



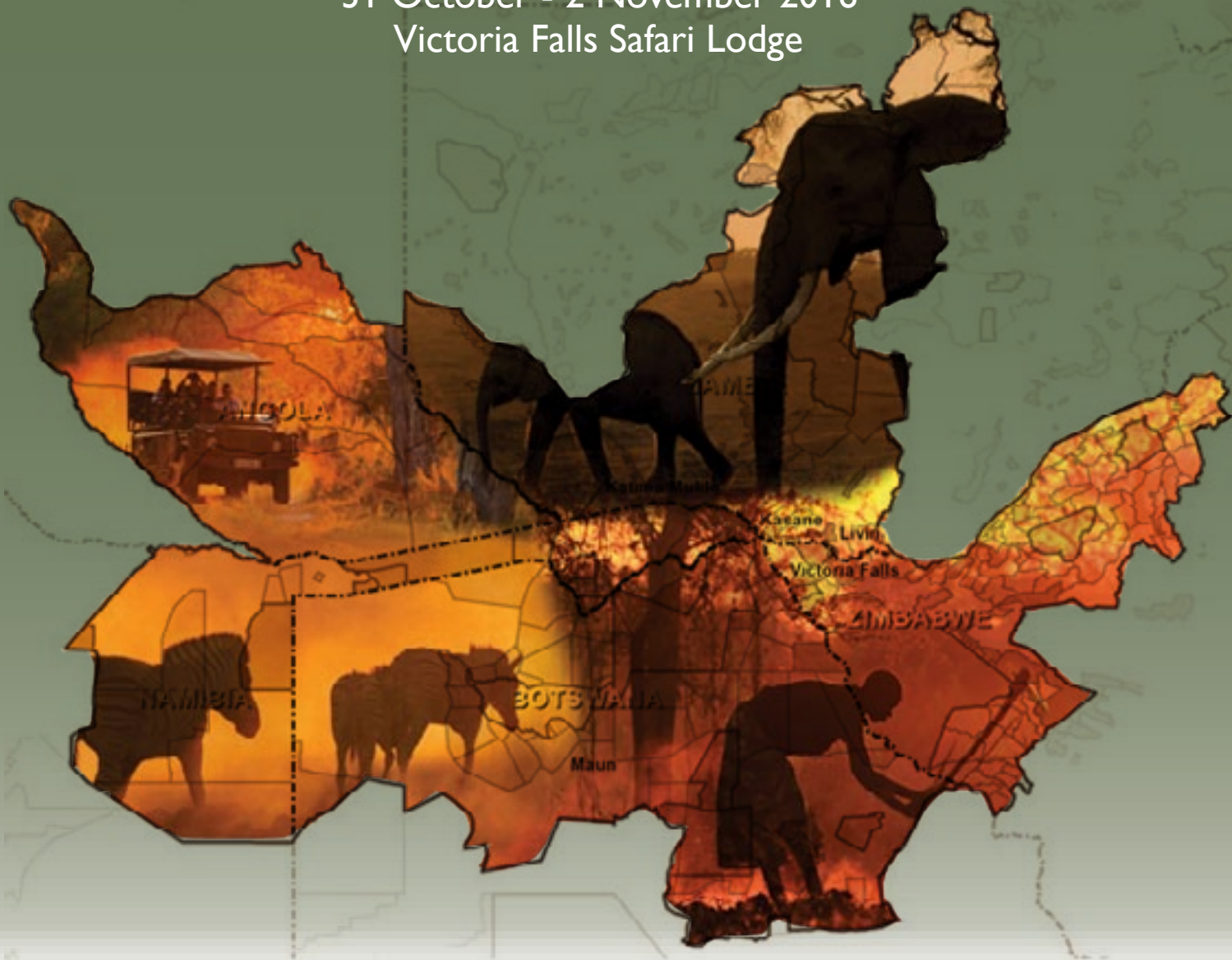
State of KAZA Symposium 2016



*“Where have we come from, where are we now
and where are we going?”*

PROCEEDINGS

31 October - 2 November 2016
Victoria Falls Safari Lodge

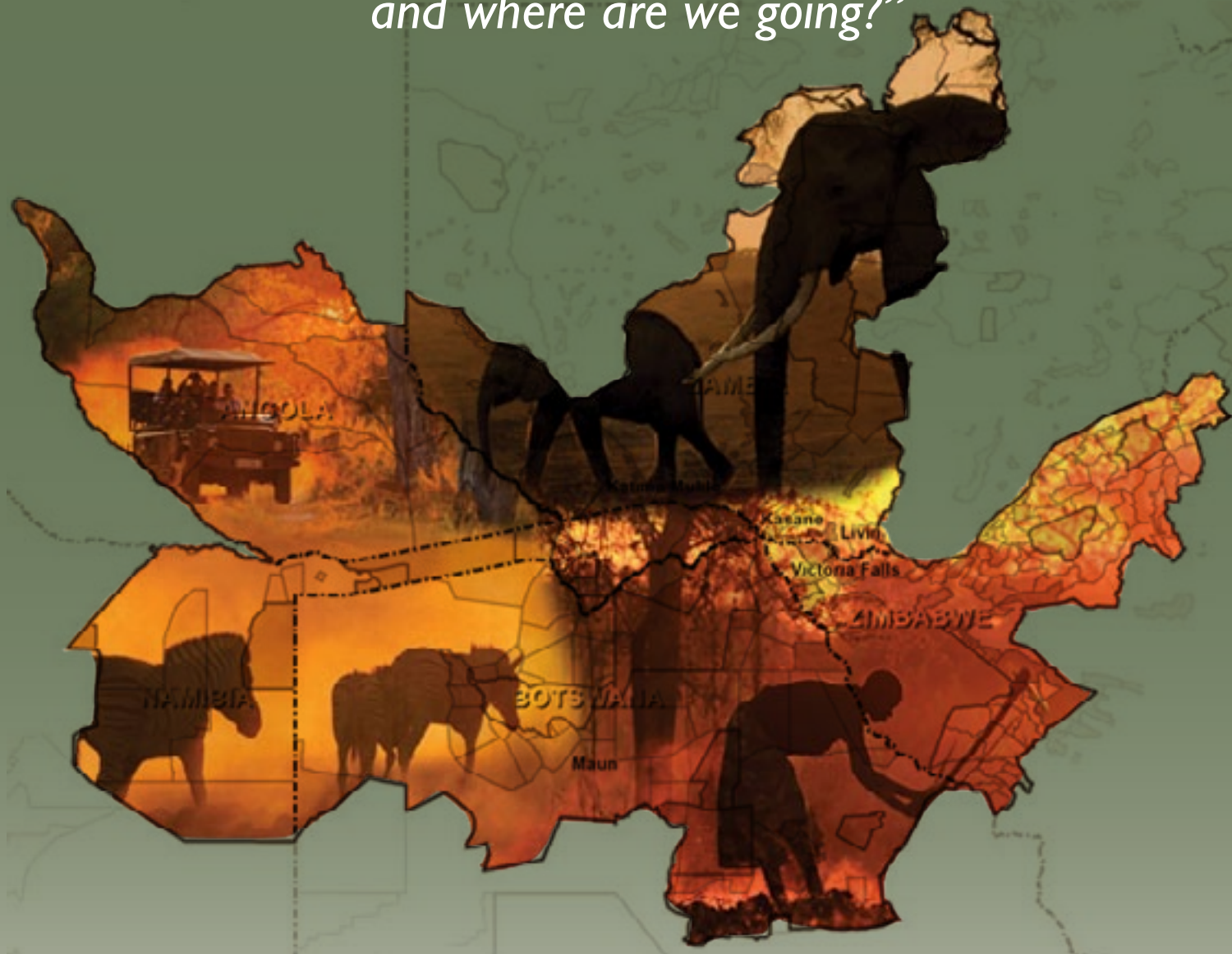




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31 October - 2 November 2016
Victoria Falls Safari Lodge
Victoria Falls, Zimbabwe

The Kavango Zambezi Transfrontier Conservation Area (KAZA TFCA) Partner Countries would like to express their utmost gratitude to all participants who attended, presented, and contributed to the State of KAZA Symposium 2016. The Symposium would not have been successful without the participation of a wide range of stakeholders from the five Partner Countries' (Angola, Botswana, Namibia, Zambia, and Zimbabwe) representing government ministries and departments; traditional authorities; community based organisations and other community representatives; international cooperating partners; non-governmental organisations; and academic and research institutions.

