

## PARKS, PEACE, AND PARTNERSHIP: GLOBAL INITIATIVES IN TRANSBOUNDARY CONSERVATION

Edited by Michael S. Quinn, Len Broberg,  
and Wayne Freimund

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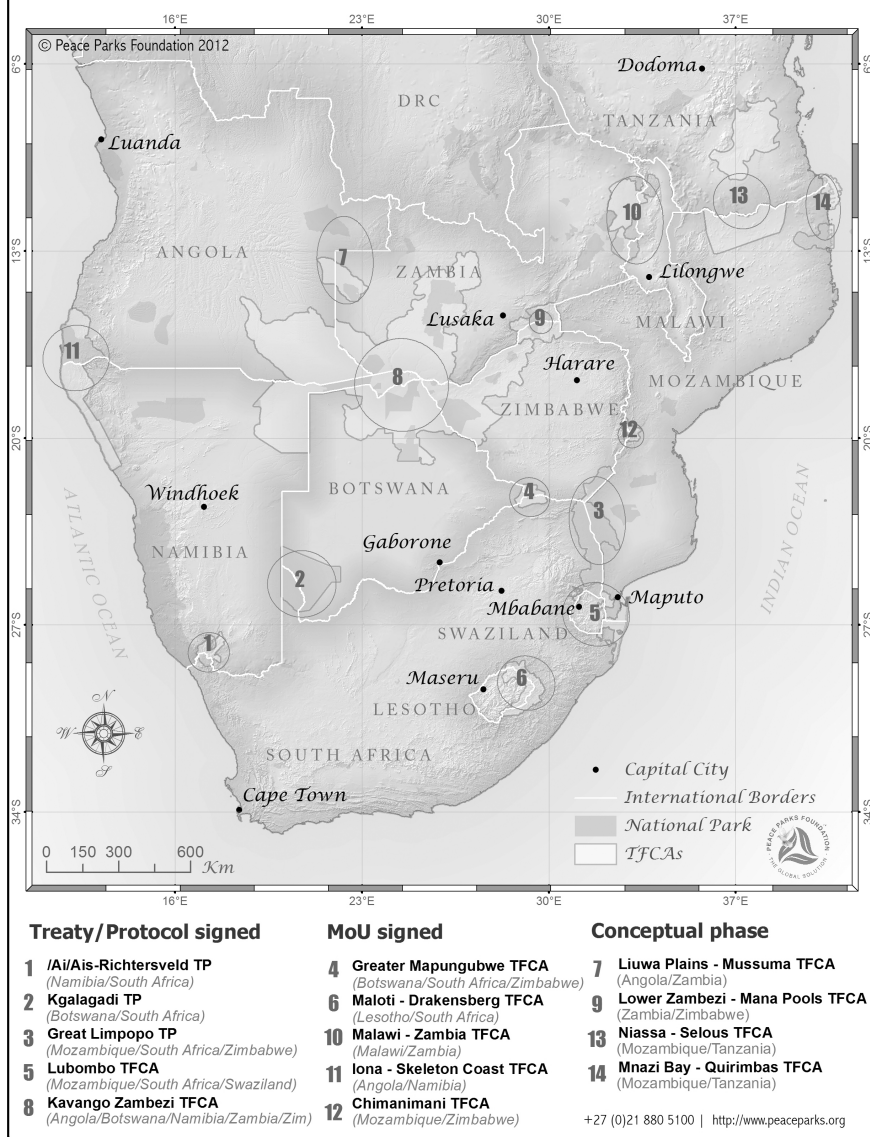
# Transfrontier Conservation Areas: The Southern African Experience

*David Mabunda, Freek Venter, Danie Pienaar, and Piet Theron*

## INTRODUCTION

Good progress has been made in the implementation of the transfrontier conservation areas (TFCAs) projects in southern Africa (Map 1). This initiative constitutes some of the most exciting, exhilarating, and ambitious conservation projects in the world today. These projects aim to establish large conservation and wildlife areas not only through the integration of vast landscapes and re-connecting ecological systems, but also through development of cross-border tourism linkages, ensuring sustainable benefits to local communities through socio-economic improvement, and the promotion of peace and stability in the region. The development of TFCAs is also an exemplary process of partnerships between governments and the private sector. While the main players are the relevant governments and implementing agencies, donors and NGOs have also greatly contributed towards the creation of transfrontier parks and transfrontier conservation areas.

# Southern African Peace Parks / Transfrontier Conservation Areas



MAP 1. TRANSFRONTIER CONSERVATION AREAS IN SOUTHERN AFRICA (PEACE PARKS FOUNDATION).

Southern Africa's first TFCA, the Kgalagadi Transfrontier Park, was formally opened on May 12, 2000, by the presidents of Botswana and South Africa. In the same year, the governments of Mozambique, South Africa, and Swaziland signed five protocols on the establishment of the Lubombo Transfrontier Conservation and Resource Area. These milestones were followed by the signing of a memorandum of understanding between the governments of the Kingdom of Lesotho and South Africa on June 11, 2001, which paved the way for the establishment of the Maloti-Drakensberg Transfrontier Conservation and Development Area (now known as the Maloti-Drakensberg Transfrontier Project). On December 9, 2002, the Great Limpopo Transfrontier Park (GLTP) was proclaimed with the signing of the International Treaty at Xai-Xai, Mozambique by the Heads of State of Mozambique, South Africa and Zimbabwe. Following this, the treaty for the establishment of the |Ai-|Ais/Richtersveld Transfrontier Park was signed on August 1, 2003, in Windhoek by the presidents of Namibia and South Africa. Finally, following an extensive process, the memorandum of understanding for the establishment of the Limpopo/Shashe Transfrontier Conservation Area was signed by the three ministers of Environment and/or Tourism of Botswana, South Africa and Zimbabwe on June 22, 2006.

The South African National Parks (SANParks) – which administers twenty-one national parks in South Africa, including the Kruger National Park – is the sole South African implementing agent for four transfrontier parks and renders all the professional and logistical support to these projects. The four transfrontier parks that fall under SANParks are: the Great Limpopo Transfrontier Park, the |Ai-|Ais/Richtersveld Transfrontier Park, the Kgalagadi Transfrontier Park, and the proposed Limpopo/Shashe Transfrontier Conservation Area. In addition to these, SANParks is also involved as one of four South African implementing agencies in the establishment of the Maloti-Drakensberg Transfrontier Project.

## INTERNATIONAL CONTEXT

### **Growth of Transboundary Conservation in the Global Conservation Arena**

The Albert National Park was the first transboundary protected area to be established in 1925 by Belgium to conserve natural resources between the colonial states of Rwanda-Burundi and the Belgian Congo (Wilkie et al. 2001). During the same time period, Poland and Czechoslovakia signed the *Krakow Protocol* in 1925 to manage border parks in both countries for conservation purposes (Thorsell 1990). The Waterton-Glacier International Peace Park followed in 1932 to commemorate the long history of peace and friendship between Canada and the United States of America (Sandwith et al. 2001). Since these early initiatives, the establishment of transboundary conservation areas globally has grown significantly, now totalling 169 transboundary protected area complexes which involve 666 protected areas in 113 countries. In establishing the protected area complexes, different levels of cooperation and formalization of cooperative agreements exist. These initiatives were established to realize the potential of biodiversity and cultural resource conservation at a landscape level, to foster peace and prosperity between countries, and to promote regional socioeconomic growth and integration (IUCN 2005).

## REGIONAL CONTEXT

### **South African Development Community (SADC) Protocol on Wildlife Conservation and Law Enforcement**

Biodiversity conservation is taken to be the overriding rationale for the existence of transfrontier parks and transfrontier conservation areas (Theron 2007). The major value of the concept of creating TFCAs is taken to be the enhancement of biodiversity and ecosystem conservation across international boundaries. However, a strong supporting reason in many

cases is for socioeconomic development through the development of cross-border tourism. In addition, the enhancement of cooperation between states, government agencies, and communities across political boundaries are also viewed by governments and stakeholders as a key deliverable of TFCA projects. All of the SADC members are signatories of the Protocol on Wildlife Conservation and Law Enforcement. This Protocol, signed on August 18, 1999, in Maputo, under Article 4(f) commits members to promote the conservation of shared wildlife resources through the establishment of transfrontier conservation areas (Hall-Martin and Modise 2002).

### **Action Plan of the Environment Initiative of NEPAD (New Partnership for Africa's Development)**

The African continent with its rich resource base offers real potential for socioeconomic development. However, the impacts of population growth, poverty, and inappropriate development and the associated impacts of natural resource depletion are key factors in the state of the environment in Africa. These, combined with the ever-present occurrence of natural disasters, global climate change and an often-ineffective policy environment, lead to continued environmental degradation.

