCAs, must further be conducted within the parameters of section 40.⁹³⁷

Section 41 of the Constitution provides that all organs of state across the national, provincial and local spheres of the government must cooperate in good trust and good faith. Several principles guide the relationship and interaction between national and provincial government departments, municipalities and semi-state institutions.⁹³⁸ In terms of the principle government actors are obligated to assist, support and inform one another of, and consult one another on, matters of common interest.⁹³⁹ These provisions in the Constitution are further extended in the *Intergovernmental Relations Framework Act* 13 of 2005 (hereafter IGRFA). This Act aims to provide an institutional framework for the different spheres of government to facilitate coherent government,

⁹³⁴ Sections 40(1)-(2) of the Constitution. See also Kotzé *Integrated Environmental Governance in South Africa* 97; Du Plessis 2008 *SA Public Law* 90. Also see *Uthukela District Municipality and Others v President of the Republic of South Africa and Others* 2003 1 SA 678 (CC) at par 684C; *Premier of the Province of the Western Cape v President of the RSA* 1999 4 SA BCLR 382 (CC) at par 50.

⁹³⁵ Bray 1999 *South African Journal of Environmental Law and Policy* 3. Also see Kotzé *Integrated Environmental Governance in South Africa* 98; Rautenbach and Malherbe *Staatsreg* 294299; Currie and De Waal *The new Constitutional & Administrative Law Volume 1 Constitutional law* 119-121.

⁹³⁶ Burns *Administrative Law* 45. See also Kotzé *Integrated Environmental Governance in South Africa* 98.

⁹³⁷ Kotzé *Integrated Environmental Governance in South Africa* 97. Also see Bray 2005 *Journal of Contemporary Roman-Dutch Law* 359-361.

⁹³⁸ Section 41 of the Constitution. See also *Du Plessis and Alberts* 2014 *SAPL* 442.

⁹³⁹ Section 41(1)(h) of the Constitution. Also see *Du Plessis and Alberts* 2014 *SAPL* 442.

coordination in the implementation and monitoring of policy and legislation, effective provision of services and the realisation of national priorities.⁹⁴⁰ The IGRFA accordingly creates various structures on the national, provincial and local level as well as on inter-departmental and inter-sphere level to give effect to cooperative governance.⁹⁴¹ These structures include a president's coordinating council consisting of the president, deputy-president, minister in the presidency, Minister of Finance, other ministers, premiers of the provinces and a municipal councillor designated by the organised local government structure.⁹⁴² Section 10 of the IGRFA also makes provision for the establishment of national intergovernmental forums to discuss matters of national interest to deal with the coordination and alignment of functional areas,⁹⁴³ provincial intergovernmental forums that include the premier, relevant members of the provincial executive council and mayors of district and metropolitan municipalities, administrators or municipal councillors.⁹⁴⁴ A forum similar to this can be established at the intergovernmental level between spheres of government.⁹⁴⁵ Section 35 of the IGRFA obligates government departments to coordinate their actions where policy needs to be implemented or where a statutory power is exercised or a function or provision of services depend on the participation of the other department.⁹⁴⁶

According to Kotzé⁹⁴⁷ "the NEMA gives effect to the constitutional provisions on cooperative governance in the environmental context." Kotzé⁹⁴⁸ further states that "this is evident from the long title of the NEMA which states that one of its primary aims is to provide for cooperative environmental governance by establishing principles for decision making on matters affecting the environment." These "institutions will promote cooperative governance and procedures for coordinating environmental functions

⁹⁴⁰ Section 4 of the IGRFA. Also see Du Plessis 2008 *SA Public Law* 108; GN 696 in GG 30140 3 August 2007; Currie and De Wall *The new Constitutional & Administrative Law Volume 1 Constitutional law* 119-121.

⁹⁴¹ Section 6 of the IGRFA. See also Du Plessis 2008 *SA Public Law* 108.

⁹⁴² Sections 7-8 of the IGRFA. See also Du Plessis 2008 *SA Public Law* 108.

⁹⁴³ Du Plessis 2008 *SA Public Law* 108.

⁹⁴⁴ Section 11 of the IGRFA.

⁹⁴⁵ Part 4 of the IGRFA.

⁹⁴⁶ Section 35 of the IGRFA. Du Plessis 2008 *SA Public Law* 105.

⁹⁴⁷ Kotzé *Integrated Environmental Governance in South Africa* 103.

⁹⁴⁸ Kotzé *Integrated Environmental Governance in South Africa* 103.

exercised by organs of state."⁹⁴⁹ Further, "section 2(4)(b) of the NEMA requires environmental management, or governance, to be integrated, by acknowledging that all elements of the environment are linked and interrelated."⁹⁵⁰ Kotzé⁹⁵¹ states "this may entail that where decision making necessitates cross-sectoral or intergovernmental action, that such decisions not only be integrated, but that they must also reflect consultation with all relevant departments that may be involved in each particular case."

The NEMA also provides for other mechanisms that recognise nested enterprises such as "environmental implementation plans (hereafter EIP) and environmental management plans (hereafter EMP)."⁹⁵² The purpose of these "plans is to coordinate and harmonise the environmental policies, plans, programmes and decisions of the various national departments that exercise functions that may affect the environment or are entrusted with powers and duties aimed at the achievement, promotion, protection of a sustainable environment."⁹⁵³ EIPs and EMPs "should also promote consistency in the exercise of functions that may affect the environment; give effect to the principle of cooperative governance in chapter 3 of the Constitution; secure the protection of the environment across the country as a whole; prevent unreasonable actions by provinces in respect of the environment that are prejudicial to the economic or health interests of other provinces or the country as a whole; and enable the Minister of Environment, Forestry and Fisheries to monitor the achievement, promotion, and protection of a sustainable environment."⁹⁵⁴

⁹⁴⁹ See NEMA long title. See also Kotzé *Integrated Environmental Governance in South Africa* 103; Nel and Du Plessis 2001 *South African Journal of Environmental Law and Policy* 21-25.

⁹⁵⁰ Section 2(4)(b) of the NEMA.

⁹⁵¹ Kotzé *Integrated Environmental Governance in South Africa* 104. Section 24L, for example, provides for integrated environmental authorisations.

⁹⁵² Kotzé *Integrated Environmental Governance in South Africa* 106.

⁹⁵³ Section 11(1) of the NEMA. See also Kotzé *Integrated Environmental Governance in South Africa* 106.

⁹⁵⁴ Section 12 of the NEMA. "It is required that every national department listed in schedule 1 to the NEMA who exercises functions which may affect the environment to prepare an EIP within five years of the coming into operation of this Act, and at intervals of not more than five years thereafter - section 11(1) of the NEMA. In terms of section 13 of the NEMA an EIP must include: a description of policies, plans and programmes that may significantly affect the environment; a description of the manner in which the relevant national department or province will ensure that the policies, plans and programmes will comply with the principles set out in section 2 as well as any national norms and standards as envisaged under section 146(2)(b)(i) of the 1996 Constitution which have as their

NEMA has several provisions on public participation. These provisions are recognised for instance in "section 2(4)(f) of the NEMA provides that 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."⁹⁵⁵ Kotzé⁹⁵⁶ states that "this principle arguably relates not only to individuals and groups outside government, but also to government officials in the ranks of government whose skills, understanding and capacity must be developed in such a way as to promote effective participation in governance tasks." The NEMA principles further state that "there must be intergovernmental coordination and harmonisation of policies, legislation and actions relating to the environment."⁹⁵⁷ This is reiterated in section 24(4) on environmental authorisations.

Nested enterprises are also recognised in chapter 6 of the NEMA which provides for cooperative governance at international and regional levels.⁹⁵⁸ While, the incorporation of international law is primarily regulated by the Constitution. The NEMA contains specific provisions relating to the incorporation of international environmental law into South African law.⁹⁵⁹ These provisions may arguably not only enable comprehensive

objective the achievement, promotion, and protection of the environment; a description of the manner in which the relevant national department or province will ensure that its functions are exercised so as to ensure compliance with relevant legislative provisions, including the principles set out in section 2, and any national norms and standards envisaged under section 146(2)(b)(i) of the 1996 Constitution and set out by the Minister, or by any other Minister, which have as their objective the achievement, promotion, and protection of the environment; and recommendations for the promotion of the objectives and plans for the implementation of the procedures and regulations referred to in chapter 5 of the NEMA." See also Kotzé *Integrated Environmental Governance in South Africa* 106; . Couzens 1999 *South African Journal of Environmental Law and Policy* 17.

⁹⁵⁵ Section 2(4)(f) of the NEMA. This have to be read with section 23, 24(4) as well as regulation 41 of GN R982 in GG 38282 of 4 December 2014 as amended. In terms of the the EIA Regulations, "an environmental assessment practitioner is obligated, in relation to an application for environmental authorisation which requires either basic assessment or scoping and environmental impact assessment: conducting at least the public participation process in accordance with the EIA Regulations, (2) opening and maintain a register of all interested and affected parties; considering all comments and representations by interested and affected parties following a public participation process and providing interested and affected parties with an opportunity to comment on any reports prepared in relation to the basic assessment or scoping and EIA processes." See also King and Riddell 2015 *PELJ* 950.

⁹⁵⁶ Kotzé *Integrated Environmental Governance in South Africa* 104.

⁹⁵⁷ Section 2(4) of the NEMA.

⁹⁵⁸ Kotzé *Integrated Environmental Governance in South Africa* 108.

⁹⁵⁹ See sections 39 and 231-233 of the Constitution and sections 25–27 of the NEMA. See also Kotzé *Integrated Environmental Governance in South Africa* 108.

incorporation of international environmental law into the domestic legal regime, but it may also facilitate and promote cooperation with other governments at international and regional level.⁹⁶⁰

NEMBA also includes measures that deal with nested enterprises. Section 2 similar to NEMA provides for cooperative governance in biodiversity management and conservation; and provides that the SANBI⁹⁶¹ should assist in achieving the objectives of the Act.⁹⁶² The Minister may to this end, for example, enter into a biodiversity management agreement with the public or organs of state. These plans should conform the EIPs and EMPs in terms of the NEMA.⁹⁶³

Nested enterprises are also recognised in the NEMBA through provisions on the "formulation of a national biodiversity framework, which must provide an integrated, coordinated uniform approach to biodiversity management by organs of state in all spheres of government, non-governmental organisations, the private sector, local communities, other stakeholders and the public."⁹⁶⁴ The framework also addresses regional cooperation "on issues concerning biodiversity management in Southern Africa."⁹⁶⁵

Nested enterprises is also recognised in the NEMPAA stipulates as one of its aims the promotion of intergovernmental cooperation and public consultation in matters concerning protected areas, which include areas which is home to the commons

⁹⁶⁰ Nel and Du Plessis 2001 *South African Journal of Environmental Law and Policy* 21.

⁹⁶¹ The objectives of the NEMBA in terms of section 2 are as follows: "(a) within the framework of the National Environmental Management Act, to provide for- (i) the management and conservation of biological diversity within the Republic and of the components of such biological diversity; (iA) the need to protect the ecosystem as a whole, including species which are not targeted for exploitation; (Section 2(a)(iA) inserted by section 2 of Act 14 of 2013) (ii) the use of indigenous biological resources in a sustainable manner; and (iii) the fair and equitable sharing among stakeholders of benefits arising from bioprospecting involving indigenous biological resources; (b) to give effect to ratified international agreements relating to biodiversity which are binding on the Republic; (c) to provide for co-operative governance in biodiversity management and conservation; and (d) to provide for a South African National Biodiversity Institute to assist in achieving the objectives of this Act."

⁹⁶² Sections 2(c)-2(d) of the NEMBA. See also Kotzé *Integrated Environmental Governance in South Africa* 111.

⁹⁶³ See sections 44, 45 and 48 of the NEMBA. See also Kotzé *Integrated Environmental Governance in South Africa* 111.

⁹⁶⁴ Section 39(1)(a) of the NEMBA. Also see GN 813 in GG 32474 of 3 August 2009.

⁹⁶⁵ Section 39(1)(d) of the NEMBA.

discussed in this thesis.⁹⁶⁶ Nested enterprises are also recognised in section 39(3) of the NEMPAA as it "provides that when preparing a management plan for a protected area, the management authority concerned must consult municipalities, other organs of state, local communities and other affected parties which have an interest in the area." Section 42 of the NEMPAA furthermore "provides for co-management agreements which may be entered into by the protected areas management authority and any organ of state, a local community, an individual, or any other party." Such a co-management agreement should also "provide for the harmonisation and integration of management of cultural heritage resources in the protected area by the management authority."⁹⁶⁷ Further, the NEMPAA norms and standards recognise nested enterprises in norm 10 on a sound relationship between protected area management and neighbouring communities.⁹⁶⁸ Compliance with this norm requires the management authority to regularly collaborate with partners, local communities and other organisation.⁹⁶⁹ In addition, the management authority should give neighbouring communities an opportunity to provide their input, where relevant decisions relating to protected area management.⁹⁷⁰

The policy documents recognise nested enterprises, for example, through provisions on mainstreaming biodiversity considerations into policies, strategies and practices of a range of sectors which rely on the partnership of these various sectors, as provided in the NBSAP.⁹⁷¹ Nested enterprises are also recognised in the Draft NBF through its provisions that establish partnerships to enable cooperation across institutional and administrative boundaries that is considered essential for effectively managing ecosystems.⁹⁷² The NPAES calls for cooperation and coordination between provinces and agencies with respect to protected area expansion.⁹⁷³ The SBZ also recognises nested enterprises as it makes provision for active partnerships between national park management authority, community members and municipalities with respect to

⁹⁶⁶ Long title and section 2(b) of the NEMPAA.

⁹⁶⁷ Sections 42(1)-42(3) of the NEMBA.

⁹⁶⁸ See para 10 NEMPAA norms and standards in GN 382 in GG 39878 of 31 March 2016.

⁹⁶⁹ See para 10 NEMPAA norms and standards in GN 382 in GG 39878 of 31 March 2016.