We would like to thank the Republic of Zimbabwe for hosting such an iconic event, marking ten years since the signing of the Memorandum of Understanding in the same town in December 2006 and for providing on the ground logistical support during the Symposium. The Partner Countries acknowledge the continued political commitment and support from their Heads of State and line ministries which remains pivotal in driving the TFCA initiative forward towards the realization of an agreed vision.

The Symposium set a platform for regional cooperation and multi sectoral participation in the development of the KAZA TFCA as exemplified by the collaborative presentations by experts from across borders and the region under integrated themes. We thank presenters for demonstrating this spirit of collaboration and partnership and it is our sincere hope that we continue to work together going forward.

Special appreciation goes to the following cooperating partners for providing financial resources and technical and logistical support for hosting the State of KAZA Symposium 2016: 1) Ministry for Economic Cooperation and Development of the Federal Republic of Germany, a long term cooperating partner in the development of the KAZA TFCA through the German Development Bank (KfW); 2) World Wildlife Fund for Nature network and Namibia office specifically; 3) Peace Parks Foundation; 4) ECOEXIST project; and 5) Animal & Human Health for the Environment And Development programme under Cornell University, USA. We would also like to thank the technical and organizing teams that worked tirelessly for many months to ensure that the event was a success.

Last but not least, we express our sincere gratitude to the staff and management of Victoria Falls Safari Lodge for physically hosting the event and many of the attendees, and for their resolute commitment to ensuring a pleasant and memorable stay.

His Excellency, Dr Paulino Domingos Baptista
Honourable Minister of Hotels and Tourism, Republic of Angola

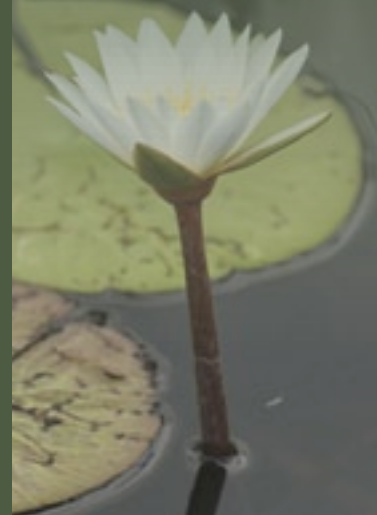


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ACKNOWLEDGEMENTS



FOREWORD



His Excellency: Dr Paulino Domingos Baptista.
The Minister of Hotels and Tourism of Republic of Angola

On behalf of the KAZA TFCA Partner Countries I have the pleasure of presenting to you the proceedings of the State of KAZA Symposium 2016, which was held under the theme “Where have we come from, where are we now, and where are we going?” These proceedings simply provide an overview of the presentations and ensuing discussions that took place at the Symposium.

It is worth noting that KAZA TFCA is a SADC approved conservation and development initiative of the KAZA Partner Countries, comprising the Republics of Angola, Botswana, Namibia, Zambia, and Zimbabwe. The State of KAZA Symposium 2016 was held as a celebration of KAZA’s 10 years of existence since signing the Memorandum of Understanding in December 2006 and provided a platform to showcase its achievements against set objectives as well as highlight key challenges and discuss priorities going forward. These proceedings are a record of an iconic event that was attended by close to 300 participants from various sectors from across the region and beyond, reflecting the principles of multi stakeholder participation and regional cooperation. The proceedings are a stepping-stone towards the production of the State of KAZA Report, which shall form the basis for monitoring and assessing the impacts of our individual and joint actions and interventions as we manage our shared natural and cultural resources for future generations.

The objectives of the KAZA TFCA can be aggregated into two categories: (a) ecological - focused on protection of internationally shared ecosystems; increasing the area available for wildlife and plant populations; and re-establishment of transboundary seasonal wildlife dispersal routes; and (b) socioeconomic – concerned among others, with increasing economic opportunities for the local communities who bear the opportunity cost of living with wildlife. In meeting its vision of establishing a world class TFCA and tourism destination in the Okavango and Zambezi river basin regions of the five countries, KAZA has as its primary purpose to manage shared natural and cultural heritage resources to derive equitable socio-economic benefits, harmonization of strategies, practices and policies together with promotion of coordinated transboundary partnerships and investments. The Symposium therefore invited a wide array of stakeholders instrumental in the development of this iconic landscape. The Symposium was preceded by a brief tour through parts of the KAZA TFCA for existing and potential International Cooperating Partners which was meant to expose attendees to the realities on the ground, appreciate the development needs in the landscape and hear the views of the inhabitants of the TFCA. The tour resulted in a commitment of funds under bilateral arrangements in some components of the TFCA.