In order to address challenges associated with Africa's future, the heads of state initiated the New Partnership for Africa's Development (NEPAD). This initiative outlines a common vision to eradicate poverty and place all the countries in the continent on a path of sustainable growth and development that will allow them to participate effectively in the world economy. NEPAD initiated the development and adoption of an environmental action plan and strategy to address the region's environmental challenges while at the same time combating poverty and promoting socioeconomic development. This action plan, which was adopted at the Johannesburg World Summit on Sustainable Development (WSSD), was prepared through a participatory process with all key stakeholders under the leadership of the African Ministerial Conference on Environment (AMCEN) and provides an implementation strategy for the first decade of the twenty-first century. It is a body of collective and individual responsibilities and actions that African countries adopt and will implement to maintain the integrity of the environment and ensure sustainable use of

their natural resources through partnerships. In so doing, it recognizes that partnerships among African countries and the international community are key elements of a shared common vision to achieve sustainable development and eradicate poverty.

The Environment Action Plan is a coherent long-term program which has been prepared to promote Africa's sustainable development. It is further embedded in the main philosophy of NEPAD which aims to balance short-term economic growth challenges with long-term environmental, poverty eradication, and social development imperatives. The Action Plan outlines project activities to be implemented over the next ten years. The key program areas cover the following priority sectors and cross-cutting issues: combating land degradation, drought and desertification, wetlands, invasive species, marine and coastal resources, cross-border conservation of natural resources, and climate change.

The implementation of the action plan provides a challenge to the continent that can only be successfully implemented through the support and active participation of all African countries and their development partners.

## **Leadership in Conservation for Africa Initiative**

The Leadership for Conservation in Africa (LCA) initiative is the brain-child of Dr. David Mabunda, chief executive of South African National Parks (SANParks). This initiative was launched in August 2006, aiming to bring together a core group of African conservation leaders and businessmen to establish long-term business and development frameworks. It is also envisaged that through the LCA initiative, issues of sustainable biodiversity and conservation and related socioeconomic advancement will be promoted. The initiative is a joint partnership with Gold Fields Limited (funding patron) and the International Union for Conservation of Nature (IUCN) as the conservation patron.

The vision statement for LCA is: "To harness the collective will and capacity of business and conservation leaders for sustainable conservation-led socio-economic development in Africa" (LCA 2007). In so doing, the initiative aims to create a sustainable institutional partnership

of influential, credible and committed business and conservation leaders striving to reach the following objectives:

- Significantly advance the discourse and practice of conservation-led development in Africa through advocacy and action;
- Facilitate a formal process for the sharing and development of knowledge, skills, and capacity, so as to promote conservation-led development across the African continent;
- Support and promote integration of conservation and development strategies across the African continent; and
- Create an environment conducive to the generation of significant returns for conservation, business and communities.

The LCA was launched in the Kruger National Park August 22–27, 2006, involving conservation leaders in Africa and a number of local and international business experts. Key issues that were addressed at this workshop included capacity-building, good corporate governance, issues of skills development, and investment opportunities.

## **TFCAs as Regional Conservation Based Development Initiatives**

Based on the aforementioned, it is evident that the development of transboundary conservation areas in the region could potentially play a significant role from both a conservation and socioeconomic development perspective. In other words, transboundary conservation initiatives should be instituted as an effective and legitimate land use which contributes to regional economic development and integration, sustainable livelihoods, peace and security, and increased capacity for biodiversity conservation.

In so doing, TFCAs should aim to contribute to the following broad regional priorities:



- Sustainable local and regional livelihoods;
- Increased capacity for biodiversity conservation in the region;
- Stability, peace, and security;
- Long-term sustainability of conservation development initiatives, including legitimate participation of all stakeholders; and
- Integrated local and regional economic development programs (Fakir and Fourie 2004).

## BACKGROUND TO TRANSFRONTIER PARKS/ CONSERVATION AREAS IN SOUTHERN AFRICA

### **Transfrontier Parks/Transfrontier Conservation Areas**

Generally, two different types of transboundary conservation area projects or initiatives are being established in southern Africa. These are **transfrontier parks** and **transfrontier conservation areas**.

A **Transfrontier Park (TFP)** is established when the authorities responsible for areas where the primary focus is wildlife conservation, which border on one another across international boundaries, formally agree to manage those areas as one integrated unit according to a joint management plan. These authorities also undertake to remove all human barriers within the transfrontier park so that animals can roam freely. The purpose of these parks is to employ conservation as a land-use option to the benefit of local people.

A **Transfrontier Conservation Area (TFCA)** usually refers to a cross-border region where the conservation status of the various component areas differs. These areas may include private game reserves, communal natural resource management areas, and even hunting concession areas. Fences, major highways, railway lines, or other barriers may also separate the various parts. However, they nevertheless border on one another and are managed for long-term sustainable use of natural resources, even

though the free movement of all animals amongst the various parts may not be possible. The SADC Protocol on Wildlife Conservation and Law Enforcement defines a TFCA 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” (SADC 2011).

Projects are generally either implemented as TFCAs from the outset or in a phased approach where the TFP is established first as the core of the transboundary conservation project, followed with the establishment of the TFCA as a buffer area around the core.

Most TFPs established to date in southern Africa consist of formally proclaimed conservation areas managed by government authorities. Based on the aforementioned, the various institutions established to date consist mainly of government officials and representatives from the implementing agencies.

The planning and development of TFCAs, which include communal and private land and the formation of appropriate institutions to manage these, presents a bigger challenge than when only state-owned land is involved. However, since the formation of TFPs and TFCAs often entails international agreements and treaties, only the state/central government has the mandate to enter into an agreement with the government of another country.

Finally, in order to have effective management of these areas, the relevant institution should also ensure effective participation of, and communication with, the various key stakeholders involved in the process. These stakeholders will often include local and provincial government, local communities, and the private sector.

## **Key Objectives for the Establishment of TFPs/TFCAs**

Transfrontier parks and conservation areas are usually regional projects aimed at establishing large conservation and wildlife areas, not only through the integration of vast landscapes and re-connecting ecological systems, but also through development of cross-border tourism linkages, ensuring sustainable benefits to local communities through socio-economic upliftment, and the promotion of peace and stability in the region.

In so doing, TFCA projects in southern Africa are usually underpinned by the following objectives, which are outlined in various international agreements and/or treaties between the countries involved in the project:

- Fostering transnational collaboration and cooperation among the parties, which in turn facilitates effective ecosystem management in the TFCA area;
- Promoting alliances in the management of biodiversity by encouraging social, economic and other partnerships among the parties, including the private sector, local communities, and non-governmental organizations;
- Enhancing ecosystem integrity and natural ecological processes by harmonizing environmental management procedures across international boundaries and striving to remove artificial barriers impeding the natural movement of wildlife;
- The establishment and maintenance of a sustainable sub-regional economic base through appropriate development frameworks, strategies, and work plans;
- Fostering regional socioeconomic development by the creation of transborder ecotourism; and
- The exchange of technical, scientific, and legal information for the joint management of ecosystems.

## **Key Role Players**

The establishment of transfrontier conservation areas is an exemplary process of partnerships between governments and the private sector. While the main players are the relevant governments and implementing agencies, donors and non-governmental organizations (NGOs) have also greatly contributed towards the creation of transfrontier parks.

In developing transfrontier conservation areas, SANParks works closely with the Department of Water and Environmental Affairs (DWEA), which is the lead national department for the development of

TFCAs in South Africa. The department plays a critical role under the political leadership of the minister of Water and Environmental Affairs in maintaining the momentum needed for the successful planning, development, and implementation of transfrontier projects. Support from other partners and role players including government departments, relevant governments and implementing agencies of partner countries, the private sector, donors, and NGOs, such as the Peace Parks Foundation, are also critical to the successful implementation of these projects.

The role that the Peace Parks Foundation (PPF) has played in the region needs special mentioning. Under the visionary leadership of Dr. Anton Rupert, who founded the South African branch of the World Wildlife Fund, the idea of promoting peace in southern Africa through conservation led to the establishment of the Peace Parks Foundation in 1990. He invited the presidents of the countries of the region to serve as patrons of the Peace Parks Foundation, thus indicating their support of the ideals of the organization. The Peace Parks Foundation is thus an international partnership working to promote wildlife conservation, ecotourism, and job creation in southern Africa, playing a facilitating role when it comes to the establishment of transfrontier conservation areas. In so doing, the primary objective of the PPF is to promote transfrontier conservation areas in southern African regions that embrace the land of more than one nation, unifying fragmented ecological habitats and promoting environmental and political stability. Through these proposed “Peace Parks,” the foundation is working with governments, the private sector and local communities to protect our environment and unlock the huge economic potential of the region’s tourist industry. The Peace Parks, or transfrontier conservation areas, will help to bind together southern Africa’s nations in a vast network of sustainable and environmental partnerships, protecting their unique natural inheritance for generations and promoting a culture of peace and cooperation.

Other key role-players that have made major contributions towards the TFCA Programme in southern Africa include the Global Environmental Facility, the World Bank, United States Agency for International Development (USAID), Regional Centre for Southern Africa, the German Ministry of Cooperation through Kreditanstalt

für Wiederaufbau (KfW), the Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ), Conservation International (CI), the Wildlife Conservation Society (WCS), World Wide Fund for Nature in Netherlands (WWF-Netherlands), the Dutch National Postcode Lottery, the Deutsche Bank, Südliches Afrika Initiative der Deutschen Wirtschaft (SAFRI)/DaimlerChrysler, Novamedia, the Rufford Maurice Laing Foundation, and the African Wildlife Foundation.