⁹⁷⁰ See para 10 NEMPAA norms and standards in GN 382 in GG 39878 of 31 March 2016.

⁹⁷¹ NBSAP 28.

⁹⁷² NBF 57.

⁹⁷³ NPAES 58-59.

biodiversity that transcends boundaries, such as is the case in the commons in the TFCAs discussed in this thesis.⁹⁷⁴

Although South African legislation makes provision for elements of the principle of nested enterprises, as a requirement of the commons framework principles set out in chapter two, it is still lacking in terms of the involvement of community members in the commons with respect to monitoring, enforcement and conflict resolution as this is mainly the responsibility of the state.

4.4 Social-ecological resilience

In this section the elements of the definition of social-ecological resilience in this study shall be analysed with respect to African regional documents as well as South African national law.

4.4.1 Capacity of a linked social-ecological system to adapt in the face of disturbance and still maintain functions

Adaptation strategies for resilience building as indicated in the commons framework are recognised in section 24 of the *African Charter* as interpreted by the African Commission in the *SERAC* matter on obligations that should be complied with by national, provincial and local spheres of government towards realising the environmental right.⁹⁷⁵ These obligations include: (a) taking reasonable and other measures to prevent pollution and ecological degradation; (b) promoting natural resource conservation; and securing an ecologically sustainable development and use of natural resources.⁹⁷⁶ Additional adaptation strategies as stated in the commons framework are recognised in the *Revised African Convention* through its provisions directed to member states to conserve, protect and sustainably use land, soil, vegetation and water resource in their jurisdictions.⁹⁷⁷

As been stated under the discussion of the commons, the African regional documents as well as the interpretations of the African Commission, provides for environmental

⁹⁷⁴ SBZ 9.

⁹⁷⁵ See para 4.2.1 above.

⁹⁷⁶ See para 4.2.1 above.

⁹⁷⁷ See para 4.2.1 above.

rights, as well as an obligation on all spheres of government to contribute to the realising of this right as well as to ecologically sustainable development and use of natural resources.⁹⁷⁸ Similarly various SADC Protocols recognise ecosystem-based adaptation strategies for resilience building.⁹⁷⁹

In this regard, South Africa should therefore include measures in legislation or management plans that recognise adaptation strategies for resilience building including (a) natural resource conservation; (b) preventing ecological degradation; and (c) sustainable use and management of natural resources.

4.4.2 Collaboration by diversity of stakeholders sharing a resource, rights and responsibilities at multiple levels and scales taking into account diversity of knowledge and information sharing

As discussed above,⁹⁸⁰ the collaboration of a diversity of stakeholders sharing resources at multiple levels is recognised in the *African Charter*⁹⁸¹ the *SERAC*, *Endorois* and *Ogiek* matters, as well as resolution 153 of the African Commission.⁹⁸²

The *African Charter* promotes the duty of the state to promote and protect morals and traditional values of the community.⁹⁸³ Further, the African Commission in *Endorois* by interpreting the right to development as allowing decision making to be through cultural procedures recognising indigenous knowledge within the regulatory institutions.⁹⁸⁴

⁹⁷⁸ Article 24 of the *African Charter*, article 111(1) of the *Revised African Convention; Social and Economic Rights Action Centre for Economic and Social Rights (SERAC) v Nigeria, African Commission on Human and Peoples' Rights Comm No 155/96 (2001)*; *SADC Protocol on Wildlife, SADC Protocol on Forestry* and *SADC Protocol on Environmental Management*.

⁹⁷⁹ For example, the provisions on the conservation and sustainable resource use of wildlife resources in the *SADC Protocol on Wildlife*, facilitation and promotion of sustainable forest management in the *SADC Protocol on Forestry*, sustainable and equitable utilisation of shared watercourses in the *SADC Protocol on Tourism*, the systemic protection of biodiversity and ecosystem services and the sustainable management and utilisation of transboundary biological diversity including natural forests, wildlife, fisheries, aquatic ecosystems, wetlands, agro-biodiversity and genetic resources recognised in the *SADC Protocol on Environmental Management*. See para 3.5.2 above.

⁹⁸⁰ See para 4.2.7.

⁹⁸¹ Articles 24 and 22.

⁹⁸² See para 4.2.7 read with para 4.2.7 above.

⁹⁸³ See article 17(3) of the *African Charter*.

⁹⁸⁴ *Endorois* para 289. See also Scholtz "Human Rights and the environment in the African Union context" 114 and Ntoubandi and Adjovi "Wide human rights spectrum and climate change in Africa" 265-266; Wicomb and Smith 2011 *AHRLJ* 444.

Article IV of the *Revised African Convention* recognises a diversity of knowledge as it states the fundamental obligation of parties to the Convention,⁹⁸⁵ is to adopt and implement all measures necessary to achieve the object of the *Revised African Convention* with regard to traditional values as well as scientific knowledge in the interest of present and future generations.⁹⁸⁶ In addition, effective measures have to be taken to prevent land degradation by establishing land use plans based on scientific investigations as well as local knowledge and experience.⁹⁸⁷ Article VIII of the *Revised African Convention* requires South Africa to take all the necessary measures for the protection, conservation, sustainable use and rehabilitation cover, through adopting scientifically and sound traditional conservation, utilisation and management plans for forests, woodlands, rangelands, wetlands and other areas with vegetation cover.⁹⁸⁸

The collaboration by a diversity of stakeholders sharing resources at multiple levels, is recognised in the *SADC Protocol on Wildlife*,⁹⁸⁹ the *SADC Forestry Protocol*,⁹⁹⁰ the *SADC Protocol on Tourism*,⁹⁹¹ the *SADC Protocol on Environmental Management*⁹⁹² and the *RBS*.⁹⁹³

The *SADC Protocol on Wildlife* obligates South Africa and other member states to the Protocol, to "integrate principles and techniques derived from indigenous knowledge systems into national wildlife management and law enforcement policies and procedures."⁹⁹⁴ The *SADC Protocol on Environmental Management* states that state parties should ensure "that decisions take into account the interests, needs and values of all interested and affected parties, including the recognition of all forms of knowledge including traditional knowledge."⁹⁹⁵ The *SADC Protocol on Environmental Management* provides that state parties are obligated to work towards the generation and application of best scientific and indigenous knowledge as a basis for the sustainable use of the

⁹⁸⁵ See para 2.4.8 above read with article IV of the *Revised African Convention*.

⁹⁸⁶ Article IV of the *Revised African Convention*.

⁹⁸⁷ Article VI(3) of the *Revised African Convention*.

⁹⁸⁸ Article VIII(1)(a) of the *Revised African Convention*.

⁹⁸⁹ See para 4.2.7 above.

⁹⁹⁰ See para 4.2.7 above.

⁹⁹¹ See para 4.2.7 above.

⁹⁹² See para 4.2.7 above.

⁹⁹³ See para 4.2.7 above.

⁹⁹⁴ Article 7(4) *SADC Protocol on Wildlife*.

⁹⁹⁵ Article 3(7)(a) of the *SADC Protocol on Environmental Management*.

environment and natural resources.⁹⁹⁶ Once South Africa ratifies this Protocol it will have to introduce measures to formally recognise and use indigenous knowledge as scientific knowledge in the selected TFCAs.

The *SADC Protocol on Forestry* recognises information sharing in the *SADC Protocol on Forestry* which obligates "state parties to develop and publish national forest policies, programmes and plans, which are consistent with national land use plans." It further places an obligation on state parties to "collaborate in establishing and maintaining a regional database on the status and trends, management and use of forest resources which includes data on all forest resources within SADC."⁹⁹⁷ State parties should have a "market information system in place for the collection, organisation and exchange of forest market and industrial information,⁹⁹⁸ and exchange data and information concerning the management of forests."⁹⁹⁹

State parties have to contribute to the production of regular state of the environment reports and develop appropriate indicators for the monitoring of key environmental trends in the SADC region.¹⁰⁰⁰ They must further promote publications of regional interest, including electronic journals¹⁰⁰¹ and cooperate in information generation and exchange on crucial issues such as regional environmental trends,¹⁰⁰² measures to manage the environment,¹⁰⁰³ measures taken to mitigate and adapt to climate change impacts,¹⁰⁰⁴ and transboundary movement of waste.¹⁰⁰⁵ The SADC Secretariat has to establish a central data and information warehouse in the to manage, store and archive environmental publications and records. Member states have to deposit the relevant information and data.¹⁰⁰⁶

⁹⁹⁶ Article 19(2) of the *SADC Protocol on Environmental Management*.

⁹⁹⁷ Article 10(1)(a) of the *SADC Protocol on Forestry*.

⁹⁹⁸ Article 10(1)(b) of the *SADC Protocol on Forestry*.

⁹⁹⁹ Article 21 of the *SADC Protocol on Forestry*.

¹⁰⁰⁰ Article 13(16) of the *SADC Protocol on Environmental Management*.

¹⁰⁰¹ Article 19(7) of the *SADC Protocol on Environmental Management*.

¹⁰⁰² Article 21(1)(a) of the *SADC Protocol on Environmental Management*.

¹⁰⁰³ Article 21(1)(b) of the *SADC Protocol on Environmental Management*.

¹⁰⁰⁴ Article 21(1)(c) of the *SADC Protocol on Environmental Management*.

¹⁰⁰⁵ Article 21(1)(c) of the *SADC Protocol on Environmental Management*.

¹⁰⁰⁶ Article 21(4) of the *SADC Protocol on Environmental Management*.

The *RBS* requires "state parties to produce Regional State Biodiversity Reports once every ten years."¹⁰⁰⁷ The *RBS* provides "that the report should be a clear and articulated account, of what is good or acceptable according to agreed standards and indicate what and by when it should be ameliorated, where possible."¹⁰⁰⁸ The *RBS* requires that the dissemination of "information on various biological resources and emerging issues to targeted stakeholders using various channels, including the print and electronic media."¹⁰⁰⁹

South African legislation should therefore at least reflect provisions recognising (a) indigenous knowledge within the regulatory institutions; (b) collaboration of a diversity of stakeholders sharing at multiple levels and (c) information sharing amongst all the resource stakeholders in the commons. South African law could also consider including the measures in the Protocol on Environmental Management that relate to (d) formally recognising the use of indigenous knowledge and scientific knowledge in decision making within the commons.

4.4.3 Social-learning, monitoring and review

Social-learning is recognised in article XX of the *Revised African Convention* as it obligates South Africa and other member states to "promote environmental education, training and awareness at all levels in order to enhance their peoples' appreciation of their close dependence on natural resources."¹⁰¹⁰

The SADC documents include more measures on social learning, for example, article 7 of the "*SADC Protocol on Wildlife* places an obligation on state parties to develop programmes and mechanisms to educate the general public and raise public awareness concerning issues of the conservation and sustainable use of wildlife and promote research which contributes to and supports the conservation and sustainable use of wildlife."

¹⁰⁰⁷ *RBS* 22.

¹⁰⁰⁸ *RBS* 22.

¹⁰⁰⁹ *RSB* 25.

¹⁰¹⁰ See para 2.3.8 read with article XX of the *Revised African Convention*.

The *SADC Protocol on Wildlife* provides for capacity building for effective wildlife management and state parties are obligated to incorporate into existing training programmes, techniques based on community based natural resources management, traditional knowledge systems and current practices in wildlife management and law.¹⁰¹¹ The training programmes therefore promotes learning which is enhanced by incorporating other forms of knowledge such as traditional knowledge, the law and various forms of wildlife management. In addition, the Protocol further enables learning as it obligates state parties to identify aspects of wildlife management and wildlife law enforcement for which adequate training programmes are not available within SADC.¹⁰¹² State parties have to establish training programmes to meet the identified needs.¹⁰¹³

The *SADC Protocol on Forestry* places an obligation on state parties to actively promote education, training, public awareness and capacity building activities in order to support the achievement of the objectives of the Protocol.¹⁰¹⁴ They also have to actively promote research and development in connection with forests and forest related activities.¹⁰¹⁵

Article 6 of the *SADC Protocol on Tourism* obliges member states to establish "a common education policy with regard to imparting tourism education in schools and include tourism and environmental related issues in subjects presently taught at school."¹⁰¹⁶ Further, in terms of the Protocol "all people should be given the opportunity to develop skills and capacity necessary for achieving equitable and effective participation."¹⁰¹⁷ Further the Protocol provides that "community well-being and empowerment should be promoted through environmental education, the raising of environmental awareness and sharing of knowledge."¹⁰¹⁸

In terms of policy, the *RBS* recognises learning as one of its strategic goals in enhancing awareness, information and knowledge on biological resources at various

¹⁰¹¹ Article 10(2) of the *SADC Protocol on Wildlife*.

¹⁰¹² Article 10(3) of the *SADC Protocol on Wildlife*.

¹⁰¹³ Article 10(3) of the *SADC Protocol on Wildlife*.

¹⁰¹⁴ Article 19 of the *SADC Protocol on Forestry*.

¹⁰¹⁵ Article 20 of the *SADC Protocol on Forestry*.

¹⁰¹⁶ Article 6(1) of the *SADC Protocol on Tourism*.

¹⁰¹⁷ Article 3(6)(a) of the *SADC Protocol on Environmental Management*.