During the Symposium it became clear that there is need to substantively increase our efforts toward community livelihood development. Much of the KAZA landscape comprises communal areas where the majority of the communities are arable and pastoral subsistence farmers, subject to considerable hardship due to Human Wildlife Conflict. Even though tourism and other conservation compatible land uses are being practiced and are accruing benefits to some of these communities, these efforts need to be bolstered and communities need to be engaged more meaningfully in the design of their development pathways rather than being mere subjects of decisions made in isolation of ground realities, needs and desires. If the KAZA TFCA is to achieve its conservation and development objectives, its strategy for engaging with host communities and their traditional authorities requires fundamental re-thinking.

These proceedings were compiled by summarising the presentations made and panel discussions held at the Symposium. Most of oral presentations have been signed off by their authors to be shared with participants and are available on the KAZA TFCA website <http://www.kavangozambezi.org> or through the KAZA Secretariat. I trust you will find the document informative and an accurate reflection of what took place during the event.

A handwritten signature in dark ink, reading "Paulino Domingos Baptista". The signature is fluid and cursive, with a horizontal line drawn underneath it.

His Excellency, Dr Paulino Domingos Baptista
Honourable Minister of Hotels and Tourism, Republic of Angola

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ACRONYMS

AESR	African Elephant Status Report
AfESG	African Elephant Specialist Group (IUCN/SSC)
AHEAD	Animal & Human Health for the Environment And Development
CAMPFIRE	Communal Areas Programme For Indigenous Resources
CBNRM	Community-Based Natural Resource Management
CBD	Convention on Biological Diversity
CBO	Community-Based Organisation
CITES	Convention on International Trade in Endangered Species of Fauna and Flora
CPUE	Catch per Unit Effort
CRIDF	Climate Resilient Infrastructure Development Facility
DEG	Deutsche Investitions- und Entwicklungsgesellschaft (KfW)
FMD	Foot and Mouth Disease
GEF	Global Environment Facility
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GLOBAL	Global Observation and Biodiversity Information Portal
GLTFCA	Greater Limpopo Transfrontier Conservation Area
GMA	Game Management Area (Zambia)
HWC	Human Wildlife Conflict
IDP	Integrated Development Plan
IRDNC	Integrated Rural Development and Nature Conservation
IUCN	International Union for the Conservation of Nature and Natural Resources
JPC	Joint Permanent Commission
KAZA TFCA	Kavango Zambezi Transfrontier Conservation Area
KfW	KfW Development Bank, Germany
LEAP	Law Enforcement and Anti-Poaching
MIKE	Monitoring the Illegal Killing of Elephants
MOMS	Management Oriented Monitoring System
MOU	Memorandum of Understanding
MTVFWHS	Mosi-oa-Tunya Victoria Falls World Heritage Site
NRM	Natural Resources Management
OIE	World Organisation for Animal Health
OKACOM	Permanent Okavango River Basin Water Commission
PC	Partner Country (KAZA)
PES	Payment for Ecosystem Services
PPF	Peace Parks Foundation

RETOSA	Regional Tourism Organization of Southern Africa
SADC	Southern African Development Community
SMART	Spatial Monitoring and Reporting Tool
SSC	Species Survival Commission (IUCN)
TAD	Transboundary animal disease
TBC SG	Transboundary Conservation Specialist Group (IUCN)
TBNRM	Transboundary Natural Resources Management
TFCA	Transfrontier Conservation Area
USAID	United States Agency for International Development
WCS	Wildlife Conservation Society
WDA	Wildlife Dispersal Area
WWF	World Wildlife Fund
ZPWMA	Zimbabwe Parks and Wildlife Management Authority



Executive Summary

The State of KAZA Symposium 2016 was held from 31 October to 2 November 2016 at the Victoria Falls Safari Lodge in Victoria Falls, Zimbabwe. With over 275 delegates, 46 presentations, 30 posters, three panel discussions and one keynote address, the Symposium sought to celebrate the KAZA TFCA's achievements and progress towards attainment of the objectives of the TFCA, highlight lessons learned, both positive and negative, harness recommendations for future direction and provide a platform for engagement and collaboration of the TFCA's many and diverse stakeholders. Ten years on from signing the MoU, the State of KAZA Symposium 2016 provided an opportunity for Partner Countries (PCs) to evaluate achievements and re-affirm their continued commitment to the initiative.