## CASE STUDIES

### **Kgalagadi Transfrontier Park**

The Kgalagadi Transfrontier Park (KTP) is 37,991 km<sup>2</sup> in extent, of which 27 per cent is in South Africa with the remainder in Botswana. This park has been de facto in existence since 1948 through a verbal agreement between South Africa and Botswana and consists of the Gemsbok National Park in Botswana (proclaimed in 1971) and the Kalahari Gemsbok National Park in South Africa (proclaimed in 1931). It subsequently incorporated the Mabuasehube Game Reserve in Botswana in 1992. The area represents a large ecosystem relatively free of human influence, an increasingly rare phenomenon in Africa. The boundary between the two parks, which is also the international border between the two countries, never had any physical barriers, thus always allowing for the free movement of animals.

In June 1992, representatives from the South African National Parks Board (now SANParks) and the Department of Wildlife and National Parks of Botswana set up a bilateral committee to manage the area as a single ecological unit. This undertaking led to the drafting of a management plan, which was reviewed and approved by the two conservation agencies early in 1997. An integral feature of the agreement was that each country would provide and maintain its own tourism facilities and infrastructure, giving particular attention to developing and involving communities living adjacent to the park. On April 7, 1999, Botswana and South Africa signed a historic bilateral agreement whereby both countries undertook to manage their adjacent national parks, the Gemsbok National Park in

Botswana and the Kalahari Gemsbok National Park in South Africa, as a single ecological unit. Following the signing of the agreement, southern Africa's first Peace Park was opened on May 12, 2000, by President Festus Mogae of Botswana and President Thabo Mbeki of South Africa.

## *Joint Zoning Plan*

### **Background**

Tourism is recognized as having an essential role to play in stimulating economic activity in the region and providing employment and business opportunities to local communities. Botswana and South Africa undertook to develop the tourism potential of the park in a manner compatible with its conservation and wilderness qualities.

A draft management plan for the Kgalagadi Transfrontier Park (KTP) was produced in 1996, detailing joint approaches in dealing with environmental, conservation, and wildlife protection issues in the park. This management plan sets out the framework for joint management of the area by the Department of Wildlife and National Parks of Botswana and SANParks.

The management plan is, however, inadequate in two important areas, namely tourism and community economic empowerment. Due to these shortcomings, the management plan is in the process of being revised, with the main focus being on tourism development and community economic empowerment. The first step in the revision of the management plan was to commission the development of the tourism development component of the management plan, which has been sponsored by the PPF. This component also included the drafting of a joint zoning plan.

The development of a joint zoning plan for transfrontier parks has always been aimed at harmonizing the various existing zoning plans of the component parks in order to minimize conflict. However, in the case of KTP it was decided by the bilateral committee that the approach to the development of the joint zoning plan should be a joint process involving both national parks from the outset, jointly agreeing on the zoning process and the use zones. The committee also felt that this process should inform

the tourism development in the park and should therefore be developed as part of the integrated tourism plan for the KTP.

### Joint Zoning Plan Process

SANParks and the Botswana Department of Wildlife and National Parks (BDWNP) initiated the compilation of a joint tourism development plan for the KTP. As part of the tourism plan, the joint zoning plan process was facilitated by a group of specialists from the Peace Parks Foundation (Beyond Horizons Consulting and Peace Parks Foundation 2006). The joint zoning system for KTP was compiled by studying the zoning systems as applied by SANParks in all national parks and by BDWNP in the Moremi and Chobe National Parks.

A preliminary draft, combining features of both systems, was sent to a representative working group for comment. The joint zoning system was modified as a result of feedback from the group. The resulting first draft was then presented and discussed at a workshop held in Pretoria, South Africa, on April 6, 2006. After discussion, the system was extensively modified and a draft zoning map was compiled. The system was further modified as the zoning process proceeded and was finalized at a workshop held in Gaborone, Botswana, on June 27, 2006.

The outcome of the aforementioned process resulted in a zoning system comprised of the following:

- a) Visitor use zones covering the entire park; and
- b) Special management overlays which designate specific areas of the park that require special management interventions.

The visitor use zones reflect a gradation of wilderness quality experiences, levels of tourism development, and the density of visitor use. The broad categories of intended experiences are indicative of the visitor experience intended for the zones in that category. The various zones were then defined in terms of levels of visitor density within the intended visitor experience.

## Outcome

The outcome of this exercise was a joint zoning plan, which now forms an integral part of the integrated tourism development plan and the joint management plan. The main objective for the development of the zoning plan was to provide for a wide range of visitor experiences without compromising the integrity of the park. The use zones applied in the KTP ranged from areas where one can have a pure wilderness experience with no infrastructure development to development nodes providing for tourist rest camps. The boundaries of the various zones, and the various nodes within these were carefully located on the desert landscape in order to minimize interaction between users. The zones were also used to ensure that high intensity facilities and activities are placed in areas that are robust enough to tolerate intensive use. Visitor use zones also served to protect more sensitive areas of the park from over-use.

## *Upgrading of a portion of the Nossob Road*

### Background

The existing 540 kilometres of tourist roads on the South African side of the KTP are largely restricted to the dry Nossob and Auob riverbeds owing to their flat consolidated surfaces, combined with the difficulty of constructing roads in the unconsolidated sand dunes and lack of permanent water. The roads in and next to the river were never designed and constructed as new roads and follow the routes of farm roads that existed before the area was proclaimed a national park.

Along the entire length of the Auob River and the middle and northern section of Nossob River, the road has been largely moved out of the riverbed onto the calcrete foot slope. However, along the southern section of the Nossob River, the road has remained in the riverbed owing to high dunes on the western bank and calcrete cliffs on the Botswana eastern bank. This particular section remains a management problem as the present ungravelled road has been lowered below the riverbed surface through continual maintenance grading and loss of soil in the form of dust through traffic movement. This has made it particularly prone to flooding when water concentrates on the road causing it to act as a water



canal, making it inaccessible to tourist traffic for extended periods during the summer months. The water in the road prevents precious water from reaching the sensitive riverine ecosystems.

Following the above, it seemed inevitable that this section of the Nossob road is in dire need of upgrading. The primary motivation behind the upgrading of the road stems from the difficulties in road passage during times of heavy rainfall, when the road becomes impassable due to flooding. From a tourism perspective, the current positioning of the road in the riverbed provides good game viewing opportunity during the day as game congregates in the riverbed. Most of the park roads associated with the primary rivers run within the river courses. Thus, tourists are not exposed to the other various aesthetic environments offered within the park.

### Planning Process

In order to investigate and evaluate the various alternatives associated with the proposed upgrade/re-alignment of the lower section of the Nossob Road (approximately thirty-one km), an inter-disciplinary team was constituted by the KTP Bi-lateral Committee to conduct an initial assessment of the proposed project. The task team consisted of the two park managers of the Botswana and South African component of the KTP, a park road engineer, a park planner, an ecologist, and the tourism consultant appointed to develop the integrated tourism plan. It is submitted that relocating the road out of the riverbed, while retaining the opportunity for views over the riverbed, would provide visitors with the opportunity to experience different landscape facets and the associated fauna and flora.

### Outcome

Given the requirements of the park to provide a good tourism product, the preferred action of upgrading the road would require a compromise between ecological and aesthetic requirements in order to provide reasonable tourism opportunities. Although relocation of the road on the South African side of the river could also be considered an option, this is largely impractical owing to the nature of the riverbed margin habitat of steep dunes.

Four alternatives to solving the problem were identified. These included: upgrading the present road within the riverbed, moving the road onto the eastern river margin, moving the road onto the eastern calcrete terrace, or a combination of the three.

Following the identification of alternatives, an environmental scoping process was undertaken to evaluate the potential opportunities and constraints associated with each of the alternatives. A scoring system was used to identify positive and negative impacts associated with each of the road alternatives. Based on the outcome of this process, it was recommended that moving the road, or its most problematic sections, is the preferred option mainly because: (1) roads should not be constructed in rivers in national parks as a matter of principle; (2) the road reduces, and has a negative impact on, scarce riverine habitat in this arid national park; (3) tourists will experience a variety of new habitats if the road is moved; and (4) this would also allow the potential development of an exclusive tourism node for the Botswana side at Rooiputs. The rest of the river sites have been monopolized for general tourist usage due to the placement of the roads.

This process led to the drafting of a project proposal, which has currently been submitted to various donors and funders for their consideration. If the funding applications are successful, and the project gets implemented, it would benefit the overall development and management of the KTP significantly. Not only will it provide a sustainable solution to the current difficulties in road passage during times of heavy rainfall to the lower section of the Nossob Road, but it will also rehabilitate the section of the Nossob River ecosystem to a state nearest its natural condition and restore the ecosystem services and processes. At the same time, it will provide tourists visiting the park with an alternative tourism experience by exposing them to the different facets of the Nossob River Valley landscape.

## **Great Limpopo Transfrontier Park**

The Great Limpopo Transfrontier Park (GLTP) project is a joint agreement between Mozambique, South Africa, and Zimbabwe to establish a 3,577,144-hectare transfrontier park comprised of three national parks, one in each of the respective countries involved. The three areas involved

are the recently proclaimed Limpopo National Park (formerly known as Coutada 16) in Mozambique, the Kruger National Park and Makuleke region in South Africa, and the Gonarezhou National Park, including the Manjinji Pan Sanctuary and Malipati Safari Area in Zimbabwe.