¹⁰¹⁸ Article 3(6)(c) of the *SADC Protocol on Environmental Management*.

stakeholder levels.¹⁰¹⁹ In addition, the *RBS* strategic goals includes, amongst others, the development of "appropriate research and development approaches for implementing biodiversity initiatives."¹⁰²⁰ In implementing this strategic goal, the *RBS* requires research to be conducted "on increasing the size and productivity of selected biological resources, multi-disciplinary research on plant and animal health in TFCAs, including linkages with human health and livelihoods and research on trade-offs between conservation and livelihoods in protected areas, and provide guidelines on the optimal extent and scale of protected areas under different conditions, such as key natural ecosystems."¹⁰²¹

Monitoring is recognised in both the AU and SADC documents. The African Commission's interpretation of the right to a general satisfactory environment enshrined in article 24 of the *African Charter* in the *SERAC* matter and the *Revised African Convention* indicated that monitoring should take place,¹⁰²² while the *SADC Protocol on Wildlife*,¹⁰²³ the *SADC Protocol on Forestry*,¹⁰²⁴ the *SADC Protocol on Environmental Management*¹⁰²⁵ and the *RBS* also provide for monitoring as set out above in relation to the commons.¹⁰²⁶ While review is recognised in article XI(2) of the *Revised African Convention* which requires state parties in the conservation and management of species and their habitats to undertake inventories of species of fauna and flora and prepare maps of their distribution and abundance, and conduct regular reviews to facilitate the monitoring of the status of such species and their habitats with a view to: (a) provide the appropriate scientific basis for decisions pertaining to their conservation and use; (b) identifying species that are threatened or may become so, and providing them accordingly with appropriate protection, and (c) identifying species that are migratory or congregatory and therefore confined to specific areas at particular seasons, and providing them with appropriate protection.

¹⁰¹⁹ *RBS* 25.

¹⁰²⁰ *RBS* 25.

¹⁰²¹ *RBS* 25.

¹⁰²² See para 4.2.3 above.

¹⁰²³ See para 4.2.3 above.

¹⁰²⁴ See para 4.2.3 above.

¹⁰²⁵ See para 4.2.3 above.

¹⁰²⁶ See para 4.2.3 above.

Review is also recognised in article 8 of the *SADC Protocol on Forestry* which obligates state parties to regularly review and evaluate the effectiveness of national forest policies and programmes and where appropriate revise them to ensure that they are consistent and effectively implement the Protocol.¹⁰²⁷

In relation to training and education, South African legislation should therefore as a minimum provides for (a) environmental education and awareness at all levels of stakeholders in order to enhance their peoples' appreciation of their close dependence on natural resource; (b) awareness on conservation and sustainable use of natural resources; and (c) incorporate techniques based on community based natural resource management and traditional knowledge systems. Further, as stated above the legislation should also provide for monitoring and review.

4.5 South African legal framework: social ecological resilience

4.5.1 Capacity of a linked social-ecological system to adapt in the face of disturbance and still maintain functions

As indicated the Constitution, contains provisions recognising adaptation strategies for resilience building in section 24(b) of the Constitution which places a positive obligation on the three spheres of government to have reasonable and other measures in place to prevent pollution of environmental media and the decay of ecological systems; promote the conservation of natural resources or environmental media and secure ecologically sustainable development.¹⁰²⁸ In addition, the NEMA principles on sustainable development which should be applied by all organs of state, recognise adaptation strategies for resilience building.¹⁰²⁹ Section 35(1) of the NEMA also recognises adaptation strategies for resilience building, as it provides for environmental management cooperation agreements (hereafter EMCAs), in terms of which the Minister, every MEC and municipality may enter into an EMCAs with any person or community for the purposes of promoting compliance with the principles laid down in NEMA. This means that communities within the Contract Parks in the selected TFCAs

¹⁰²⁷ See article 8(2) of the *SADC Protocol on Forestry*.

¹⁰²⁸ See para 4.2.2 above.

¹⁰²⁹ See para 4.2.2 above.

can enter into EMCAs with government in order to protect and conserve the resources in those areas in terms of the principles of sustainable development in the NEMA. Section 17 of the NEMPAA provides that the purpose of protected areas is to protect, preserve, and conserve all ecosystems and biodiversity found within such areas.¹⁰³⁰ The NFA prohibits the destruction of natural forests¹⁰³¹ and recognises adaptation strategies for resilience building in that the communities can play a role in protecting forests by way of concluding community forestry agreements.¹⁰³²

Provincial laws also contain provisions recognising the sustainable utilisation of plants, wildlife and fish which are all adaptation strategies for resilience building.¹⁰³³ In terms of policy, the fourth strategic objective of the NBF refers to the sustainable use of biological resources as an adaptation strategy for resilience building.¹⁰³⁴ In addition, the NBSAP provides that investments in the maintenance, restoration and protection of ecological infrastructure have the ability to enhance ecosystem resilience to better withstand pressures from climate change.¹⁰³⁵ The principle of duty of care in the SBZ provides "that all people and organisations should act with due care to conserve and avoid negative impacts on biodiversity, and to use biological resources sustainably, equitably and efficiently."¹⁰³⁶

The South African legislation complies with the presence of legislative provisions that promote adaptation in the case of change which include: (a) natural resource conservation; (b) preventing ecological degradation; and (c) sustainable use and management of natural resources. However, in terms of the provisions set out in chapter two South African law lacks provision pertaining to (a) dealing with complexity and multi-stakeholder tensions that characterise decision making with shared resources in a commons; and (b) differing perceptions in terms of values, social, environmental,

¹⁰³⁰ Section 17(1)(a)-(f) of the NEMBA.

¹⁰³¹ See para 4.2.2 above.

¹⁰³² Section 29(1) of the NFA. Part 3 of the NFA "allows communities that wish to engage in community forestry to enter into agreements with the Minister. In terms of section 29(1) Any community wishing (a) to do anything in a State forest for which a license is required; (b) to manage a State forest or part of it, whether alone or jointly with an organ of State; or to do both."

¹⁰³³ See para 4.2.2 above.

¹⁰³⁴ NBF, 2009 18-19.

¹⁰³⁵ NBSAP 27.

¹⁰³⁶ Strategy on Buffer Zones 8.

ecological, political and economic influences by the various stakeholders involved in commons governance.

4.5.2 Collaboration by diversity of stakeholders sharing a resource, rights and responsibilities at multiple levels and scales taking into account diversity of knowledge and information sharing

Similarly stated under the commons framework, the Constitution,¹⁰³⁷ the NEMA,¹⁰³⁸ NEMBA,¹⁰³⁹ NEMPAA,¹⁰⁴⁰ NFA,¹⁰⁴¹ IPILRA,¹⁰⁴² CBNRM *Guidelines*,¹⁰⁴³ NBF,¹⁰⁴⁴ NBSAP,¹⁰⁴⁵ the Draft NBF,¹⁰⁴⁶ NPAES¹⁰⁴⁷ and SBZ¹⁰⁴⁸ clearly provide for the collaboration of a diversity of stakeholders at multiple levels.

In addition to this, diversity of knowledge is recognised in the NEMA principles which provide that decisions must recognise all forms of knowledge, including traditional and ordinary knowledge.¹⁰⁴⁹ The NEMBA recognises traditional knowledge in the case of bioprospecting activities for the provision of access to the indigenous genetic and biological resources or traditional knowledge associated with indigenous genetic and biological resources.¹⁰⁵⁰ The TLGFA recognises indigenous knowledge in providing for the roles and functions of traditional leadership are subject to the customary law.¹⁰⁵¹

The recognition of indigenous knowledge is provided the CBNRM *Guidelines* as they require local and traditional knowledge to be included in policy pertaining to CBNRM.¹⁰⁵²

¹⁰³⁷ See para 4.4.8 above.

¹⁰³⁸ See para 4.4.8 above.

¹⁰³⁹ See paras 4.4.8 above.

¹⁰⁴⁰ See para 4.4.8 above.

¹⁰⁴¹ See para 4.4.8 above.

¹⁰⁴² See para 4.4.8 above.

¹⁰⁴³ See para 4.4.8 above.

¹⁰⁴⁴ See para 4.4.8 above.

¹⁰⁴⁵ See para 4.4.8 above.

¹⁰⁴⁶ See para 4.4.8 above.

¹⁰⁴⁷ See para 4.4.8 above.

¹⁰⁴⁸ See para 4.4.8 above.

¹⁰⁴⁹ Section 2(4)(g) of the NEMA. Also see Du Plessis 2008 *PELJ* 187.

¹⁰⁵⁰ Section 81 of the NEMBA. Also see GN 447 in GG 3880 of 19 May 2015.

¹⁰⁵¹ Section 19 of the TLGFA.

¹⁰⁵² CBNRM Guidelines 58.

The recognition of indigenous knowledge is provided for in the SBZ on the guiding principle on "recognition and protection of traditional knowledge, practices and cultures."¹⁰⁵³ With regards to this principle, the SBZ requires the "traditional knowledge, practices and cultures supporting the conservation and sustainable use of biodiversity to be recognised, protected, maintained, promoted and used with the approval and involvement of those who possess this knowledge."

The definition of community in the CPA Act provides that a community constitutes a group of persons who wish to have rights over a particular property determined by their shared rules presented in a written constitution.¹⁰⁵⁴ Regarding this, these shared rules could amount to the cultural practices of the community, which when written down in a constitution amounts to recognition of their practices in the governance of their land.

Relating to information sharing, the Constitution affords everyone the right to access information held by the state¹⁰⁵⁵ public and private bodies¹⁰⁵⁶ and any other person and that is required for the exercise or protection of any rights.¹⁰⁵⁷ The *Promotion of Access to Information Act* 2 of 2002 (hereafter PAIA) aims to foster a culture of transparency and accountability in public and private bodies by giving effect to the right to access to information.¹⁰⁵⁸ The PAIA enables this by providing for effective access to information to all citizens, to enable them to fully exercise and protect all their constitutional rights.¹⁰⁵⁹ With regard to communities this right is of particular importance, as it allows those who may be affected by a proposed biodiversity conservation initiative, as is the case in the GMTFCA, to gain access to information pertaining to the initiative.

¹⁰⁵³ SBZ 9.

¹⁰⁵⁴ Section 1(iv) of the CPA Act.

¹⁰⁵⁵ Section 32 (1)(a) of the Constitution. See also Hoexter *Administrative Law in South Africa* 91; Currie and De Waal *The Bill of Rights Handbook* 683.

¹⁰⁵⁶ Section 32(1)(a) of the Constitution. See also section 1 of the *Promotion of Access to Information Act* 2 of 2002 (hereafter PAIA), enacted to give effect to the right of access to information provided in section 32 of the Constitution.

¹⁰⁵⁷ Section 32(1)(a) of the Constitution. See also Hoexter *Administrative Law in South Africa* 91; Currie and De Waal *The Bill of Rights Handbook* 683.

¹⁰⁵⁸ Preamble of the PAIA.

¹⁰⁵⁹ Preamble of the PAIA.

The right to access to environmental information was central in the case of *Trustees of the Time Being of the Biowatch Trust v Registrar, Genetic Resources and others*¹⁰⁶⁰ in terms of which the court held that the constitutional right of access to information is intended to promote the facilitation of transparent and accountable government and that while it is not absolute, all organs of state in terms of the Constitution are obliged to respect, protect, promote and fulfil this right in addition to the other rights in the Bill of Rights. In the event that members of the public assert their right to access to information, this causes a change with respect to balance of power between the State and citizens and promotes the pursuit of social, environmental and economic justice.¹⁰⁶¹ In the event that community members within the commons exercise their right to access to information from the state, they will be able to influence decision making regarding to finances and other income generating activities within these areas, from which their participation has been limited.¹⁰⁶² The right of access to information should be read with the right to administrative action that is lawful, reasonable and procedurally fair,¹⁰⁶³ and to be provided written reasons where rights have been adversely affected by an administrative action.¹⁰⁶⁴ Section 33 of the Constitution essentially embraces the concept of administrative justice, which aims to ensure good governance and administration, ensure fair dealing in administrative context, enhance protection of the individual against abuse of state power and to promote public participation in decision making.¹⁰⁶⁵ The close nexus between the right to access information and administrative action is evident in the case of *Aquafund (Pty) Ltd v Premier of the Western Cape*¹⁰⁶⁶ in terms of which the court held that:

..every person is entitled to lawful administrative action, it must follow that in a legal culture of accountability and

¹⁰⁶⁰ 2009 (6) SA 232 (CC) at par 45. Also see *Brümmer v Minister for Social Development and Others* 2009 (6) SA 323 (CC) paras 6263; *CCII Systems (Pty) LTD v Fakie & Others NNO* 2003 (2) SA 325; *Transnet Ltd and Another v SA Metal Machinery Co (Pty) Ltd* 2006 (6) SA 285 (SCA); *Claase v Information Officer of South African Airways (Pty) Ltd* 2006 SCA; *De Lange and Another v Eskom Holdings Limited and Others* 2012 (1) SA 280 (GSJ); *SA Airlink (Pty) Limited v The Mpumalanga Tourism and Parks Agency and Others* 2012 ZAGPJHC.

¹⁰⁶¹ O'Connor 2012 *South African History Archive* 6.

¹⁰⁶² See para 1.2 above.

¹⁰⁶³ Section 33(1) of the Constitution.

¹⁰⁶⁴ Section 33(2) of the Constitution read with the PAJA.

¹⁰⁶⁵ Kotzé 2004 *PER* 1–42. See also Hoexter *Administrative Law in South Africa* 167; Currie and De Waal *The Bill of Rights Handbook* 650.

¹⁰⁶⁶ 1997 (7) BCLR 907 (C) para 916E.

transparency [that] a person must be entitled to such information as is reasonably required to determine whether his or her right to lawful administrative action has been infringed.

Information sharing provisions are also recognised in section 2(k) of the NEMA as it provides that decisions must be taken in an open and transparent manner. In addition to this, the NEMA regulations which recognise EIA documents as open documents, so if any development is to take place in the TFCA or surrounding areas the communities and other stakeholders will have access to information.¹⁰⁶⁷ Whistle-blowers are also protected.¹⁰⁶⁸

The NEMBA provides for information sharing in that the national biodiversity framework is to be published,¹⁰⁶⁹ as well as the national list of ecosystems that are threatened and in need of protection,¹⁰⁷⁰ the provincial lists of ecosystems in the province that are threatened and in need of protection;¹⁰⁷¹ list of species that are threatened or in need of national protection,¹⁰⁷² and processes or activities in listed ecosystems that could be regarded as threatening processes or activities.¹⁰⁷³ These lists are available to the public and also to the communities and stakeholders of the TFCAs.