The KAZA TFCA covers an area of about 520,000km² across five countries (Angola, Botswana, Namibia, Zambia and Zimbabwe), is home to over 2.5 million people, encompasses rich natural and cultural resources, and represents an absolutely critical landscape for the conservation of key migratory wildlife species.



Where have we come from?

The concept of transfrontier conservation as a tool for peace is exemplified by the KAZA TFCA. Five countries with diverse linguistic, socio-economic, political, legal and cultural realities have come together in recognition of shared histories, rich biodiversity and sites of global cultural and natural importance. Over the past ten years, key milestones have been achieved: the signing of the Memorandum of Understanding in 2006, the establishment of the Secretariat in Kasane, Botswana, and accompanying governance structures, and the signing, by Heads of State, of the KAZA Treaty in 2011. This has been a time of building an understanding of the KAZA TFCA landscape and to move the TFCA dream forward through the careful building of institutions and relationships. The development and adoption of several strategic documents, among these, the Master Integrated Development Plan (MIDP), is an important culmination of these achievements.

Where are we now?

The Secretariat, now formally hosted by Botswana, is supported by strong political will and commitment. The identification of Wildlife Dispersal Areas, as outlined in the KAZA TFCA MIDP, provides a strategic framework for transboundary initiatives under five key pillars: Integrated Land Use Planning; Management of Shared Natural Resources; Tourism Development; Community Livelihood Development; and Infrastructure Development. Initial efforts to cooperate on combatting wildlife crime and collaborating on research and development issues provide the basis for enhanced and continuing collaborative action. Closer partnerships are evidenced through the success of transboundary natural resource forums and the 2016 meeting of traditional leaders. The basis for a strong wildlife-based economy remains robust.

Though considerable achievements have been made in the last ten years, many challenges remain. There is an ever-increasing human population, which is largely rural and relies heavily on the natural resource base for its livelihoods. Human-wildlife conflict is constant, if not increasing. Climate change represents a significant short and long-term threat to livelihoods and natural systems across the complex KAZA TFCA landscape. Poaching for high-value wildlife products and bush meat is a significant threat to certain species, formerly healthy fisheries are collapsing, and landscape fragmentation (from, amongst other, veterinary cordon fencing used as part of the region's historical approach to foot and mouth disease management), continues to threaten ecosystem integrity. Participation and leadership by key sectors, in particular the private sector and rural communities, remain low. Mechanisms for real engagement and partnership with the people within the KAZA TFCA require strengthening. Information management systems are neither sufficient, nor coordinated.

Where are we going?

Despite these challenges, commitment remains unyielding and momentum from PCs and stakeholders to ensure that the work of the last ten years can meaningfully translate into action to achieve the KAZA TFCA's vision. A number of key messages emerged from the Symposium that help to chart the future of the TFCA.

- Communities are at the heart of the KAZA TFCA objectives and are key to achieving its vision.
- The KAZA TFCA is a complex system, requiring adaptive and resilient responses at appropriate scales.
- The future of the KAZA TFCA, as a wildlife-based economy, relies on the long-term survival of key species and ecosystems, at a landscape scale.
- Bold and innovative multi-sectoral approaches are needed to unlock the value of the TFCA's unique global resources.
- Successful anti-poaching and law enforcement relies on robust regional cooperation, and comprehensive, coordinated strategies that do not alienate local communities.
- Information collection, management and analysis are critical in achieving the goals of the KAZA TFCA.
- Tourism, as one of the economic pillars of development in the KAZA TFCA, remains a largely untapped opportunity.