The establishment of the GLTP is the first phase in the establishment of a bigger transfrontier conservation area (GLTFCA) encompassing almost 10 million hectares and including Banhine and Zinave National Parks, the Massingir and Corumana areas and interlinking regions in Mozambique, as well as various private- and state-owned conservation and communal areas in South Africa and Zimbabwe bordering on the transfrontier park. The final delineation of the area will be determined by way of broadly consultative processes that are currently underway.

### *Co-management in the Kruger National Park Context*

#### **Background**

As described above, large areas surrounding the Gonarezhou National Park in Zimbabwe and occurring to the east and south of the Limpopo National Park in Mozambique have been earmarked by these respective countries to be part of the GLTFCA. In South Africa, the areas to the west of the Kruger National Park present few opportunities to allocate additional land for conservation due to the land being occupied by communities, agricultural activities, and other land uses that are not compatible with conservation. The KNP have thus embarked on a program to include as much as possible of the unoccupied land as part of the GLTFCA. This program addresses the various interlinked components of the broader vision to effectively “expand” the boundaries of the KNP through various strategies and approaches. In so doing, a few key objectives of the KNP are addressed simultaneously, namely the regional integration into the socio-ecological system with enhanced buffer effects to the core KNP protected area, as well as the provision of “benefits beyond boundaries.” This overall program consists of a number of components, namely the transfrontier conservation area program, non-SANParks land within the boundaries of KNP, buffer areas (including arrangements with provincial and private nature reserves), communal land incorporations, and land claims.

The main objectives of the approach of SANParks to expand the land under conservation are the positive spin-offs this may have for both the KNP ecosystems and for local communities adjacent to the KNP. Thus, for example, one of the spin-offs is the enabling of sustainable resource use practices as embedded in the *National Environmental Management: Protected Areas Act*.

The philosophy behind including contractual parks and other areas into the greater KNP ecosystem hinges on three important aspects:

- Such areas along the boundaries of the KNP function as important buffer areas against several potentially significant impacts on KNP. These include poaching, spread into the park of invasive alien biota, feral animals or diseases, as well as impacts related to incompatible land use and developments that may impact on the ecosystem functioning and sense of place such as visible infrastructure, light pollution, diminishing of habitats and ecosystem services, fragmentation of migration routes, etc.
- It increases ecosystem size which positively enhances and enables the maintenance of natural disturbance regimes and re-colonization sources and events, and minimizes possible extinctions. Crucial habitats, that may not be present within the boundaries of the park and are important for specialized biota, can be included in the expanded protected area. This will be especially important in the face of predicted climate change over the next few decades, as well as burgeoning elephant populations, enabling highly desirable “source-sink” ecosystem dynamics.
- Including adjacent areas into the greater KNP will significantly increase the benefits to neighbouring communities and may be an important step in the fight against poverty. Direct and indirect benefits to neighbours, particularly communities dependent on the land for their livelihoods, will encourage and facilitate KNP’s sustainability

and future existence. In this way, a strong constituency will be built.

### Co-management Arrangements

As land adjacent to the KNP has become prohibitively expensive, it is envisaged that potential conservation land earmarked for conservation purposes, should be effectively incorporated by means of management agreements and/or on a formal contractual basis. The exact nature of such incorporation will depend on the status of the adjacent area under consideration, which is by choice of the individual property owners. Proclamation of these areas as formal conservation land can follow different routes that will influence the extent of involvement of the KNP in the management of those areas. Essentially, two types of contractual arrangements can be entered into with areas that are connected to the KNP, namely:

- areas where the KNP conducts all the necessary management activities and the land owner contributes financially towards the management of the area; or
- the land owner conducts the conservation management according to the conditions of agreement and the management plan of the area.

The ultimate goal is for all areas within the open conservation system around the KNP to be governed by some form of contractual agreement.

### Outcome

In order to facilitate the ideal of free movement of people and animals between the different transfrontier parks, certain infrastructure had to be created and fences removed. A new tourist crossing point has been established at Giryondo, and the Pafuri border post has been upgraded to facilitate tourists moving between the KNP and Limpopo National Park in Mozambique.

A total of 45 kilometres of fence separating KNP and the parks in Mozambique has been removed. It is hoped to have the remaining 100-kilometre fence between LNP and KNP removed by the end of 2012.

In order to link KNP with Gonarezhou National Park in Zimbabwe, a new tourist crossing point needs to be established over the Limpopo River. An environmental impact assessment process is currently underway to establish the most suitable crossing point and type of structure. The different role players in both South Africa and Zimbabwe have diverse preferred sites and types of structures in mind, and sensitive negotiations will be required to get agreement on this important issue.

It is believed that an effectively designed and implemented TFCA will enhance the achievability of the desired state within and around KNP. For this purpose, a discussion paper and an integrated conservation development plan for the South African component of the GLTCA have been drafted to guide the relationship between key partners. Due to the existing memorandum of understanding between SANParks, DEAT, and Peace Parks Foundation (PPF), it was recommended that SANParks enters into an agreement with PPF to undertake this project. Additional potential stakeholders envisaged to be included are: World Wide Fund for Nature, the South African members of the GLTP JMB, Department of Water Affairs and Forestry, Department of Agriculture, South African Biodiversity Institute, Provincial Government of Mpumalanga, Provincial Government of Limpopo, relevant local authorities, traditional leaders, non-government organizations, affected private land-owners and land-owner associations, Wits Rural Facility, and the South African Wildlife Ranchers Association.

An additional challenge is the establishment of private nature reserves across international boundaries, as this is also covered by the GLTP Treaty. The private reserves on the Mozambican side of the border between Massingir Dam and the Inkomati River are planned to be included into the Greater GLTCA. Negotiations on the ground were found to be complex as the specific land in Mozambique falls under the jurisdiction of the Mozambican Department of Agriculture. Nevertheless, it was agreed between the KNP, Mozambique GLTP officials, and Mozambique Department of Agriculture officials that the following conditions for inclusion of this land will apply:

- The formation of an association by all the private properties (this has been completed);
- The drafting of a management plan that is acceptable for the KNP, Mozambique GLTP officials, and Mozambique Department of Agriculture officials – the PPF is facilitating this process and significant progress has been made;
- Fencing of the Mozambican eastern boundary to a specific standard – this has been completed for approximately 30% of the properties as the costs related to the fencing are prohibitive for some of the leaseholders at present; and
- Adequate resources in terms of area integrity protection and fence maintenance need to be in place.

Non-SANParks lands within the boundaries of the KNP are areas that have been successfully claimed by communities and fall within the boundaries of the KNP. The areas are under individual community ownership. These areas came about as a result of land restitution and/or community areas that were fenced in but not necessarily proclaimed as part of the KNP historically. Currently, there are three such areas in the KNP, namely Makuleke Contractual Park (land claim), Mdluli land, and Nkambeni land (communal land fenced into the KNP). The day-to-day conservation management of these areas, which includes law enforcement and biodiversity management and monitoring, is performed jointly by KNP officials and the respective communities. Commercial activities within these areas have been contracted out by the communities as concessions and the concession-holders are responsible for commercial developments. A signed settlement agreement exists in the case of the Makuleke land, but no agreements exist yet with the Mdluli and Nkambeni communities.

The Makuleke people were compensated in 1998 for their relocation from the far northern KNP with the restitution of their land and the creation of a contractual park. A twenty-five-year agreement was forged between the Makuleke and SANParks to return the ownership and title of the land to the people, although the title specifies that the land may only be used for wildlife conservation. The contract that governs the

incorporation of the Makuleke land into KNP enables them to make sustainable use of specified natural resources, and they have the option to construct six small tourist camps with a cumulative capacity of 224 beds.

The land is owned by the Makuleke Community Property Association (CPA) and occurs between the Limpopo to the Luvuvhu rivers. The area is at the centre of the GLTFCA. Since acquiring ownership of the land, the Makuleke awarded four concessions in their area, i.e., one trophy hunting by Wayne Wagner Safaris (now terminated), one training camp (Makuleke Ecotraining) that trains guides, and two lodge concessions operated by Matswani Safaris (The Outpost) and Wilderness Safaris (Pafuri Tented Camp).

The Makuleke contractual park is managed according to the signed management agreement as well as the management plan for the area. There is a joint management board (JMB) that consists of three members from both parties – SANParks and the Makuleke CPA. The JMB is the decision-maker in terms of the management of the Makuleke contractual park to ensure that the area is managed according to the agreement. There is also an operations officer who is responsible for implementing JMB decisions. The Makuleke contractual park in the KNP has been in operation for twelve years, and although teething problems did occur along the way, operations are starting to become smoother. One reason for this is that the capacity in and understanding of conservation management issues of the CPA members on the JMB has increased considerably.