The NEMPAA shares information via the *Government Gazette* when declaring an area specified in the notice as a special nature reserve and as part of an existing nature reserve;¹⁰⁷⁴ a specified area as a national park and as part of an existing national park,¹⁰⁷⁵ or a declaration of a specified area as a nature reserve or part of it as a wilderness area.¹⁰⁷⁶

The NFA places an obligation on the Minister to report to Parliament at least every three years on the facts and trends that emerge through his or her duties on monitoring with

¹⁰⁶⁷ GN R982 in GG 38282.

¹⁰⁶⁸ GN R982 in GG 38282.

¹⁰⁶⁹ As well as its amendments in terms of section 38(2) of the NEMBA.

¹⁰⁷⁰ Section 52 (1)(a) of the NEMBA. Also see GN R150 in GG 29657 of 23 February 2007.

¹⁰⁷¹ Section 52 (1)(B) of the NEMBA. Also see GN R150 in GG 29657 of 23 February 2007.

¹⁰⁷² Section 56(1) of the NEMBA. Also see GN R150 in GG 29657 of 23 February 2007.

¹⁰⁷³ GN 1002 in GG 34809 of 9 December 2011.

¹⁰⁷⁴ Section 18(1)(a)(i)-(ii) of the NEMPAA.

¹⁰⁷⁵ Section 20(1)(i)-(ii) of the NEMPAA.

¹⁰⁷⁶ See section 26(1) of the NEMPAA.

respect to the Act in section 6(3).¹⁰⁷⁷ The Minister also has to publish in the *Government Gazette* or two newspapers circulating in an area any declaration of a forest to be a natural forest,¹⁰⁷⁸ the recognition as of areas as protected areas¹⁰⁷⁹ or a controlled forest area.¹⁰⁸⁰

In terms of the provincial legislation information sharing is recognised in the NCNCA in that the MEC has to publish in the *Provincial Gazette* notices relating to restrictions on hunting,¹⁰⁸¹ a list of damage causing animals,¹⁰⁸² and angling seasons for the angling of protected fish within the province. The MNCA similarly may publish in the *Provincial Gazette* open and closed seasons in relation to the hunting of specific species or fishing seasons or restrictions of fishing in specific waters.¹⁰⁸³ The LEMA also recognises information sharing through a provision in the *Provincial Gazette* declaring a site of ecological importance.¹⁰⁸⁴

The South African legislation provides for provisions that recognise the collaboration of stakeholders to the commons at multiple levels. Additionally, information sharing is extensively provided for in the law. However, provisions recognising the diversity of knowledge in terms of decision making are limited.

4.5.2.1 Social-learning, monitoring and review

Social-learning includes for example provisions on environmental education, the raising of environmental awareness, the sharing of knowledge and experience as recognised in section 2(4)(h) of the NEMA¹⁰⁸⁵ and norm 17 of the NEMPAA's norms and standards.¹⁰⁸⁶ Adaptive management practices are further recognised in the NEMPAA's norms and standards.¹⁰⁸⁷ These practices include (a) continually improving management policies and practices by learning from their outcome; (b) engaging in research in order to

¹⁰⁷⁷ Section 6(3) of the NFA.

¹⁰⁷⁸ Section 7(3)(a)-(c) of the NFA.

¹⁰⁷⁹ Recognised in section 9(2) of the NFA.

¹⁰⁸⁰ Section 17(3) of the NFA.

¹⁰⁸¹ Section 6(2) of the NCNCA.

¹⁰⁸² Section 28(1).

¹⁰⁸³ Sections 7(1) and 52(1) of the MNCA.

¹⁰⁸⁴ Section 18 of the LEMA.

¹⁰⁸⁵ Section 2 (4)(h) of the NEMA.

¹⁰⁸⁶ See para 17 NEMPAA norms and standards in GN 382 in GG 39878 of 31 March 2016.

¹⁰⁸⁷ See paras 11.1 and 12 NEMPAA norms and standards in GN 382 in GG 39878 of 31 March 2016.

feed research results back to protected area management to facilitate adaptive management; and (c) monitoring ecological processes, using the results from monitoring to adapt management in order to improve the conservation of the protected area.¹⁰⁸⁸ Research is referred to in section 50 of the NEMBA,¹⁰⁸⁹ and section 5 of the NFA.¹⁰⁹⁰

Similar to the commons framework, monitoring is recognised in the NEMA, NEMBA, NEMPAA, NFA, LEMA, and in terms of policy documents the NBSAP, Draft NBF, NPAES and the SBZ.¹⁰⁹¹ Review is recognised in that the Minister or a MEC responsible for environmental affairs in the relevant province have to review at least every five years their bioregional plans,¹⁰⁹² as well as their biodiversity management plans.¹⁰⁹³

It can be argued that in light of the discussion pertaining to African regional law and South African law, monitoring is mostly done by the state, with the exclusion of local communities who are also resource managers within the commons. This exclusionary approach does not seem to provide accurate results as it limits the incorporation of indigenous knowledge which is also essential in monitoring. Further, the monitoring provisions found in both African regional law and South African law are mostly concerned with compliance with the law and very few provisions make provisions for review of ecosystems, which is very crucial in adapting to management plans to changes in the environment.

In the following paragraph the mismatches within the African regional law and South African law discussed under the commons and social-ecological resilience above, will be analysed to determine the extent to which they recognise community members ability to govern their commons.

¹⁰⁸⁸ See para 12 NEMPAA norms and standards in GN 382 in GG 39878 of 31 March 2016.

¹⁰⁸⁹ Section 50(1) of the NEMBA.

¹⁰⁹⁰ Section 5(2) of the NFA.

¹⁰⁹¹ See para 4.2.4 above.

¹⁰⁹² Section 42(1) of the NEMBA.

¹⁰⁹³ Section 46 (1) of the NEMBA.

4.6 Governance mismatches and the commons, social-ecological resilience and adaptive governance nexus

In terms of African regional law, the *African Charter*, *Revised African Convention*, *SADC Protocol on Wildlife*, *SADC Protocol on Forestry* and *SADC Protocol on Environmental Management* contain provisions that recognise community participation in decision making and resource management.¹⁰⁹⁴ However, the ability of community members to govern resources is dependent on the legislation, policies and measures that the state would have established.¹⁰⁹⁵ As such the degree in terms of which community members participate in decision making with respect to their land even in the case of the commons, is determined by the state.¹⁰⁹⁶ This exhibits the first interface of the commons, social-ecological resilience and adaptive governance, in terms of which the government has rights of use over resources that are owned by the community members.¹⁰⁹⁷ This approach is evident in the commons in the three selected TFCAs which are owned by the local community members and private individuals, in terms of which the state through its representative SANParks is the principle conservation authority in the areas.¹⁰⁹⁸ However, the *SADC Protocol on Forestry* takes a slightly different approach from the other African law instruments analysed in the thesis, as it obligates member states such as the South African government to respect the rights of communities, such as the management of land within their commons through facilitating communities participation in forest policies, development, planning and management.¹⁰⁹⁹ This provision recognises the third interface of the commons, social-ecological resilience and adaptive governance, in terms of which all resource users and those governing resources collaborate, thereby creating trust and compliance to rules around resource use.¹¹⁰⁰ Although the *SADC Protocol on Forestry* exhibits the meaningful participation of community members in decision making, it is limited to forests. The *SADC Protocol on Environmental Management* also recognises community involvement in resource management as it requires member states, like South Africa in the event that it ratifies

¹⁰⁹⁴ See para 4.2 above.

¹⁰⁹⁵ See para 4.2 above.

¹⁰⁹⁶ See para 4.2 above.

¹⁰⁹⁷ See para 2.7 above.

¹⁰⁹⁸ See paras 3.3, 3.4 and 3.5 above.

¹⁰⁹⁹ See para 4.2 above.

¹¹⁰⁰ See para 2.7 above.

the Protocol, to enhance the involvement of all stakeholders, in particular the affected local communities in the decision making processes.¹¹⁰¹ In the event that the Protocol is ratified and comes into operation, communities within South African commons will be able to participate in decision making with respect to their resources. This exhibits the third interface of the nexus as it promotes the collaboration of stakeholders.¹¹⁰² The collaboration of all stakeholders creates an environment of all trust, which ensures that they are all actively involved in complying to any rules formulated directed towards promoting social-ecological resilience.¹¹⁰³ This exhibits the second interface of the commons-social-ecological resilience-adaptive governance, in terms of which the actions of resource stakeholders on land determine the promotion of social-ecological resilience.¹¹⁰⁴ The presence of challenges in the commons in the form of human wildlife conflict and governance, as a result of the lack of active community involvement in resource governance in these areas, shows challenges pertaining to the application of the nexus.¹¹⁰⁵

In terms of national legislation, the NEMA, NEMPAA, NEMBA, NFA and CPA contain provisions that recognise the participation of community members in decision making and resource management.¹¹⁰⁶ These provisions within the law recognise the third interface of the commons-social-ecological resilience-adaptive governance which requires the collaboration of resource stakeholders in governance.¹¹⁰⁷ However, the ability of the community to govern in terms of the NEMA and NEMPAA for instance, requires them to enter into co-management agreements with the state.¹¹⁰⁸ In terms of such co-management the rules pertaining to resource use and governance in the commons are collectively devised by the community and the state and subject to both customary law and legislation.¹¹⁰⁹ This is the approach which is clearly evident within the commons in the KTFCA and GLTFCA in terms of which governance is through a JMB that consists of members of the community CPA and SANParks which acts on behalf of

¹¹⁰¹ See para 4.2 above.

¹¹⁰² See para 4.2 above.

¹¹⁰³ See para 2.7 above.

¹¹⁰⁴ See para 2.7 above.

¹¹⁰⁵ See para 1.2 above.

¹¹⁰⁶ See para 4.3 above.

¹¹⁰⁷ See para 2.7 above.

¹¹⁰⁸ See para 4.3 above.

¹¹⁰⁹ See para 4.3 above.

the state.¹¹¹⁰ This is a different approach from the CPA that gives community members the ability to formulate their own constitution based on their own rules in terms of which they can manage their land without any state interference.¹¹¹¹ However, it can be argued that the ability of community members within a commons to manage their resources subject to minimal state interference as envisaged by the CPA, is recognised through provisions on community-based natural resource management in the NEMPAA, NFA and CBNRM *Guidelines*.¹¹¹² It can be argued that the second interface of the nexus is recognised through provisions that allow community members to manage their resources, with limited state interference as they utilise their traditional knowledge, towards any changes in the areas, thereby promoting social-ecological resilience.

From the analysis of the African and South African legal framework that pertains to governance of the TFCAs and commons, it can be gathered that a promise of adaptive governance is highlighted through provisions that are scattered across the various laws, recognising decision making at multiple levels. However, other crucial elements recognising the need for community members to be actively involved in the formulation of rules by the application of their customs, and community members' involvement in monitoring, review and compliance within the commons is limited in the law. Having noted this fragmented approach of the law in terms of provisions that may be applied to governance in the commons and social-ecological resilience. There is a need to devise an integrated approach to the in terms of legal provisions that recognise commons and social-ecological resilience, to ultimately promote adaptive governance in such areas.

4.7 Conclusion

This chapter commenced with an analysis of the African Union and SADC documents.¹¹¹³ In this regard, the *African Charter*, *Revised African Convention*, *SADC Protocol on Forestry*, *SADC Protocol on Wildlife* and *SADC Protocol on Environmental*

¹¹¹⁰ See Chapter 3 above.

¹¹¹¹ See para 4.3 above.

¹¹¹² See para 4.3 above.

¹¹¹³ See para 4.2 above.

Management were analysed.¹¹¹⁴ There were investigated in so far as they contain measures that support TFCAs that can be applied in to the commons, although they do not refer to the commons as such.¹¹¹⁵ In terms of the first principle that relates to measures pertaining to appropriation and provision rules and local conditions, it was gathered that African regional law contains provisions that recognise appropriation rules that can be applied to South African law, that applies to the commons, which include access rights such as walking in the commons; rules pertaining to withdrawal rights such as the hunting and gathering of plants that occurs within the commons.¹¹¹⁶ It was gathered that there is congruence of appropriation and provision rules with local conditions for instance in the *Revised African Convention* as it allows the state to benefit from its vegetation cover, and at the same time take into account the social and economic needs of its peoples, in the case of the commons allowing local community to harvest the vegetation for livelihood purposes.¹¹¹⁷

In the case of the analysis of the principle of collective-choice arrangements it was gathered that African regional law contains provisions recognising the principle which should be included into South African law.¹¹¹⁸ The measures pertained to the meaningful participation of local community members in respect to development in their commons; the need to obtain the prior and informed consent of community members who own a commons, before commencing any development on their land; and their traditional knowledge to be recognised in giving their consent.¹¹¹⁹

In terms of the analysis on the principle of monitoring, it was deduced that African law contains provisions that recognise monitoring only with respect to members states as it contains no provisions relating to the commons.¹¹²⁰ As such as far as monitoring is concerned, South Africa should have legislation that reflects the scientific monitoring of biodiversity, forests, ecosystems and environments; monitoring the development, implementation, enforcement and evaluation of management plans relating to the

¹¹¹⁴ See para 4.2 above.

¹¹¹⁵ See para 4.2 above.

¹¹¹⁶ See para 4.2.1 above.

¹¹¹⁷ See para 4.2.1 above.

¹¹¹⁸ See para 4.2.2 above.

¹¹¹⁹ See para 4.2.2 above.

¹¹²⁰ See para 4.2.3 above.

commons; and incorporation of traditional knowledge in the process of monitoring in commons.¹¹²¹

In the case of the principle of graduated sanctions, it was gathered that African regional law contains provisions that only applied to the South African government.¹¹²² It was proposed that as a minimum, the South African legislation should at least provide for sanctions for non-compliance with the Wildlife Protocol's measures as embedded into legislation or management plans in a transboundary context in the selected TFCAs.¹¹²³

It was also gathered that African regional law makes provision for conflict-resolution but with regard to conflict amongst state parties.¹¹²⁴ It was deduced that there is an absence of a general provision with respect to conflict resolution that recognises easily accessible low-cost local arenas to resolve conflicts among resource users in a commons or between resource users and management officials in these areas.¹¹²⁵

In terms of the analysis on the principle minimal recognition of rights, provisions recognising the principle that can be applied to South African law and management plans of the commons were gathered.¹¹²⁶ These provisions include rights of communities to be consulted in a culturally appropriate manner pertaining to their rights; allowing communities to establish areas for conservation and use of natural resources; introducing measures pertaining to community-based wildlife management; and applying indigenous knowledge in systems and structures in relation to decision making.¹¹²⁷

Lastly, based on the analysis of nested enterprises it was deduced that the principle was largely recognised amongst the collaboration of member states in managing transboundary resources.¹¹²⁸ The *SADC Protocol on Environmental Management* in the event that it gets ratified and comes into operation, was found to contain provisions

¹¹²¹ See para 4.2.3 above.

¹¹²² See para 4.2.4 above.

¹¹²³ See para 4.2.4 above.

¹¹²⁴ See para 4.2.5 above.

¹¹²⁵ See para 4.2.5 above.

¹¹²⁶ See para 4.2.6 above.

¹¹²⁷ See para 4.2.6 above.

¹¹²⁸ See para 4.2.7 above.

recognising the cooperation of all stakeholders in decision making pertaining to shared resources.¹¹²⁹ As the commons are shared resources, South African law can apply this provision in the context of decision making within the commons.

Thereafter, there was an analysis of South African law, specifically the Constitution, NEMA, NEMBA, NEMPAA, NFA, CPA, NCNCA, MNCA, LEMA, CBNRM *Guidelines*, NBSAP, the Draft NBF, the NPAES and SBZ.¹¹³⁰ These documents were chosen as they contain provisions applicable to the TFCAs, Contract Parks and surrounding areas as commons.¹¹³¹

In respect to the principle on clearly defined boundaries and resource users, it was gathered that, in relation to the commons framework principles set out in chapter two, South African law sufficiently addresses the principle through the amendment of schedule 2 to the NEMPAA which clearly identifies areas of land within the selected TFCAs constituting the commons.¹¹³² It was however deduced that, South African law fails to specifically identify the resource users within these areas, as they are broadly referred to as communities in the NEMPAA and CPA Act.¹¹³³

In terms of the principle on the congruence between appropriation and provision rules and local conditions, it was gathered that, in relation to the commons framework principles set out in chapter two, South African law recognises appropriation rules on access allowed within the national park the commons are housed.¹¹³⁴ Additional appropriation rules identified pertain to rules on resource withdrawal that can be done in the commons, for instance provisions avoiding the following: (a) the disturbance of ecosystems and loss of biodiversity; (b) the degradation of the environment; (c) the disturbance of cultural resources and (d) ensuring the sustainable use of natural resources.¹¹³⁵ Provision rules were identified in South African law, through provisions in

¹¹²⁹ See para 4.2.7 above.

¹¹³⁰ See para 4.3 above.

¹¹³¹ See para 4.3 above.

¹¹³² See para 4.3.1 above.

¹¹³³ See para 4.3.1 above.

¹¹³⁴ See para 4.3.2 above.

¹¹³⁵ See para 4.3.2 above.

law requirement the payment of fees to access the area containing the commons and also to access permits.¹¹³⁶

From the analysis of the South African law, in relation to the commons framework principles set out in chapter two, it was also deduced that there is congruence of appropriation and provision rules with local conditions. This was inferred from the obligations set out in section 24 of the Constitution, in terms of which the state through its three spheres are required to devise legislative measures to prevent environmental degradation, promote nature resource conservation and secure ecologically sustainable development and the use of natural resources, but without disregard of simultaneous economic and social development.¹¹³⁷ It was argued that the formulation of these legislative measures by the state, are clearly evident in the law that is applicable to resource governance in the commons, through various provisions recognising appropriation and provision rules.¹¹³⁸ It was stated that the congruence of these rules with local conditions is recognised as section 24, as it allows the use of natural resources, in a manner that promotes socio-economic development.¹¹³⁹ Regarding this, local community members who rely on natural resources present in the commons for survival are able to do so, at the same time ensuring that they do so in a sustainable manner.

In terms of the analysis of collective-choice arrangements, in relation to the commons framework principles set out in chapter two, it was gathered there is a lack of adequate provision in South African law, that recognise the active involvement of communities, in modifying the law applicable to the commons, as it constitutes operational rules of the commons.¹¹⁴⁰ Further, it was recognised that South African courts in a similar manner to the *Revised African Convention* pronounced on the prior and informed choice principle.¹¹⁴¹ It was stated that the principle was of importance as it gives communities within the commons the right to meaningfully participate in decision making, with

¹¹³⁶ See para 4.3.2 above.

¹¹³⁷ See para 4.3.2 above.

¹¹³⁸ See para 4.3.2 above.

¹¹³⁹ See para 4.3.2 above.

¹¹⁴⁰ See para 4.3.3 above.

¹¹⁴¹ See para 4.3.3 above.

respect to any development on their commons.¹¹⁴² However, it was deduced that in terms of South African law there is an absence of legislation that requires prior and informed consent if the land rights are not informal, although the courts are moving in that direction, at least in terms of mineral exploitation.¹¹⁴³

In terms of the principle on monitoring, it was gathered that the South African law, in a similar fashion to African regional law makes provision for monitoring but with regard to specific issues, such as environmental monitoring as well as performance monitoring and the compliance to the law.¹¹⁴⁴ However, it was deduced that, based on the commons framework principles set out in chapter two, there is the absence of general monitoring provision in relation to the ability of monitors who are part of community of a commons to set out specific rules of compliance within the commons and monitor compliance of these rules.¹¹⁴⁵

In terms of graduated sanctions, in relation to the commons framework principles set out in Chapter 2, it was deduced that South African law unlike the African regional law contains provisions that recognise sanctions likely to be imposed on community members within the commons, depending on the seriousness and context of the offence, by the officials who are accountable to the community members.¹¹⁴⁶ However, in terms of the law, it was gathered that there is minimal recognition of provisions which allow community members in a commons, to impose sanctions on community members who violate rules, only in the CPA Act.¹¹⁴⁷ The African law has no provision in the law that can apply to the commons, as its sanctions are only limited to state parties.¹¹⁴⁸

In relation to the commons framework principles set out in Chapter 2, from the analysis of conflict resolution it was gathered that South African law extensively recognises the design principle.¹¹⁴⁹ Recognition of the principle of conflict resolution with specific

¹¹⁴² See para 4.3.3 above.

¹¹⁴³ See para 4.3.3 above.

¹¹⁴⁴ See para 4.3.4 above.

¹¹⁴⁵ See para 4.3.4 above.

¹¹⁴⁶ See para 4.3.5 above.

¹¹⁴⁷ See para 4.3.5 above.

¹¹⁴⁸ See para 4.3.5 above.

¹¹⁴⁹ See para 4.3.6 above.

application to commons was deduced in the TLFGA and CPA Act makes provision for dispute resolution amongst community members, locally in terms the customs of the community concerned.¹¹⁵⁰ It was stated that these provisions in the law, allow for access to readily available, low cost dispute resolution for community members within a commons.¹¹⁵¹ This is unlike African regional law which only caters for conflict resolution amongst state parties to the law.¹¹⁵²

The South African law, in a similar manner to African law, was found to contain a few provisions on the minimal recognitions of rights.¹¹⁵³ It was argued that it was largely due to the state having the authority to determine the governance of natural resource in the law applicable to the commons.¹¹⁵⁴ As such community members are required to act within the parameters of the law even as they apply their customs, in governing their resources.¹¹⁵⁵

In terms of the principle of nested enterprises, it was gathered that South African law contains provisions recognising the principle generally. However, the law lacks with regards to provisions pertaining to the involvement of community members in monitoring, enforcement, governance and conflict resolution. Whereas, African law contains no provisions recognising appropriation, provision monitoring, enforcement, conflict resolution, and governance activities being organised in multiple layers of nested enterprises.

Thereafter an analysis was conducted in terms of elements of the definition of social-ecological resilience in the study with respect to African regional documents.¹¹⁵⁶ Based on the analysis on the first element capacity of a linked social-ecological system to adapt in the face of disturbance and still maintain functions. It was deduced that as similarly stated under the commons framework African law recognises, ecosystem-based adaptation strategies for resilience building.¹¹⁵⁷ Therefore, South Africa should

¹¹⁵⁰ See para 4.3.6 above.

¹¹⁵¹ See para 4.3.6 above.

¹¹⁵² See para 4.3.6 above.

¹¹⁵³ See para 4.3.7 above.

¹¹⁵⁴ See para 4.3.7 above.

¹¹⁵⁵ See para 4.3.7 above.

¹¹⁵⁶ See para 4.4.1 above.

¹¹⁵⁷ See para 4.4.1 above.

include measures in its law or management plans applicable to the commons, recognising these adaptation strategies which include (a) natural resource conservation; (b) preventing ecological degradation; and (c) sustainable use and management of natural resources.¹¹⁵⁸

With respect to the second element, pertaining to the collaboration by diversity of stakeholders sharing a resource, rights and responsibilities at multiple levels and scales taking into account diversity of knowledge and information sharing.¹¹⁵⁹ It was gathered that similarly stated under the commons framework, that African regional law recognises provisions requiring the collaboration of a diversity of stakeholders sharing at multiple levels.¹¹⁶⁰ Additionally, the African regional law recognises indigenous knowledge within regulatory institutions.¹¹⁶¹ The provisions in African regional law recognising information sharing were also presented. It was proposed that the provisions recognising this second element of social-ecological resilience should be reflected in South African law.¹¹⁶²

Furthermore, African regional law contains provisions that recognise the element of social learning, monitoring and review within its ambit.¹¹⁶³ Social-learning is recognised in relation to provisions on training on education.¹¹⁶⁴ Regarding this, it was proposed that provisions within African law recognising training and education be applied in terms of South African law applicable to the commons as follows: (a) environmental education and awareness at all levels of stakeholders in order to enhance their peoples' appreciation of their close dependence on natural resource; (b) awareness on conservation and sustainable use of natural resources; and (c) incorporate techniques based on community based natural resource management and traditional knowledge

¹¹⁵⁸ See para 4.4.1 above.

¹¹⁵⁹ See para 4.4.2 above.

¹¹⁶⁰ See para 4.4.2 above.

¹¹⁶¹ See para 4.4.2 above.

¹¹⁶² See para 4.4.2 above.

¹¹⁶³ See para 4.4.3 above.

¹¹⁶⁴ See para 4.4.3 above.

systems.¹¹⁶⁵ Similarly stated under the commons framework provisions pertaining to monitoring were recognised in terms of African law.¹¹⁶⁶

Thereafter analysis in terms of social-ecological resilience elements with respect to South African law was conducted.¹¹⁶⁷ In terms of the first element it was deduced that South African law contains provisions recognising adaptation strategies for resilience building as it provides for (a) natural resource conservation; (b) preventing ecological degradation; and (c) sustainable use and management of natural resources.¹¹⁶⁸ However, it was deduced that in terms of the theoretical framework set out in chapter two, the law lacked provisions pertaining to deal with (a) complexity and multi-stakeholder tensions that characterise decision making with shared resources in a commons; and (b) different perceptions in terms of values, social, environmental, ecological, political and economic influences by the various stakeholders involved in commons governance.¹¹⁶⁹

With respect to the second element of social-ecological resilience, South African law provides extensively for provisions recognising the collaboration of stakeholders to the commons at multiple levels as well as information sharing.¹¹⁷⁰ However, provisions recognising the diversity of knowledge in terms of decision making are limited.¹¹⁷¹

In terms of the third element of social-ecological resilience it was gathered that, South African law include provisions recognising social-learning through provisions on environmental education and approaches that foster adaptive management.¹¹⁷² With respect to monitoring, it was argued that in a similar fashion to African regional law, monitoring in terms of South African law is mostly done by the state.¹¹⁷³ This excludes the participation of local communities who are also resource managers within the commons.

¹¹⁶⁵ See para 4.4.3 above.

¹¹⁶⁶ See para 4.4.3 above.

¹¹⁶⁷ See para 4.5. above.

¹¹⁶⁸ See para 4.5.1 above.

¹¹⁶⁹ See para 4.5.1 above.

¹¹⁷⁰ See para 4.5.2 above.

¹¹⁷¹ See para 4.5.2 above.

¹¹⁷² See para 4.5.3 above.

¹¹⁷³ See para 4.5.3 above.

It can be argued that in light of the discussion pertaining to African law and South African law, monitoring is mostly done by the state, with the exclusion of local communities who are also resource managers within the commons.¹¹⁷⁴ There are monitoring provisions in both African regional law and South African law but they are mostly concerned with compliance with the law and very few provisions exist on review of ecosystems, which is very crucial in adapting management plans to changes in the environment.¹¹⁷⁵

Thereafter, an analysis was undertaken of governance mismatches and the commons, social-ecological resilience and adaptive governance nexus. From this analysis it was gathered that there are number of mismatches in terms of the legal framework applicable to the commons and the ability of the community to govern. In this regard, while in a commons the community is responsible for formulating rules on natural resource use, regional and sub-regional law place an obligation on the state to provide mechanisms or rules in terms of which the community should participate in decision making.¹¹⁷⁶ This was said to exhibit the first interface of the commons, social-ecological resilience and adaptive governance nexus, in terms of which the government has rights of use over resources that are owned by the community members.¹¹⁷⁷

The second mismatch was that, in terms of South African law community members in a commons devise rules and co-manage a commons jointly with the state, meaning the rules they formulate should comply with national legislation.¹¹⁷⁸ This exhibits the second interface of the nexus, in terms of which the interventions undertaken by the social system which constitutes resource managers, and decisions they make have an effect in term of ecosystem adaptation to change.¹¹⁷⁹

The third mismatch is, as the rules formulated are subject to legislation, that a myriad other stakeholders that are recognised within legislation should be consulted in the decision making process and decisions are there not dependent on the view of that

¹¹⁷⁴ See para 4.5.3 above.