The Mdluli land (Daannel farm) as well as the Nkambeni land is within the KNP, close to the Numbi Entrance Gate and Pretoriuskop Rest Camp. These areas are not contractually bound due to certain legislative processes that need to be completed. It is envisaged that the agreements with these areas would be completed and signed within two years. Unfortunately, due to the lack of contractual direction, developments on these areas have been conducted without consultation with SANParks and structures that do not comply with environmental and aesthetic standards for the KNP have been erected.

Provincial nature reserves have been proclaimed in the past under provincial legislation and are managed by the provincial authorities



according to draft open conservation area management agreements with the KNP. In the case of KNP, these provincial nature reserves include:

- Manyeleti (managed by Mpumalanga Tourism and Parks Agency [MTPA]);
- Letaba Ranch (managed by Limpopo Department of Economic Development, Environment and Tourism [LEDET]);
- Makuya (managed by LEDET); and
- Mthimkhulu (managed jointly by LEDET and the concessionaire of the land).

The fences between all these reserves and the KNP have been removed. Co-management agreements have been drafted but not finalized due to the changes regarding new legislation over the past few years.

The Mthethomusha area, managed by MTPA, along the southern part of the KNP is separated from the KNP by a fence and the railway line running along the Nsigazi River. In the future, it would be possible to drop fences if a similar arrangement with the rail authorities can be reached as that which is in place where the railway line runs through the Klaserie and Balule Private Nature Reserves.

Private nature reserves in South Africa bordering the KNP are currently proclaimed as nature reserves under provincial legislation (Mpumalanga and Limpopo). These areas are Sabie Sand Wildtuin and the Associated Private Nature Reserves (APNR), which include Timbavati, Klaserie, Umbabat, and Balule Private Nature Reserves. There is a signed management agreement between SANParks and APNR and the latter area is managed according to a master plan drafted in compliance with the previous KNP management plan. Only a draft agreement between SANParks and Sabie Sand Wildtuin exists, and there is currently no agreed management plan in place. These agreements give the private nature reserves autonomy in the management of their areas, but within the limits of the agreed management plan.

As part of the contractual obligation of the APNR, an agreed hunting protocol was drafted to regulate the species of animals hunted, where they are hunted and the numbers involved. The proposed take-off quotas are based on the annual aerial wildlife survey conducted during the late dry season as well as veld condition assessments and previous climatic conditions. The take-off quotas are generally less than 3 per cent of the various species totals and are well below average annual population growth rates of the various species. The actual take-off percentages could be expected to be even lower as many large herbivore species are generally undercounted during total area aerial counts, particularly for species such as impala (*Aepyceros melampus*), kudu (*Tragelaphus strepsiceros*), and warthog (*Phacochoerus africanus*). The annual take-off quotas can therefore be considered to be well within acceptable removal limits, which would not impact the various species and are considered in line with sustainable utilization practices.

Certain communities that occupy land adjacent to the KNP (currently belonging to the Department of Land Affairs but under claim or utilized by communities) have expressed the desire that parts of their land be included into the KNP as natural resource use and ecotourism zones. Areas that fall in this category include Mjejane and Mthimkhulu (fence removal agreements concluded). Mthimkhulu is managed by LEDET and the concessionaire, but Mjejane is managed by the KNP with funds made available by Mjejane. The Mahumani, Ndindani, Mahlathi, Muyexe, and Mhinga areas are not yet formally included and fences are still intact. These areas were formerly referred to as the Mariyeta Buffer Area – a project that did not get off the ground. The relevant traditional leaders of these areas have shown interest to proclaim and incorporate these areas into KNP as protected environment or contractual national park land that will then be managed by the KNP.

It is envisaged that sustainable resource use within these areas will be conducted under controlled conditions that will be captured in the agreements with these areas. Significant income can be generated from trophy hunting while utilization of renewable resources such as meat, mopane worms (*Gonimbrasia belina*), and thatch will be able to be sourced at

sustainable levels, thus allowing the communities access to food sources as well as to earn an income (e.g., from trophy hunting, ecotourism ventures, etc.).

### *Development of the Giryondo Tourist Access Facility*

#### **Background**

One of the key objectives of the Great Limpopo Transfrontier Park is to “develop trans-border ecotourism as a means of fostering regional socio-economic development” (SANParks 2011a). This can only be achieved if adequate access facilities are provided to facilitate the flow of tourists between the three countries involved.

The GLTP area is rich in ecological heritage, resulting in the primary economic activity being nature-based tourism. From a tourism development perspective, the key components in the GLTP are the Kruger National Park and the Makuleke region in South Africa, which have had more than one hundred years of tourism development and currently host more than one million visitors a year. The established, sophisticated tourism infrastructure in this part of the GLTP serves as an ideal springboard for increasing tourism throughout the rest of the transfrontier park and conservation area.

In light of the above, the planning process for the establishment of the GLTP identified the need to establish a number of border posts between Kruger National Park (South Africa) and Limpopo National Park (Mozambique), and Kruger National Park and Gonarezhou National Park (Zimbabwe). Once developed, these access facilities would then provide an opportunity for South Africa’s neighbouring countries to capitalize on the approximately 1.3 million people who visit the Kruger National Park each year. As part of this development strategy, it was envisaged that one of the proposed new border posts be developed on the international boundary between Mozambique and South Africa at an area called Giryondo, linking the Limpopo National Park (LNP) and the Kruger National Park (KNP). This facility would also promote the development of the “bush-beach ecotourism” concept, which aims to link world-class game viewing

opportunities to the magnificent Mozambican coast with its beautiful coastal resorts in the Gaza and Inhambane provinces.

### Planning Process

In the 2002/2003 financial year, the South African government allocated an amount of approximately US\$5 million (or about 40 million South African rands) to infrastructure development on the South African side of the Great Limpopo Transfrontier Park. The projects identified for funding in the Kruger National Park were in accordance with the GLTP development plan and included an amount of approximately US\$750,000 for the planning and construction of the proposed Giryondo Border Post. Based on a condition by the South African National Treasury Department, the funds had to be committed before the end of the financial year (March 31, 2003). As a result, the planning, development, and implementation process for the proposed infrastructure developments in the KNP commenced at the beginning of December 2002. This included conceptual planning and design and the commissioning of an Environmental Impact Assessment (EIA) in terms of the relevant South African legislation.

At a GLTP Ministerial Committee meeting held in November 2002, the planning and development process for the proposed tourism infrastructure was initiated. At the beginning of December 2002, consultants were appointed by SANParks (Kruger National Park) to develop a conceptual layout for the proposed border post and conduct an EIA on the proposed development. The EIA identified four alternative development sites and a draft conceptual layout plan was developed and presented to the relevant stakeholders.

In terms of the GLTP process at that time, it was understood that Mozambique would house its customs and immigration facility at Massingir (a town located approximately 60 kilometres from Giryondo). The choice for this location was motivated by the fact that there was an existing airstrip with the possibility of being upgraded to an international airport at a later stage. The recently upgraded infrastructure (housing, the dam, offices, etc.) at Massingir and the airstrip would lift the profile of the whole town as the main gateway into Limpopo National Park (LNP).

Regular discussions between stakeholders in Mozambique and South Africa took place as part of the planning process. One of the key outcomes

was that Mozambique felt it should move its planned border post facility from Massingir to Giryondo. This led initially to the design of a single facility, which would house dual customs and immigration services (i.e., one-stop concept – immigration facilities from both countries in one building straddling the international boundary). A single border crossing facility was successfully opened in 2006 allowing for the movement of tourists between Mozambique and South Africa within the GLTP.

It became clear that Mozambique had to source separate funding for its component of the Giryondo Border Post. In addition, Mozambique was of the opinion that the existing road to Massingir needed upgrading before tourists could travel into the LNP. To complicate matters, the Limpopo National Park development plan did not make any provision for the development of tourist facilities for at least the next two to three years. This meant that the LNP was not in a position to provide overnight facilities to tourists once the border became operational.

Due to a condition that the funds had to be committed by the end of March 2003, South Africa had no option other than to proceed with the project. In so doing, the planning phase for the facility was completed by March 2003 and construction commenced in July 2003. Construction of the South African component was completed by December 2004. Mozambique sourced government funding for the project from its Ministry of Finance and, after a delay in the release of the project funds by an administrative tribunal responsible for the project, construction activities on the Mozambican component of the Giryondo Border Post only commenced in January 2005. This resulted in the project being twenty-two weeks behind schedule, with the possibility of further delays as a result of the rainy season, which normally stretches to March or April. The Mozambican component of the project was completed at the beginning of November 2005, in time for the operationalization of the border post on December 7, 2005.

## Outcome

Following the postponement of the official opening ceremony of the Giryondo Tourist Access Facility (renamed from a border post to a tourist access facility), the border post became operational on December 7, 2005. The facility was proclaimed as a tourist border post with the implication

that no commercial traffic would be allowed to make use of the facility. The first tourists made use of the facility at eight o'clock in the morning on Wednesday, December 7, 2005. In the first week of operation, approximately one hundred tourists made use of the facility. To date, the facility has significantly enhanced tourism flow between Mozambique and South Africa as part of the further development of the Great Limpopo Transfrontier Park (GLTP). In the first six months of operation, 3,409 vehicles (10,934 people) made use of the facility. This provided LNP with an additional source of revenue through the collection of gate and camping fees. In so doing, tourists travelling through the Giriyondo Tourist Access Facility provided an additional income of approximately US\$65,000 for the Limpopo National Park. This is a significant income given the fact that the overall five-year budget for the development of the LNP is around US\$8 million.

However, given the fact that this was a new type of facility not previously used elsewhere in TFCAs, it provided implementers and managers with a range of challenges. In order to address these, a set of standard operating procedures (SOP) were developed by the two countries (and the respective stakeholders in each) to guide the day-to-day management of the project. The SOP provides guidelines for the operation of the facility, which incorporate the legislative and policy requirements as per the relevant conservation and immigration legislation, and also the relevant guidelines and procedures as per the management plans for LNP and KNP. These procedures are reviewed on a regular basis in order to allow for an adaptive management approach in dealing with issues relating to the operation of the facility.

## *Wildlife Translocation Program*

### **Background**

Wildlife populations in Limpopo National Park have declined drastically over the past twenty-five years, primarily because of the uncontrolled hunting that occurred mostly during the civil war. The hunting was done by residents within the area for subsistence, but also by residents and outsiders for the commercial sale of meat and of trophies.

The erection of the eastern boundary fence of Kruger National Park (KNP) in 1976 had a negative impact on those species that historically undertook seasonal east–west movements between KNP and Mozambique. This was, however, minor compared to the impact of illegal hunting. After the war, localized increases in the numbers of some of the species such as waterbuck and nyala have been observed. Nevertheless, overall game numbers are still very low, given the size of the area and are not nearly adequate enough to support a non-consumptive tourism industry. Game numbers are especially important in enhancing the tourism product of the park, which in turn will provide much needed job opportunities to the local communities residing within the Limpopo National Park. Because of the enormous size of the LNP, management decided that it was imperative that the wildlife numbers in LNP had to be increased as soon as possible. In addition, the translocation of large numbers of common and non-threatening wildlife species from KNP was considered critical to the successful (biodiversity and economic) development of Limpopo National Park as an integral part of the Great Limpopo Transfrontier Park.

### Development of a Wildlife Translocation Program

A wildlife translocation program was initiated as part of the overall development of the GLTP. This program was based on two key activities: (1) the active translocation of wildlife from KNP to LNP, and (2) passive translocation of wildlife through the dropping of sections of the fence located on the international boundary between these two parks.

The active translocation project, which is aimed at delivering approximately 6,000 head of game over a period of five years, started on October 4, 2001, when South Africa's Minister of Environmental Affairs and Tourism at the time, Mr. Mohammed Valli Moosa, initiated the process of relocating wildlife to Limpopo National Park. The South African government, with its implementing agency, SANParks, officially presented the first twenty-five African elephants (*Loxodonta africana*) to the Mozambican minister of Tourism, Mr. Fernando Sumbana, at a ceremony on the international boundary hosted by ex-president Nelson Mandela. At this ceremony, the captured elephants were released into LNP. The Peace Parks Foundation made approximately US\$1 million available for the wildlife

relocation project. SANParks as the implementing agent renders all the professional and logistical support towards this project.

The passive translocation project, which was aimed at dropping three sections of the fence (totalling approximately fifty kilometres) identified by the GLTP Safety and Security Committee, started at the end of 2002. On December 11, 2002, Minister Mohammed Valli Moosa and the Mozambican minister of Tourism, Fernando Sumbana, symbolically removed part of the fence that divided the two national parks. The area where this twenty-metre section of the fence was dropped is located in the far northern region of the two parks. The ceremony to remove the fence followed the signing of a treaty to formally establish the GLTP by South Africa's President Thabo Mbeki, Mozambican President Joachim Chissano, and Zimbabwe's President Robert Mugabe in Xai-Xai, Mozambique on December 9, 2002.

## Outcome

In August 2002, 1,130 wild animals were translocated to Limpopo National Park. These included blue wildebeest (*Connochaetes taurinus*), giraffe (*Giraffa camelopardalis*), impala, warthog, waterbuck (*Kobus ellipsiprymnus*), and zebra. In addition, forty-eight elephants were released into LNP between September 11 and 16, 2002. All the game was caught in the Kruger National Park by the SANParks game capture team. These animals were all translocated to a fenced 300-km<sup>2</sup> wildlife enclosure located in the south-eastern corner of LNP. The main reason for the development of this enclosure was to minimize human-animal conflict between the translocated wildlife and the approximately 6,000 people living in the core area of the park. Following the outcome of a community consultation process, the program continued in 2003 with the translocation of another 893 animals, and 499 animals in 2004, 737 animals in 2005, and 567 animals in 2006 (Table 1).

At the ministerial committee meeting held on June 20, 2003, in Maputo, Mozambique, it was decided that, based on a recommendation from the joint management board (JMB), the activities relating to the fence removal would commence on August 15, 2003. Site establishment by the KNP construction team took place on August 15, 2003, and activities relating to the removal of the 14.85 kilometres of fence commenced on



Table 1. Species and numbers of wildlife translocated to the Limpopo National Park: 2001–2008.

	2001	2002	2003	2004	2005	2006	2007	2008	TOTAL
Impala	–	588	237	132	369	373	61	329	2,089
Zebra	–	158	361	195	205	100	255	87	1,361
Blue Wildebeest	–	264	235	98	98	64	103	28	890
Giraffe	–	4	13	15	14	15	20	33	114
Elephant	25	48	38	–	–	–	–	–	111
Waterbuck	–	15	9	–	18	6	11	–	59
Buffalo	–	–	–	49	–	–	–	–	49
Roan	–	–	–	–	26	–	–	–	26
Lichtenstein Hartebeest	–	–	–	–	7	9	–	–	16
White Rhino	–	–	–	10	–	–	–	–	10
<b>Total</b>	25	1,077	893	499	737	567	450	477	4,725

August 18, 2003. A technical team from KNP was responsible for removing the remainder of the steel cables and other fence structures, and all the components were removed by the end of November 2003. The railway track was left as the only visual demarcation of the international boundary. Following the destruction of the KNP northern boundary fence by the floods that occurred in February 2000, this section was also removed in 2003.

At the GLTP Ministerial Committee meeting held in August 2004, the GLTP Joint Management Board’s recommendation to remove a further thirty kilometres of the Kruger National Park eastern boundary fence was approved. The recommendation included the remaining part (approximately 20 km) of the 35.37-kilometre section in the Sandveld area located in the northern part of the shared boundary between the LNP and KNP, and a 9.95-kilometre section located in the central part of the shared boundary. Both the aforementioned areas fall within the three sections of the KNP fence that were originally identified for removal by the then GLTP Safety and Security Working Group. Following the ministerial committee’s decision, and as an effort to promote Small, Medium, and Micro Enterprises (SMMEs), the South African Department of Water and

Environmental Affairs (DWEA) made US\$40,000 available for the fence removal. Three contractors were appointed towards the end of May 2005 and their work was completed by the end of August of the same year.

To date, the combination of active and passive translocation has increased wildlife numbers in LNP to over 5,000 animals. This has allowed the park to embark on a tourism development program, which has already started but will be phased in over the next five years.

## *GLTP Joint Research Policy*

### **Background**

The Tri-lateral Treaty establishing the Great Limpopo Transfrontier Park and Conservation Area was signed in 2002 and yet a lot remains unknown regarding the real and potential costs and benefits of these initiatives to stakeholders from the community to the regional level. Whilst there has been research undertaken to understand the contribution of transfrontier conservation projects to wildlife and biodiversity conservation, there are still several knowledge gaps that inhibit understanding of the broader implications of transfrontier conservation projects to economic, social, and political development.

Research within the GLTP was conducted largely in an *ad hoc* manner, driven primarily by the fashions of academic institutions. The three parks also have big differences in capacity to manage and coordinate research at the park level.

Research work in Limpopo National Park is limited in quantity and scope, it is not consolidated, and the results are not feeding into management. There is also no internal research capacity in the park to coordinate, guide, and assist visiting researchers and to facilitate the link between science and management. To overcome these problems, park authorities have designed a research program whose objective is to generate environmental, social, and economic information and promote monitoring that is necessary for effective management of the LNP.

The Kruger National Park is the most advanced in terms of conducting research and has had internal research capacity since 1950 (Du Toit et al. 2003). The Scientific Services Department coordinates research and

monitoring activities, does knowledge harvesting, and provides technical information to support park management. Scientific Services has a skilled staff complement of about twenty-five people and has various facilities to help stimulate science, including short-term visiting researcher accommodation, logistical support, and access to long-term datasets. The main task of these scientific staff is to attract and support external research projects of value to the park and re-integrate the ensuing knowledge into park understanding and management.

Much of the research carried out in the Gonarezhou National Park (GNP) is done through the scientific branch of the Parks and Wildlife Management Authority (PWMA). The scientific branch carries out research to establish baseline quantitative data on biology of species, the structure and functions of ecosystems, and the ecological relationships between species and their habitats. PWMA encourages outsiders to conduct research in the Parks and Wildlife Management Estates, given the limited number of researchers within. Priority is given to researchers who undertake research that is in line with the PWMA research program either jointly or independently. Researchers from outside the country apply through the PWMA to the Research Council of Zimbabwe in terms of a permit to conduct research, and to the immigration department for a temporary residence permit. The fee payable is US\$500 to the Research Council and US\$500 to the PWMA to process the application.