¹¹⁷⁵ See para 4.5.3 above.

¹¹⁷⁶ See para 4.2 read with para 4.3 above.

¹¹⁷⁷ See paras 2.7 and 4.6 above.

¹¹⁷⁸ See para 4.4 above.

¹¹⁷⁹ See paras 2.7 and 4.6 above.

community members owning a commons only, despite the fact that they are the only interested and affected parties to a resource.¹¹⁸⁰

From the analysis above of African law and South African law in relation to the presence of the set of elements constituting the commons framework and social-ecological resilience, it was deduced that the African regional law does not recognise the commons *per se*, but does contain provisions, in a fragmented manner that fit within the commons framework that South African law can apply. In terms of South Africa law it was deduced that the law in a similarly fragmented approach like African regional law, does recognise provisions that apply to the commons framework. A similar finding was gathered in respect to the analysis of the elements of social-ecological resilience. It was gathered that both the African and South African law do not properly allow for adaptive governance. However, a promise of an element of adaptive governance which is the cooperation of stakeholders and multiple and overlapping levels are recognised through provisions scattered across South African law. Therefore, there is a need to devise an integrated approach towards the commons and social-ecological resilience that clearly provides for adaptive governance and the nexus of these concepts within the commons.

¹¹⁸⁰ See para 4.4 above.

CHAPTER 5: Conclusion and recommendations

5.1 Conclusion

The main aim of this study was to determine whether the South African legal system governing the commons within its TFCAs enables social-ecological resilience through adaptive governance.¹¹⁸¹ Three Contract Parks within TFCAs (namely the KTFCA, GLTFCA and GMTFCA) were selected and their constituting documents and other plans and programmes were analysed to determine whether these Contract Parks within the TFCAs constituted a commons and whether social-ecological resilience, as an important feature of these Contract Parks, is catered for.¹¹⁸² The three Contract Parks in the selected TFCAs experience various governance issues, interpersonal conflict, human-wildlife conflict and climate change related challenges which are currently not clearly addressed.¹¹⁸³

The study argued that the Contract Parks can be regarded as commons.¹¹⁸⁴ It was further argued that the TFCAs are social-ecological systems in terms of which humans interact with nature¹¹⁸⁵ and that the challenges relating to governance, conflict and climate change could impact on social-ecological resilience in these areas.¹¹⁸⁶

5.1.1 Theoretical background and the three selected TFCAs

In Chapter 2 the theoretical background of the commons theory was discussed, starting with its origins in England, to Hardin's idea of the tragedy of the commons, which is severely criticised.¹¹⁸⁷ Ostrom negates Hardin's theory and tries to solve the commons dilemma that originates if there is no coordination in individual action.¹¹⁸⁸ Ostrom proposes eight design principles to constitute a commons.¹¹⁸⁹ If most of them are

¹¹⁸¹ See para 1.8 above.

¹¹⁸² See Chapter 3 above.

¹¹⁸³ See para 1.2 above.

¹¹⁸⁴ See para 3.2 above.

¹¹⁸⁵ See para 2.5 above.

¹¹⁸⁶ See para 1.2 read with para 2.5 above.

¹¹⁸⁷ See para 2.3 above read with para 2.3.2 above.

¹¹⁸⁸ See para 2.4 above.

¹¹⁸⁹ See para 2.4 above.

present, an area can be regarded as a commons.¹¹⁹⁰ The eight design principles that constitute a commons framework for purposes of this study are namely: clearly defined boundaries and resource users (design principle 1); congruence between appropriation and provision rules and local conditions (design principle 2); collective-choice arrangements (design principle 3); monitoring (design principle 4); graduated sanctions (design principle 5); conflict-resolution mechanisms (design principle 6); minimal recognition rights design principle 7); nested enterprises (design principle 8).¹¹⁹¹

For the purposes of this study the 'commons' was defined as (i) common-pool resources; (ii) where a community of commoners devise the rules to govern the resource (this can happen within the framework of legislation or African customary law, or mindful of the limitations that legislation or custom places on decision making); and (iii) presenting characteristics of Ostrom's eight design principles.

Social-ecological resilience for purposes of this study was defined as the (i) capacity of a linked social-ecological system to adapt, absorb and transform in the face of disturbance and still maintain functions; (ii) through processes such as the collaboration by diversity of stakeholders sharing a resource, rights and responsibilities at multiple levels and scales taking into account diversity of knowledge and information sharing; and (iii) social-learning, monitoring and review.¹¹⁹²

Adaptive governance for the purposes of this study was defined as a governance approach which includes the collaboration by a diversity of stakeholders sharing a resource, rights and responsibilities at multiple levels and scales taking into account diversity of knowledge and information sharing; as well as social-learning, monitoring and review.¹¹⁹³

It was gathered that there is a nexus between the commons, social-ecological resilience and adaptive governance.¹¹⁹⁴ The commons-social-ecological resilience-adaptive governance nexus, for purposes of this study essentially means that these concepts are

¹¹⁹⁰ See para 2.4 above

¹¹⁹¹ See para 2.4 above.

¹¹⁹² See para 2.4 above.

¹¹⁹³ See para 2.6.3 above.

¹¹⁹⁴ See paras 2.2, 2.3, 2.4 2.5, 2.6 and 2.7 above.

linked and any action occurring within the elements of the nexus each of these concepts.¹¹⁹⁵

The first interface is that the commons, social-ecological resilience and adaptive governance frameworks apply to clearly defined spaces where human beings interact with nature as resource users or managers.¹¹⁹⁶ This interaction takes place at various spheres of government, local community groups or non-governmental organisations, amongst others.¹¹⁹⁷ As they interact with nature, human beings exercise various rights over resources which may overlap at multiple levels,¹¹⁹⁸ meaning for instance, local community members may have rights of use over resources that are owned by the government or *vice versa*. The second interface of the commons-social-ecological resilience-adaptive governance nexus is that the interventions by the social system which constitutes resource and members of the governance structures' actions on land, have an effect on the ability of the ecosystems on their shared land to better adapt to any external pressures while the ecosystem structure and functions are maintained.¹¹⁹⁹ The third interface of the commons-social-ecological resilience-adaptive governance is the nature of relations among those in the social system that is the resource stakeholders' impacts on promoting social-ecological resilience. If all resource users and those governing resources collaborate, an environment of trust and a willingness by all stakeholders to implement measures such as conservation and to adhere to laws directed towards promoting social-ecological resilience of the shared resource is created.¹²⁰⁰ This collaboration involves the integration of various forms of knowledge, be it traditional or scientific devised, in the process of learning by doing, monitoring and evaluation in a real world setting, devising approaches to sustainably manage resources even in the event of uncertainty in the environment and collectively complying with all legal and other provisions aimed at promoting social-ecological resilience and ultimately adaptive governance by all stakeholders.¹²⁰¹ In instances where there is a lack of collaboration, as set out in Chapter 1, it impacts on promoting social-ecological

¹¹⁹⁵ See para 2.7 above

¹¹⁹⁶ See paras 2.2, 2.3, 2.5, 2.6, 2.7 and 2.8 above.

¹¹⁹⁷ See para 2.5, 2.6, 2.7 and 2.8 above.

¹¹⁹⁸ See paras 2.5, 2.6, para 2.7 and 2.8 above.

¹¹⁹⁹ See paras 2.6, 2.7.3 and 2.8 above.

¹²⁰⁰ See para 2.7 read with para 2.8 above.

¹²⁰¹ See paras 2.7.1, 2.7.2, 2.7.3 and 2.8 above.

resilience in the commons within the selected TFCAS discussed in this thesis.¹²⁰² Social-ecological resilience is impacted upon when the social system is not in harmony able to fully integrate with the ecological system in order to foster social-ecological resilience.¹²⁰³

In Chapter 3 an analysis was conducted in terms of the commons framework with respect to the Park Agreement and Kalahari Park Management Plan.¹²⁰⁴ Based on the analysis of the commons framework on the South African side of the KTFCA, it was gathered that within the Contract Park the design principles of the commons framework were found to be present mostly within the Park Agreement and Kalahari Park Management Plan.¹²⁰⁵ Based on this finding, it was deduced that the Contract Park within the KTFCA constituted a commons, as design principles constituting a commons were found scattered in the Park Agreement and Kalahari Park Management Plan.¹²⁰⁶

However, although provisions recognising collective-choice arrangements were recognised in the governance framework, based on prior empirical research of other researchers, collective-choice arrangements are not being effectively being implemented as the Khomani San and Mier community members, regardless of the fact that they were represented by some community members within the JMB, argued that there was a lack of information dissemination from the Financial Committee, Khomani San Park Committee and Mier community representatives regarding community projects such as the game farms and lodge in the Contract Park.¹²⁰⁷ This information relates to the annual budget, animal numbers, hunting quotas, selling of animals, amount of cash generated and community expenditure.¹²⁰⁸ The lack of transparency and accountability by the community representatives within the JMB to the Khomani San and Mier communities in respect of financial matters weakens the recognition of collective-choice

¹²⁰² See para 1.2 above.

¹²⁰³ See Chapter 1 above where it is provided that GLTFCA governance structure, the KTFCA and GMTFCA evidenced by the various unsustainable land use practices taking place ranging from overgrazing, human-wildlife conflict and farmer-wildlife conflict as lack of community involvement in the decision-making or control of land belonging to them. Also see para 2.7 above.

¹²⁰⁴ See para 3.3.1 above.

¹²⁰⁵ See para 3.3.1 above.

¹²⁰⁶ See para 3.3.1 above.

¹²⁰⁷ See para 3.3.2 above.

¹²⁰⁸ See para 3.3.2 above.

arrangements as they do not fully integrate contributions from other relevant stakeholders in decision making.¹²⁰⁹

Furthermore, collective-choice arrangements are not being fully implemented within the commons in the KTFCA as the governance area of the common fails to recognise the Khomani San who successfully instituted a land claim in the KTFCA was a heterogeneous community.¹²¹⁰ The Park Agreement assumes the decision making process to draft a constitution for the CPA was undertaken by a traditional homogenous community. However, the Khomani San's decision making process is subject to conflicting views between the original claimants, their traditional leadership and those who later joined the land claim. The newcomers have a modern outlook to using land as opposed to the original land claimants.¹²¹¹ These groups are referred to as the traditional and modern Khomani San.¹²¹²

Similarly, based on prior empirical research of the commons in the KTFCA, the framing of institutions and development of projects into one mould, by not differentiating different perceptions of land use by the modern and traditional Khomani San community members, are likely to have conflict-ridden effects among the communities which could compromise collective action.¹²¹³ For instance, SANParks primarily uses the traditionalist narrative in framing rules for resource use in the KTFCA.¹²¹⁴ However, the framing of the Khomani San culture as pristine, cohesive and undiluted was viewed by some Khomani San community members as a strategy by SANParks to gain the power to constrain resource use and marginalise some modernised Khomani San community members.¹²¹⁵ The traditionalist-modernist conflict, in the KTFCA is advanced by non-governmental organisations' that classify communities based on their cultural background.¹²¹⁶ This lack of meaningful participation in decision making often does not rest well with some members of the society, which perhaps explains the reported dislike

¹²⁰⁹ See para 3.3.2 above.

¹²¹⁰ See para 3.3.2 above.

¹²¹¹ See para 3.3.2 above.

¹²¹² See para 3.3.2 above.

¹²¹³ See para 3.3.2 above.

¹²¹⁴ See para 3.3.2 above.

¹²¹⁵ See para 3.3.2 above.

¹²¹⁶ See para 3.3.2 above.

towards collaborative governance within the Contract Park and communal land.¹²¹⁷ This challenge can be rectified by engaging in meaningful collaboration by all community members within the commons.¹²¹⁸ Additionally, although provisions recognising conflict-resolution mechanisms were recognised in the governance framework, conflict-resolution mechanisms are not being effectively being implemented as human-wildlife conflict is taking place within the area.¹²¹⁹

Thereafter, an analysis was conducted in terms of the commons framework with respect to the Settlement Agreement and the KNP Management Plan.¹²²⁰ Based on the analysis of the commons framework on the South African side of the GLTFCA, it was gathered that the Contract Park constitute a form of commons.¹²²¹ This is so as the design principles that constitute the commons framework were found scattered in the Settlement Agreement and KNP Park Management.¹²²²

However, although provisions recognising collective-choice arrangements were recognised in the governance framework based on empirical research collective-choice arrangements are not being effectively being implemented as the majority of Makuleke community members, regardless of the fact that they were represented by the Makuleke CPA within the JMB, argued that they did not meaningfully participate in the choice of community projects, as these projects were only presented to them after the JMB had ratified the decision taken on the kind of projects that the community would undertake on their land.¹²²³ These projects included concession contracts with private companies and operating lodges that the community had to conclude. Only a few community members had an opportunity to decide with whom the Makuleke community would conclude the agreement.¹²²⁴ Furthermore, although provisions recognising conflict-resolution mechanisms were recognised in the governance framework, conflict-

¹²¹⁷ See para 3.3.2 above.

¹²¹⁸ See para 3.3.2 above.

¹²¹⁹ See para 3.3.26 and para 1.2 above.

¹²²⁰ See para 3.4.1 above.

¹²²¹ See para 3.4.2 above.

¹²²² See para 3.4.2 above.

¹²²³ See para 3.4.2 above.

¹²²⁴ See para 3.4.2 above.

resolution mechanisms are not being effectively implemented as human-wildlife conflict is taking place within the area.¹²²⁵

In concluding the analysis of the commons framework in TFCAs in South Africa, an analysis was conducted in terms of the commons framework with respect to the Mapungubwe National Park Management Plan.¹²²⁶ Based on the analysis of the commons framework on the South African side of the GMTFCA, it has been gathered that the Mapungubwe National Park including the land subject to contractual agreements within it constitute a form of commons.¹²²⁷ This is so as the most of the design principles that constitute the commons framework were recognised in the Mapungubwe Park Management Plan.¹²²⁸

However, although provisions recognising conflict-resolution mechanisms were recognised in the governance framework, based on prior empirical research, conflict-resolution mechanisms are not being effectively being implemented as farmer-wildlife conflict is taking place within the area.¹²²⁹ Further, although the Mapungubwe Park Management Plan recognises the meaningful participation of community members, farmworkers who constitute the local communities in the GMTFCA cannot meaningfully participate in terms of decisions that affect resource management as they have no knowledge of the GMTFCA and do not participate in GMTFCA Trilateral Technical Committee meetings.¹²³⁰

From the analysis of the commons in the selected TFCAs it was gathered that the challenges occurring among the local communities pertain to governance, human-wildlife conflict and climate change related challenges.¹²³¹ In the KTFCA and GLTFCA the challenge is due to the absence of the indicators of good governance namely transparency, accountability and fairness whereas in the GMTFCA it is due to the absence of local communities in the governance framework.¹²³² The land use challenge

¹²²⁵ See para 3.4.16 and para 1.2 above.

¹²²⁶ See para 3.5.1 above.

¹²²⁷ See para 3.5.2 above.

¹²²⁸ See para 3.5.2 above.

¹²²⁹ See para 3.5.1.6 above.

¹²³⁰ See para 3.5 above.

¹²³¹ See para 1.2 above.

¹²³² See para 1.2 and para 3.3.2 above.

is similarly occurring in the KTFCA, GTFCA and GMTFCA however, its form differs in these areas.¹²³³ In the KTFCA it is due to intra-group differences over land use among the local communities and human-wildlife conflict occurring between animals and visitors,¹²³⁴ whereas the GLTFCA the human-wildlife conflict is occurring between local communities living adjacent to the park and animals.¹²³⁵ The GMTFCA is experiencing challenges that are related to land use, as is also being experienced in the KTFCA and GLTFCA.¹²³⁶ However this challenge in the GMTFCA takes a different form because it is as result of incompatible land use types, namely conservation and irrigation farming that are occurring side by side.¹²³⁷ The GMTFCA is also experiencing farmer-wildlife conflict; this form of conflict is similar to the human-wildlife conflict occurring in the GLTFCA because they all result in livelihoods and impact on land use.¹²³⁸ Within the three selected TFCAs climate change impacts in the form of droughts and flooding are a challenge.¹²³⁹ It is foreseen that these impacts will have an impact on plant and animal health.¹²⁴⁰ Additionally, these extreme weather events could also have a significant impact on tourism as the tourism industry is quite fragile and dependent on the environmental state of the region.¹²⁴¹

5.2 Analysis of the commons in the legal framework governing commons within South Africa's TFCAs

The current South African legal framework was analysed in light of the principles and elements of the commons and social-ecological resilience as highlighted in chapter 2 as well as the regional African legal framework.

Table 5-1 illustrates how the commons principles as well as social-ecological elements are reflected in the Management Plans of the Contract Parks, African regional law as well as in South African legislation.

¹²³³ See paras 1.2, 3.3.2, 3.4.2 and 3.5.2 above.

¹²³⁴ See para 1.2 and para 3.3.2 above.

¹²³⁵ See para 1.2 and para 3.4.2 above.

¹²³⁶ See para 1.2 and para 3.5.2 above.

¹²³⁷ See para 1.2 and para 3.5.2 above.

¹²³⁸ See para 1.2 above.

¹²³⁹ See para 1.2 above.

¹²⁴⁰ See para 1.2 above.

¹²⁴¹ See para 1.2 above.

Table 5-1: Comparison: Theory, practice and the law

	AU /SADC	Kalahari Gemsbok National Park	Kruger National Park	Mapungubwe National Park	South African legislation
COMMONS					
Principle 1					
Defined borders and resource users	x	✓ ¹²⁴²	✓ ¹²⁴³	✓ ¹²⁴⁴	✓ ¹²⁴⁵
Principle 2					
Congruence between appropriation and provision rules and local conditions	✓ ¹²⁴⁶	✓ ¹²⁴⁷	✓ ¹²⁴⁸	✓ ¹²⁴⁹	✓ ¹²⁵⁰
Principle 3					
Collective-	✓/x ¹²⁵¹	✓ ¹²⁵²	✓ ¹²⁵³	✓/x ¹²⁵⁴	✓/x ¹²⁵⁵

¹²⁴² Section 2.1 of the Kalahari Park Management Plan 2016-2026. Also see GN 1051 in GG 30442 of 9 November 2007; <http://mapservice.environment.gov.za/PAR/map.aspx>; Section 2.4 of the Kalahari Park Management Plan 2016-2026; Clauses 28.2, 28.4, 48 and 49 of the Park Agreement.

¹²⁴³ Clause 24 (1) of the Settlement Agreement. Also see Clause 33 of the Settlement Agreement.

¹²⁴⁴ Section 2.5 of the Mapungubwe Park Management Plan 2019-2029. Also see <https://www.gov.za/documents/world-heritage-convention-act-proclamation-mapungubwe-cultural-landscape-world-heritage-0>.

¹²⁴⁵ Section 20(6) of the NEMPAA. GN 2 in GG 39728 of 25 February 2016. Also see sections 1 and of the CPA Act.

¹²⁴⁶ See para 4.2 above. These documents are as follows: African Charter, Revised African Convention, SADC Protocol on Wildlife and SADC Protocol on Environmental Management.

¹²⁴⁷ GN R1061 in GG 28181 of 28 October 2005. Also see Clauses 28, 48 and 49 of the Park Agreement.

¹²⁴⁸ GN R1061 in GG 28181 of 28 October 2005. Also see para 3.4.1 above.

¹²⁴⁹ GN R1061 in GG 28181 of 28 October 2005. Also see para 3.2 above.

¹²⁵⁰ See para 4.3.2 above. These documents are as follows: the Constitution, NEMA, NEMBA, NEMPAA, NFA, NCNCA, MNCA and LEMA.

¹²⁵¹ See para 4.2.2 above. These documents are as follows: African Charter, Revised African Convention, SADC Protocol on Forestry and SADC Protocol on Environmental Management.

¹²⁵² Clause 38 of the Park Agreement. Also see sections 39, 41.1.1 and 41.1.5 of the Park Agreement; Section 4 of the Kalahari Park Management Plan, 2016-2026.

¹²⁵³ Clauses 28(5), 27(3) and 27(4) of the Settlement Agreement. Also see Section 4 of the KNP Management Plan, 2018-2028.

¹²⁵⁴ Section 4 of the Mapungubwe Park Management Plan, 2019-2029. Also see Section 10.6.1 of the Mapungubwe Park Management Plan, 2019-2029.

	AU /SADC	Kalahari Gemsbok National Park	Kruger National Park	Mapungubwe National Park	South African legislation
choice arrangements					
Principle 4					
• Monitoring	✓/x ¹²⁵⁶	✓ ¹²⁵⁷	✓ ¹²⁵⁸	✓/x ¹²⁵⁹	✓/x ¹²⁶⁰
Principle 5					
• Graduated sanctions	✓/x ¹²⁶¹	✓/x ¹²⁶²	✓/x ¹²⁶³	✓/x ¹²⁶⁴	✓ ¹²⁶⁵
Principle 6					
• Conflict- resolution mechanisms	x ¹²⁶⁶	✓ ¹²⁶⁷	✓ ¹²⁶⁸	x ¹²⁶⁹	✓ ¹²⁷⁰
Principle 7					
• Minimal	✓ ¹²⁷¹	✓ ¹²⁷²	✓ ¹²⁷³	✓/x ¹²⁷⁴	✓ ¹²⁷⁵

¹²⁵⁵ See para 4.2.2 above. These documents are as follows: the, NEMA, NEMBA, NEMPAA, NFA, CPA Act, CBNRM *Guidelines*, TLGFA and NBF.

¹²⁵⁶ See para 4.2.3 above. These documents are as follows: African Charter, Revised African Convention, SADC Protocol on Wildlife, *SADC Protocol on Forestry* and *SADC Protocol on Environmental Management*.

¹²⁵⁷ GN R1061 in GG 28181 of 28 October 2005. Also see para 3.3.1 above; Section 3.2 of the KNP Management Plan, 2018-2028.

¹²⁵⁸ GN R1061 in GG 28181 of 28 October 2005. Also see clauses 25(2) and 25(8) of the Settlement Agreement; section 3.2 of the KNP Management Plan, 2018-2028.

¹²⁵⁹ GN R1061 in GG 28181 of 28 October 2005. Also see para 3.5.1.4 above. These documents are as follows: the NEMA, NEMBA, NEMPAA, NFA, CPA Act, LEMA, NBSAP, Draft NBF, NPAES and SBZ.

¹²⁶⁰ See para 4.3.4 above.

¹²⁶¹ See para 4.2.4 above. These documents are as follows: *African Charter*, *Revised African Convention* and *SADC Protocol on Wildlife*.

¹²⁶² See para 3.3.2.5 above.

¹²⁶³ See para 3.4.1.5 above.

¹²⁶⁴ See para 3.5.1.5 above.

¹²⁶⁵ See para 4.3.5 above. These documents are as follows: the NEMA, NEMBA, NEMPAA, NFA and CPA Act.

¹²⁶⁶ See para 4.2.5 above.

¹²⁶⁷ See para 3.3.2.6 above. Also see Clauses 41, 46.1, 57.1, and 58.1 of the Park Agreement.

¹²⁶⁸ See para 3.4.1.6 above. Also see Clause 37 of the Settlement Agreement.

¹²⁶⁹ See para 3.5.1.6 above.

¹²⁷⁰ See para 4.3.6 above. These documents are as follows: the NEMA, NEMBA, NEMPAA, NFA, WHCA, TLGFA and CPA Act.

¹²⁷¹ See para 4.2.6 above. These documents are as follows: *African Charter*, *Revised African Convention*, *SADC Protocol on Wildlife*, and *SADC Protocol on Environmental Management*.

¹²⁷² See para 3.3.2.7 above. Also see Clause 41 of the Park Agreement.

¹²⁷³ See para 3.4.1.7 above.

¹²⁷⁴ See paras 1.2 and 3.5.1.7 above.

	AU /SADC	Kalahari Gemsbok National Park	Kruger National Park	Mapungubwe National Park	South African legislation
recognition of rights					
Principle 8					
• Nested enterprises	x ¹²⁷⁶	✓ ¹²⁷⁷	✓ ¹²⁷⁸	✓ ¹²⁷⁹	✓/x ¹²⁸⁰

Principle 1 is well reflected in South African law and the management documents that are applicable to the commons within the selected TFCAs, through the park management plans applicable to these areas. The African regional law fails to provide for provisions recognising principle 1. Principle 2 is reflected in the management documents, the African regional law and South African law, but the policy framework does not provide for this. Principle 3 is well reflected in the management documents, however, the African regional law, and the management documents applicable to the commons in Mapungubwe National Park and South African law partially recognise the principle in terms of the set of principles commons framework in chapter two. Principle 4 is partially recognised in African regional law, South African law and policy, however, the management documents applicable to the commons in the Mapungubwe national park fail to provide for this principle based on the set of principle in the commons framework in chapter two. Principle 5 is partially recognised in African regional law and management documents applicable to the commons in the selected TFCAs, as the requirement by the commons framework set of principles in chapter two. However, principle 5 is reflected in South African law, with limited recognition of provisions applicable to the commons only provided in the CPA Act. Principle 6 is reflected in the management documents applicable to the commons in the Kalahari and Kruger National Park, the South African law in the CPA Act and the TLFGA in terms of the set of

¹²⁷⁵ See para 4.4.7 above. These documents are as follows: the NEMPAA, NFA and CBNRM *Guidelines*.

¹²⁷⁶ See para 4.2.7 above.

¹²⁷⁷ See para 3.3.2.8 above. Also see sections 10, 10.2.1 and 10.6.1 of the Kalahari Park Management Plan, 2016–2026.

¹²⁷⁸ See para 3.4.1.8 above. Also see sections 10.2.1, 10.2.2 and 10.7.3 of the KNP Management Plan, 2018–2028.

¹²⁷⁹ See para 3.5.1.8 above. Also see section 10.2.3 of the Mapungubwe Park Management Plan, 2019–2029.

¹²⁸⁰ See para 4.4.8 above. These documents are as follows: the Constitution, IGRFA, NEMA, NEMBA, NEMPAA, NBSAP, Draft NBF, NPAES and SBZ

principles in the commons framework in chapter two². African regional law and the Mapungubwe national park management documents do not reflect principle 6. Principle 7 is well reflected in the African regional law, management documents applicable to the commons in the Kalahari and Kruger National Parks, although in terms of South African law recognition is limited to the NEMPAA, NFA and CBNRM *Guidelines*. However, principle 7 is partially reflected in terms of the management documents applicable to the Mapungubwe National Park as farmworkers who constitute the local communities in the area are excluded from decision making. Principle 8 is not reflected in the African regional law but is reflected in the management documents applicable to the commons in the selected TFCAs. South African law and policy partially recognise principle 8, as it does not contain provisions in line with the set of principles in the commons framework in chapter 2.

From the analysis of the commons design principles some mismatches were noticed between legislation and the ability of the community to govern. Firstly, from the definition of commons it is clear that rule formulation is in the hands of the community.¹²⁸¹ However, based on the analysis of both African regional and sub-regional law it is clear that an obligation is placed on member states, in this case the South African government, to provide legislation, policies and programmes in place that direct how community members can govern their land.¹²⁸² Secondly, it was gathered that in terms of national law such as the NEMA and NEMPAA that community members, in the commons such as those in the selected TFCAs can only devise rules and co-manage their land jointly with the state, which is evident within the JMB within the KTFCA and GLTFCA. In this regard, the rules formulated in the commons are subject to the customary law and the national legislation.¹²⁸³ Thirdly, it was gathered that as the rules formulated to govern the commons are subject to legislation, then a myriad of other stakeholders recognised in the legislation should be consulted in the

¹²⁸¹ See para 4.6 above.