The GLTP/TFCA is premised on the need to promote regional cooperation in biodiversity conservation and socio-economic development, and yet understanding of basic ecology, conservation status and trends, functionality of social-ecological-systems, and the costs and potential benefits of transboundary natural resource management in the area as a whole is limited. It is important that knowledge around these issues is generated through joint research. The GLTP has a complexity of stakeholders from the local, national, and regional levels all with different socio-cultural, political, and economic attributes. These attributes are not fully known, especially at the community level. Levels of existing data and knowledge are very uneven among the three parks, such that comparing performance in terms of wildlife management and tourism development is difficult. At the park level, data are also very fragmented and limited primarily to

wildlife. The GLTP/TFCA has the potential to perform better (in social, ecological, and economic terms) than the sum of the separate entities and so gaining an understanding of the value addition from the creation of the transfrontier conservation areas is imperative. Policy decisions made by the Trilateral Ministerial Committee need to be better informed by empirical data. So far research has been too *ad hoc* in nature, with inadequate feedback of research results to park managers and insufficient incorporation of research findings into park management and policies.

Given the discrepancies in research capacity that exist between the three parks, it was agreed that research should be more coordinated, systematic and demand-driven, and research findings used to guide decision-making for the GLTP/TFCA.

### Policy Development Process

Tri-national workshops were thus held to draft the GLTP research policy. Once completed, the policy was ratified by the GLTP JMB.

This policy has been designed to guide joint research activities and initiatives within the GLTP/TFCA due to the realization that there is need for knowledge that will lead to adaptive management of the project as it unfolds. In this policy document, research is defined as:

The creation and development of intellectual infrastructure of subjects and disciplines, the invention or generation of ideas, images, performances, artefacts, new developed insights, or the use of existing knowledge to produce new or substantially improved materials, devices, policies or processes, etc.

It was agreed that stakeholders within and around the GLTP/TFCA should be involved in the planning, implementation, and analysis of research to ensure buy-in and build research capacity and understanding. The development of an integrated research program to cross international borders, rather than three separate national programs is preferable, and this should include tri-lateral research programs, to build capacity and disseminate information across the region. The need for open and public access to data and knowledge should be considered but always taking

into account confidential or sensitive economic data, rare and threatened species, copyright, etc. The GLTP should strive to align resources and facilitate research permit processes between the countries for prioritized GLTP/TFCA research.

## Outcome

A GLTP research policy was drafted and was ratified by the GLTP JMB in 2008. The overall objective for joint research was specified as “To assess and evaluate the potential and real contribution of economic, socio-cultural attributes, biodiversity and ecosystems toward sustainable development (including principles of governance, institutional, policy and planning).”

The specific research objectives stated for the GLTP are:

- 1) To fully understand the costs and benefits of establishing the GLTP and GLTFCA. This would include to assess costs and benefits of the GLTFCA in terms of per capita income, quantity and quality of employment opportunities and access to natural resources;
- 2) To understand the contribution of the GLTP and GLTFCA to social, cultural and economic development of communities. To do this one will need to identify linkages between GLTFCA and community incomes, identify empowerment opportunities, identify needs of target communities and land claimants, and identify feasible opportunities and determine priority focus areas;
- 3) To determine the land use options that best promote regional development as stipulated in the treaty. This will entail conducting conservation priority setting exercises, assessing potential for complementary land use planning (e.g., development of irrigation schemes for re-settlement of people in parks), identifying appropriate leasing systems taking into account possible future land uses; and

- 4) To assess whether the GLTP/GLTFCA is contributing to natural resource conservation. This will entail the establishing of appropriate, long-term monitoring programs for vegetation, mammal and bird population abundance and diversity.

An exciting collaborative, multi-disciplinary research program involving government, academic, and NGO stakeholders is the AHEAD (Animal & Human Health for the Environment And Development) program, which was launched by the Wildlife Conservation Society (WCS) at the 2003 IUCN World Parks Congress in Durban, South Africa. Under the AHEAD banner, a range of programs addressing conservation, health, and concomitant development challenges have been launched with growing support of implementing partners and donors who see the intrinsic value of what WCS has called the “One World, One Health” approach. *AHEAD* is a convening, facilitative mechanism, working to create enabling environments that allow different and often competing sectors to literally come to the same table and find collaborative ways forward to address challenges at the interface of wildlife health, livestock health, and human health and livelihoods. *AHEAD* recognizes the need to look at health and disease not in isolation but within a given region’s environmental and socioeconomic context ([www.wcs-ahead.org](http://www.wcs-ahead.org)).

The joint research policy and research priorities document is valuable to focus future research opportunities. There is however a real need to conduct joint research projects and programs involving staff from the three parks to foster learning, knowledge transfer, and the building of a more cohesive research network.

## **|Ai-|Ais/Richtersveld Transfrontier Park**

The |Ai-|Ais/Richtersveld Transfrontier Park (ARTP) is a joint project between Namibia and South Africa (SANParks 2011b). The park measures 6,045 km<sup>2</sup> and spans some of the most spectacular arid and desert mountain scenery in southern Africa. It incorporates the 4,420 km<sup>2</sup> |Ai-|Ais Hotsprings Game Park in Namibia and the 1,625 km<sup>2</sup> Richtersveld

National Park in South Africa. This arid zone is characterized by a unique and impressive variety of succulent plant species and is part of the Succulent Karoo Biodiversity Hotspot. The park is bisected by the Orange River, which forms the international boundary between the two countries. One of the key landscape features of the transfrontier park is the world's second largest canyon – the Fish River Canyon. This 161-kilometre long and 550-metre deep canyon meanders between deep, spectacular cliffs that divide the Nama Plateau.

The Richtersveld area (including the Richtersveld National Park) is regarded as one of the world's richest succulent areas. This is due to a large variety of geological formations, rugged landscapes, and diverse soils, which brings about an unusual number of habitats with great differences in moisture condensation, sunlight exposure, and temperature. The vegetation of the area has evolved within a water-stressed environment and is thus mainly succulent, comprising more than 900 known species.

## *Community Participation in Transfrontier Conservation*

### **Background**

As a result of this biodiversity significance, efforts to obtain formal protection of the area started in the early 1970s (Hendricks 2001). However, most local residents remained unaware of the plans until the 1980s when the notion of a contractual national park for the Richtersveld was developed and legislation for the designation of the park was tabled. At the time, it was argued that the biodiversity value of the area had to be protected from the local population and the national park was thus justified on aesthetic, moral, and scientific grounds. In so doing, negotiations around the establishment of the new national park at the time basically excluded the involvement of the local communities.

However, 1989 saw a complete reversal of this trend. The local community established a community committee, which proceeded to acquire legal assistance on the issue. On March 19, 1989, the day before the contract for the park was to be signed, the community committee obtained an urgent court order from the Cape of Good Hope Supreme Court interdicting the parties to the contract from signing it. This was followed by an

eighteen-month period which resulted in the drafting of a new agreement. Contrary to the previous one, the new agreement established the principle that there would be no expropriation or forced removals from any part of the park. In addition, the existing pastoralist farmers could continue grazing their livestock in the park with the exception that the overall numbers of stock would be limited. On July 20, 1991, the signing ceremony was held for the formal establishment of the Richtersveld National Park (RNP). The signing of the contract allowed the RNP to be proclaimed on August 14, 1991.

Approximately ten years later, the process to make the RNP part of a transfrontier park with Namibia gained momentum. One of the key issues that needed to be addressed as part of the transfrontier process was to provide for adequate representation (from a South African perspective) on the joint management structures for the current land owners of the Richtersveld National Park.

### Community Participation in Joint Management

The RNP has, since its proclamation in 1991, been managed jointly by representatives from both the local communities and South African National Parks (SANParks) through a joint management and planning committee. This committee, which meets every three months, consists of nine members in total, including: one representative of each of the local communities (i.e., Kuboes, Lekkersing, Eksteenfontein, and Sanddrift), a stock farmer representative, and four representatives (including the park manager and park researcher) of SANParks. The work of the committee is aimed at promoting and ensuring discussions and decision-making regarding the management plan of the park, and ensuring effective local community participation.

In light of the aforementioned, the transboundary conservation process had to take cognisance and incorporate the existing institutional arrangements on the South African side into any proposed joint management structures between Namibia and South Africa. This issue was also highlighted in the extensive stakeholder participation processes that led to the drafting and signing of the memorandum of understanding (MOU) between the governments of Namibia and South Africa, and the subsequent participatory process for the development of the treaty.



## Outcome

In June 2002, the governments of the Republic of Namibia and the Republic of South Africa entered into an agreement by means of an MOU to initiate and actively participate in a process that would result in the establishment and management of a transfrontier park. Following the signing of the MOU, which provided the political foundation for the development of the proposed transfrontier park, the necessary processes were set in motion for the development of an international treaty to formally proclaim the area. On August 1, 2003, then president Sam Nujoma of Namibia and President Thabo Mbeki of South Africa signed an international treaty establishing the |Ai-|Ais/Richtersveld Transfrontier Park (ARTP).