¹²⁸² See para 4.6 above.

¹²⁸³ See para 4.6 above.

decisionmaking process, and thus influence the governance of these areas, excluding the voice of the stakeholders in the Contract Parks.¹²⁸⁴

5.3 Analysis of social-ecological resilience in the legal framework governing the commons within South Africa's TFCAs

In Chapter 2 the theoretical background of social-ecological resilience was discussed, it was stated that social-ecological resilience has been developed in response to the need for understanding how linked social-ecological systems operate under conditions of complexity.¹²⁸⁵ Social-ecological systems were referred to as coupled human-natural systems.¹²⁸⁶ Ostrom states that social-ecological systems are characterised as resource systems (which include a designated protected area encompassing a specified territory containing forested areas, wildlife and water systems); resource units (which include trees, shrubs and plants contained in the protected area, wildlife and the amount and flow of water); governance systems (which include governance by the government and other organisations that manage the park, the specific rules related to the use of the park and how these rules are made); and resource users (which include individuals who use the park in diverse ways for sustenance, recreation and commercial purposes).¹²⁸⁷ According to Humby there is now an understanding that the various elements that constitute social-ecological systems impact upon and change each other such that the system can both maintain a steady state (for as long as the type of relationships and feedbacks between the various elements are maintained) as well as adapt and change over time in response to various anthropogenic and non-anthropogenic shocks.¹²⁸⁸ Social-ecological resilience was therefore gathered to entail the ability of linked social-ecological systems to adapt, absorb and transform in the face of disturbance and still maintain functions in the face of external pressures such as the impacts of climate change in the form of droughts or flooding.¹²⁸⁹ In this regard, it was stated that this is facilitated by adaptive governance which includes, the collaboration by a diversity of stakeholders sharing a resource, rights and responsibilities at multiple levels and scales

¹²⁸⁴ See para 4.6 above.

¹²⁸⁵ See para 2.5 above.

¹²⁸⁶ See para 2.5 above.

¹²⁸⁷ See para 2.5 above.

¹²⁸⁸ See para 2.5 above.

¹²⁸⁹ See para 2.5 above.

taking into account diversity of knowledge and information sharing; as well as social-learning, monitoring and review.¹²⁹⁰ It seemed that adaptive governance may address social-ecological resilience in TFCAs.¹²⁹¹ This multiple levelled layered process of decision making envisaged through adaptive governance, is evident from the analysis of the commons principles and elements of social-ecological resilience, in the governing documents of the commons within the selected TFCAs, and provisions in African regional law and South African national law that recognise the collaboration of various stakeholders in decision making from the various spheres of government, local community groups, private land owners and non-governmental organisations.¹²⁹²

In the Table 5-2 a comparison is undertaken of the theory, the elements reflected in the African regional documents as well as the documents constituting the Park Agreement of the Contract Park in the KTFCA and the Settlement Agreement of the Contract Park in the GLTFCA, and the management plans of the Kalahari Gemsbok, Kruger and Mapungubwe national parks as well as the SA legislation and policy framework.

Table 5-2: Social-ecological resilience: comparison of theory, practice and South African legal frame work

	AU /SADC	Kalahari Gemsbok National Park	Kruger National Park	Mapungubwe National Park	South African legislation
SOCIAL ECOLOGICAL RESILIENCE					
Element 1					
Capacity of a	✓ ¹²⁹³	✓ ¹²⁹⁴	✓ ¹²⁹⁵	✓ ¹²⁹⁶	✓ ¹²⁹⁷

¹²⁹⁰ See para 2.5 above.

¹²⁹¹ See para 5.4 below.

¹²⁹² See para 2.5.3 above.

¹²⁹³ See para 4.4.1 above. These documents are as follows: *African Charter*, *Revised African Convention*, *SADC Protocol on Wildlife* and *SADC Protocol on Environmental Management*.

¹²⁹⁴ See para 3.6.1.1 and para 3.3.1.2 above. Also see Section 3.2 of the Kalahari Park Management Plan 2016-2026.

¹²⁹⁵ See para 3.6.1.1 and para 3.4.1.2 above. Also see section 3.2 of the KNP Management Plan 2018-2028.

¹²⁹⁶ See para 3.6.1.1 and para 3.5.1.2 above. Section 3.2 of the Mapungubwe Park Management Plan 2019-2029.

	AU /SADC	Kalahari Gemsbok National Park	Kruger National Park	Mapungubwe National Park	South African legislation
linked social-ecological system to adapt in the face of disturbance and still maintain functions					
Element 2					
Collaboration by diversity of stakeholders sharing a resource, rights and responsibilities at multiple levels and scales, taking into account diversity of knowledge and information sharing	✓/x ¹²⁹⁸	✓ ¹²⁹⁹	✓ ¹³⁰⁰	✓ ¹³⁰¹	✓/x ¹³⁰²

¹²⁹⁷ See para 4.5.1 above. These documents are as follows: the Constitution, NEMA, NEMBA, NEMPAA, NFA, , NCNCA, MNCA, LEMA, NBSAP and SBZ.

¹²⁹⁸ See para 4.4.2 above. These documents are as follows: the *African Charter*, *Revised African Convention*, *SADC Protocol on Wildlife*, the *SADC Forestry Protocol*, the *SADC Protocol on Tourism*, the *SADC Protocol on Environmental Management* and the RBS (collaboration of stakeholders); *SADC Protocol on Wildlife and SADC Protocol on Environmental Management* (diversity of knowledge); the *SADC Protocol on Forestry* and RSB (information sharing).

¹²⁹⁹ See para 3.6.1.2 and para 3.3.1.8 above. Also see See clauses 42 and 29.3.4 of the Park Agreement; Section 4 of the Kalahari Park Management Plan, 2016-2026.

¹³⁰⁰ See paras 3.4.1.2, 3.4.2.8 and 3.6.1.2 above. Also see sections 4 and 10.8.5 of the KNP Park Management Plan, 2018-2028.

¹³⁰¹ See para 3.5.2.8 and 3.6.1.2 above. Also see sections 10.2.2, 10.5, 10.8.5 and 10.8.9 of the Mapungubwe Park Management Plan, 2019-2029.

¹³⁰² See para 4.5.2 above. These documents are as follows: NEMA, NEMBA, NEMPAA, NFA, IPILRA, CBNRM *Guidelines*, NBF, NBSAP, the Draft NBF, NPAES and SBZ (collaboration of stakeholders); NEMA, NEMBA TLGFA, CPA Act, CBNRM *Guidelines*, SBZ (diversity of knowledge); the Constitution, PAIA, NEMA, NEMBA, NEMPAA, NFA, NCNCA, MNCA and LEMA (information sharing).

	AU /SADC	Kalahari Gemsbok National Park	Kruger National Park	Mapungubwe National Park	South African legislation
Element 3					
Social learning, monitoring and review	✓/x ¹³⁰³	✓ ¹³⁰⁴	✓ ¹³⁰⁵	✓ ¹³⁰⁶	✓/x ¹³⁰⁷

Element 1 is reflected in African regional law, the management documents to the commons in the selected TFCAs, and South African law. Element 2 is reflected in the management documents to the commons in the selected TFCAs, but partially in African regional law and South African law as they contain only a few provisions recognising diversity of knowledge. Element 3 is extensively reflected in the management documents that are applicable to the commons in the TFCAs, but partially in African regional law and South African law. This is so as the provisions in the law delegate monitoring to the state, at the exclusion of community members who are also resource managers in the commons. Additionally, the law lacks provisions in terms of review. These challenges may impact the ability of ecosystems in these commons to adapt, absorb and transform in the face of external impacts such as those caused by climate change for example, drought and flooding, while their functions are maintained.

5.4 Recommendations

Based on the findings in the conclusion above, the following recommendations are made:

¹³⁰³ See para 4.4.3 above. The documents are as follows: *Revised African Convention*, *SADC Protocol on Wildlife*, *SADC Protocol on Forestry*, *SADC Protocol on Tourism* and RBS (social-learning).

¹³⁰⁴ See para 3.6.1.3 and 3.3.1.4 above. Also see section 3.2 of the Kalahari Park Management Plan, 2016-2026.

¹³⁰⁵ See para 3.6.1.3 and para 3.4.1.4 above. Also see section 3.2 of the KNP Park Management Plan 2018-2028.

¹³⁰⁶ See para 3.6.1.3 and para 3.5.1.4 above. Also see section 3.2 of the Mapungubwe Park Management Plan, 2019-2029.

¹³⁰⁷ See para 4.2.4 and para 4.5.3.3 above. The documents are as follows: the NEMA, NEMBA, NFA and NEMPAA (social-learning); NEMA, NEMBA, NEMPAA, NFA, LEMA, NBSAP, Draft NBF, NPAES and the SBZ (monitoring) and NEMBA (review).

- Short term recommendations

In order to address the challenge of limited provisions in law, the section 2 principles of NEMA should include a provision requiring the meaningful participation of local community members with respect to any development taking place within commons, through obtaining the prior and informed consent of the local community group that owns a commons.¹³⁰⁸ In addition traditional knowledge should be recognised in given prior and informed consent by a local community group within its commons.

The NEMBA and NEMPAA should be amended to include provisions on monitoring that allows community members within areas such as commons to be able to elect monitors who are part of the community to participate in establishing means that actively ensure that members of the community are complying with rules that have been set on the use of shared resources.

The NEMBA and NEMPAA should be amended to include provisions on graduated sanctions that allow community members in a commons to impose sanctions, to other community members who violate rules on resource use, as recognised in the CPA Act.

The NEMBA and NEMPA should be amended to include provisions that allow community participation with respect to conflict-resolution in the commons as envisaged in the TLFGA and CPA Act, that make provision for dispute resolution amongst community members locally in terms the customs of the community concerned. This will enable community members' access to readily available, low cost dispute resolution.

The NEMBA should be amended to contain provisions on the minimal recognition of rights, for instance provisions, recognising the rights of communities in relation to their right to be consulted in a culturally appropriate manner, allow communities to establish areas for conservation and use of natural resources, introduce measures pertaining to community-based wildlife management, and including recognition for the application of indigenous knowledge systems and structures in relation to decision making, apart from bioprospecting activities the Act makes provision for.

¹³⁰⁸ Prior, Informed Consent is extensively discussed in para 4.2.2 and 4.3.3 above.

The NEMA, NEMPAA and NEMBA should be amended to ensure that they recognise provisions on the principle of nested enterprises that allows for the collaboration of various stakeholders. This should including community members in a commons owning a resource at multiple levels by incorporating provisions that recognise monitoring, enforcement, conflict resolution and governance at multiple levels.

The NEMA, NEMPAA and NEMBA should further be amended to ensure that they recognise provisions that ensure the recognition of a diversity of knowledge in a commons, ensuring formal recognition of the use of indigenous knowledge and scientific knowledge in decision making in the commons.

The NEMPAA and NEMBA should be amended to ensure that they contain adequate provisions recognising review of ecosystems, which is crucial in adapting management plans to changes in the environment, such as those associated with climate change. Further, community members should be able to participate in the review process and incorporate their traditional knowledge.

- Medium term recommendations

In order to move towards adaptive governance in the commons within the selected TFCAs, it is proposed that a household forum be established to ensure the meaningful participation amongst of all the stakeholders including local community members, in decision making within the commons.¹³⁰⁹ The household forum should consist of a number of community members, members of a CPA and *ad hoc* members of both district and local municipalities. The introduction of such household forum should be included in the management plans of the communities and be represented on the JMB responsible for managing the commons.

The household forum should be chaired by a community member, elected by members of the local community. Such a forum should be responsible for overseeing the management and administration of the commons by the JMB; provide the JMB with the necessary support to enable it to perform its functions in terms of the management plans, hold the JMB accountable in their performance of functions in terms of the

¹³⁰⁹ See *Communal Land Tenure Bill*, 2017.

management plans of the commons and performing any other function that maybe provided for in terms of the management plans.

- Longer term recommendation

This thesis proposes adaptive governance as a means of governance that may encourage adaptation to change in the commons in the face of the various challenges. Adaptive governance, is a means of governance that ensures the collaboration of a various stakeholders at multiple levels in of decision making, ranging from the national, provincial and local spheres of government, private sector and local community groups in decision making and governance of a shared resource, which in this case will be the South African side of the TFCAs involved in this study.¹³¹⁰ Having noted that there is a nexus between commons, social-ecological resilience and adaptive governance,¹³¹¹ it is hereby proposed that the NEMPAA which is the main legislation that applies to the South African side which contains the commons, be amended to have clear provisions recognising adaptive governance with respect to the commons.

The chapter in the NEMPAA will have to deal clearly with the following in order to promote adaptive governance:

- (a) appropriation and provision rules regarding resource use and that these should be congruent with local conditions such as the sources of livelihood of local community members in these areas;
- (b) collective-choice arrangements which ensure the meaningful participation of vulnerable groups from the local community in formulating rules for resource use in the population;
- (c) monitoring of rule compliance by the various stakeholders inclusive of local community members;
- (d) graduated sanctions that should be applied for rule breaking;

¹³¹⁰ See para 2.5.3 above.

¹³¹¹ See para 2.6 above.

- (e) conflict-resolution measures available locally and accessible to local community members;
- (f) minimal recognition rights which means the community can engage in community-based projects without interference from SANParks and
- (g) nested enterprises in the form of provisions that allow decision making to be collaborative amongst various stakeholders from government, civil society, local community groups and private landowners.
- (h) social ecological resilience in relation to:
 - (i) adaptation strategies for social-ecological resilience building to be collectively devised and implement by government, local community groups, private landowners and civil society;
 - (ii) the collaboration of stakeholders sharing a resource, rights and responsibilities at multiple levels and scales;
 - (iii) diversity of knowledge in decision making;
 - (iv) information sharing;
 - (v) provisions of social-learning sharing in the form of researches, educational workshops and seminars;
 - (vi) monitoring rule compliance and change within the environment; and
 - (vii) review of management plans and programmes to cater for changes in the environment.

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