The treaty provides for the formation of a joint management board (JMB) which is responsible for the overall planning and management of the ARTP. The ARTP JMB deals specifically with the management of joint issues, whilst each park still retains its own administrative structures and the right to administer its own area as deemed appropriate.

However, in contrast to other transfrontier parks in the region, the ARTP JMB consists of five members instead of the four member template which has been used in the other projects. The key objective of this divergence was to reflect the current contractual park institutional arrangements in South Africa in the composition of the joint management structure for the transfrontier park. In so doing, the treaty states that the JMB will include “two representatives from each of the national implementing agencies of the parties of which one in the case of South Africa shall be a community member of the Richtersveld Management Committee” (ARTP International Treaty, 2003). This effectively ensures local community participation, not only in the management of the Richtersveld National Park, but also in the overall development of the ARTP.

### *Limpopo / Shashe Transfrontier Conservation Area*

The Limpopo/Shashe Transfrontier Conservation Area is situated at the confluence of the Limpopo and Shashe Rivers, encompassing areas in three countries – Botswana, South Africa, and Zimbabwe. This TFCA currently includes the Botswana Northern Tuli Game Reserve, in South Africa the Mapungubwe National Park, and in Zimbabwe the Tuli Circle Safari Area.

The inclusion of the various other areas is however still under negotiation, and these may be included in the future when the international treaty gets signed to formally proclaim the area. Underpinning the establishment of the Limpopo/Shashe area is its rich biodiversity, its scenic beauty, and the cultural importance of the archaeological treasures of the Mapungubwe World Heritage Site. The area supports populations of big game, including the famous Tuli elephant, all major predators, and offers potential for the development of a viable consumptive and non-consumptive tourism industry.

### *Partnership between Governments, the Private Sector and Local Communities*

#### **Background**

In Botswana, land committed to the Limpopo/Shashe TFCA encompasses the Northern Tuli Game Reserve (Notugre), an association of private landowners who have removed the fences that separated their properties and now jointly manage wildlife resources. Notugre presently embraces thirty-six farms with a combined area of 70,000 hectares. It is renowned for its Tuli elephants, the largest elephant population on private land in Africa. Notugre is also a conservation success story, given its abundant level wildlife today that was virtually wiped out in the late 1960s and early 1970s.

On the South African side, land allocated to the TFCA comprises a complex mosaic of private land, state-owned land, and national parks. South African National Parks, with the assistance of the World Wide Fund for Nature (South Africa), De Beers Consolidated Mines Ltd., the National Parks Trust, and the Peace Parks Foundation, has been involved in land purchases to create the Mapungubwe National Park since 1998. This park forms the core area of South Africa's contribution to the Limpopo/Shashe TFCA and will include eighteen properties of 25,800 hectares in total. To date, roughly 80 per cent of the park's core area has been consolidated by means of purchase or contract. Mapungubwe National Park was officially opened on September 24, 2004, and has already become a popular destination for tourists.

The area that Zimbabwe can commit to the proposed TFCA is the Tuli Circle Safari Area (government owned) covering an area of 41,100 hectares. This area is contiguous with the northern end of Notugre and has no physical barriers to impede the movement of wildlife. The potential also exists to incorporate portions of the Maramani Communal Land.

Given the fact that the establishment of transfrontier conservation areas is mainly (on an international level) a government-to-government process, one of the key challenges for the establishment of the Limpopo / Shashe TFCA was how to include the Botswana portion of the proposed project. Given the fact that it was solely privately owned, mechanisms had to be developed and put in place to facilitate the inclusion of the area as part of the TFCA.

### Setting up the Partnership

In response to the challenge, the Government of Botswana and the Northern Tuli Game Reserve embarked on a process to develop an agreement between the two parties. The outcome of this process was an agreement between the Department of Wildlife and National Parks (on behalf of Botswana Government) and Notugre. The main assumption of the aforementioned agreement was that both parties believed a transfrontier conservation area extending across the boundaries of Botswana, South Africa, and Zimbabwe in the areas of land adjacent to the confluence of the Limpopo and the Shashe rivers could bring considerable benefits to the people of Botswana, the landowners in the area, and the flora and fauna therein. In so doing, the agreement outlines the relationship between them with respect to the establishment, operation, and management of the proposed TFCA. The parties also recognize and agree that international negotiations shall remain the responsibility of the respective governments of these countries.

### Outcome

On June 22, 2006, an MOU signalling the three nations' intent to establish and develop a transfrontier park was signed by Mr. Kitso Mokaila, Botswana's Minister of Environment, Wildlife and Tourism, Mr. Marthinus van Schalkwyk, South Africa's Minister of Environmental Affairs and Tourism, and Mr. Francis Nhema, Zimbabwe's Minister of

Environment and Tourism. Prior to the signing of the MOU by the three ministers (and after an extensive negotiation process followed by cabinet approval), the agreement between DWNP and Notugre was also signed. This signalled the start of a major milestone in the development of public-private partnerships to the benefit of transboundary conservation.

Subsequent to the signing ceremony, the first meeting of the Limpopo/Shashe TFCA Technical Committee was held in November 2006. The tri-lateral technical committee, initially comprised of six public sector representatives from each of the participating states, has been broadened to include participation by the private sector (NOTUGRE). Given the fact that NOTUGRE represents an association of private land owners with vast experience in the tourism development and business management field, their contribution to the overall development process could potentially be quite significant.

## LESSONS LEARNED AND KEY CHALLENGES

### Lessons Learned

Based on experience to date, the following key issues are critical to the success of the planning and development process for the establishment of TFPs and TFCAs:

- High-level political buy-in often results in a high level of exposure and funding.
- Effective collaboration and co-operation between countries often results in peace and stability in the region.
- A key strength of transboundary conservation projects is the ability to create opportunities for collaboration and partnership-building on various levels and scales, i.e., international, national, regional, and local levels.

- Lack of political will and understanding will impede the process. This includes a lack of understanding and/or commitment from other relevant government agencies and key role players in the TFCA development process.
- Capacity to lobby for and secure funds for TFCA-related activities could potentially impede the rate of implementation of the project.
- Rates of planning, development, and implementation processes may not be suitable to all the parties involved, especially when there are disparities relating to institutional capacity, financial resources, and level of community/ stakeholder participation.
- Effective local community and key stakeholder participation in the planning, development, and implementation process is critical to the long-term success of the project. In other words, an effective stakeholder involvement strategy must be formulated in the very early stages of the project and be immediately implemented. It must also be monitored and updated regularly to ensure that it remains effective.
- Potential incompatibility of goals when countries are in different stages of development, or when the components of the TFCA differ in the level of tourism infrastructure investment, could impede progress.
- Social, cultural, language, and related barriers may have to be overcome to ensure effective communication and an understanding of the operating environment within each of the participating countries.

## Key Challenges

Based on experience to date, the following key challenges would be critical to the success of the planning, development, and implementation of TFPs and TFCAs:

- The ability to realize the potential of regional conservation-based development initiatives. This would include the development of more effective and appropriate responses to the socioeconomic context in which these projects are embedded.
- Ensuring that projects develop and implement mechanisms to ensure sustainability and self-reliance. These would include the identification of appropriate means for sustainable financing, ensuring the equitable distribution of costs and benefits in future, and also guard against donor-dependency and conditions often associated with these.
- Measuring the effectiveness of the implementation of transboundary conservation projects through the development of tools for monitoring and evaluation (M&E), and ensuring effective feedback loops to ensure that results are incorporated into adaptive management and iterative planning processes.
- The development and implementation of effective institutional models and approaches that respond to all levels of collaboration and cooperation between key stakeholders involved in transboundary conservation projects.
- Establishing a global and regional framework for transboundary conservation, which would also act as a network where managers and key role players can share lessons learned and in so doing continue with the development of appropriate approaches and strategies.

## CONCLUSION

The global growth in transfrontier conservation areas (TFCAs) is indicative of a belief of the potential of these exciting initiatives to conserve biodiversity and cultural resources at a landscape level, foster peace and prosperity between nations, and promote regional socio-economic integration and development. This has led to these projects achieving the highest level of political support in southern Africa, underpinned by key regional programs and objectives providing for the conservation of natural resources as a means to achieve cross-border tourism development and the alleviation of poverty. In so doing, the TFCA program in Southern Africa is not only in line with the objectives of key regional initiatives such as the New Partnership for African Development (NEPAD) and the Leadership for Conservation in Africa (LCA) initiative but is also featured as one of the key recommendations of the 5th IUCN World Parks Congress held in September 2003 in Durban, South Africa.

Guided by the above, the various TFCA projects in the southern Africa have responded well to the challenge of realizing the potential of conservation-based initiatives to promote peace and prosperity in the region through the exchange of information and transfer of skills and by building partnerships between government, NGOs, communities, and the private sector. However, it has been realized that these benefits may take time to materialize, some of them only becoming a reality in the medium to long term. In the meantime, governments, implementing agencies, and protected area managers will continue to strive to find appropriate ways and means to plan, develop, implement, and manage these projects more effectively. These actions will always be guided by regional priorities and programs, and inspired by the vision of realizing an African ideology.

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