1. Preamble

The Kavango Zambezi Transfrontier Conservation Area (KAZA TFCA) is Africa's largest conservation landscape and the world's largest transfrontier conservation initiative. It represents a bold commitment on the part of the five countries, Angola, Botswana, Namibia, Zambia, and Zimbabwe, that have entered into a partnership to conserve biodiversity at scale and to market this biodiversity using nature-based tourism as the engine for rural economic growth and development. In meeting its vision of establishing a world class TFCA and tourism destination in the Okavango and Zambezi river basin regions of the five countries, the KAZA TFCA has as its primary purpose, the management of shared natural and cultural heritage resources to derive equitable socio-economic benefits. Harmonisation of strategies, practices and policies together with promotion of coordinated transboundary partnerships and investments are crucial to achieving this purpose.

Ten years on from the signing of the KAZA TFCA Memorandum of Understanding (MoU) between the five PCs on 7 December 2006 at Victoria Falls, Zimbabwe and five years since the signing of the KAZA TFCA Treaty in Luanda, Angola on 18 August 2011, stakeholders gathered at the State of KAZA Symposium in Victoria Falls, Zimbabwe from 31 October to 2 November 2016. The symposium sought to:

- Celebrate KAZA's 10 years of existence and showcase its achievements;
- Demonstrate progress towards attainment of the objectives of KAZA as listed in the Treaty and its impact thus far;
- Highlight what was working well and why, and possibilities of replicating these successes;
- Highlight what was not working well and why, and possible remedial actions;
- Harness recommendations for future direction; and
- Provide a platform for engagement and collaboration for KAZA stakeholders.

The KAZA TFCA is a complex landscape beset with a kaleidoscope of stakeholder groups comprising a multitude of development, social and environment sectors, representing government, civil society (local, national and international NGOs and community based organisations), academicians, private sector and International Cooperating Partners (ICPs). These diverse stakeholders were invited to collaboratively present on their activities within the KAZA TFCA, with over 275 delegates attending from the region and further abroad. The full participants list is available in Annex 1.

The Symposium structure was guided by the KAZA TFCA Master Integrated Development Plan (MIDP), a five-year strategy produced through a rigorous participatory process in 2014 to steer development of the TFCA at a regional level. The full agenda of the Symposium is available in Annex 2. Day one offered collaborative insight from the KAZA PCs on the key thematic areas identified in the MIDP:

- Integrated Natural Resource Management and Land Use Planning;
- Tourism Development; and
- Community Development, Alternative Livelihoods and Governance.

Days two and three allowed a range of topics to be investigated under integrated, concurrently running sessions, poster sessions and panel discussions in plenary. The final session of the Symposium allowed reflection on the achievements demonstrated, lessons learned and recommendations for the KAZA TFCA structures and stakeholders as they move forward. A follow-on workshop, "Towards Implementation of Commodity-Based Trade of Beef in KAZA: Opportunities for Integrating Livestock Agriculture and Wildlife Conservation" was held after the Symposium.





2. Opening Ceremony

Dr Morris Mtsambiwa, Executive Director of the KAZA TFCA Secretariat, chaired the Symposium's opening ceremony, which included speeches from a number of dignitaries. Speech transcripts can be found in Annex 3 of these proceedings.

His Worship, the Mayor of the City of Victoria Falls, Councillor Mpofu, welcomed all participants to the city of Victoria Falls, and wished them well in their deliberations on the past and future of the KAZA TFCA, an important wildlife and tourism initiative, and in particular on finding solutions for both wildlife and the people of the KAZA TFCA PCs.



Figure 1: Honourable O.C.Z. Muchinguri-Kashiri, Minister of Environment, Water and Climate for the Republic of Zimbabwe, giving opening remarks.

Honourable O.C.Z. Muchinguri-Kashiri, Minister of Environment, Water and Climate for the Republic of Zimbabwe (figure 1), made opening remarks. She noted the timely opportunity to take stock of the KAZA TFCA initiative in an objective manner acknowledging successes as well as shortcomings. She drew attention to the wide diversity of projects, approaches and situations in each PC and expressed the hope that the Symposium would fairly represent this incredible diversity. Community participation was highlighted as a particular priority for deliberations at the Symposium, and the Honourable Minister drew attention to the power of community voice at the just-concluded 17th meeting of the Conference of the Parties to CITES, the Convention on International Trade in Endangered Species of Fauna and Flora.

His Excellency, Minister of Hotels and Tourism for the Republic of Angola, Dr Paulino Domingos Baptista, officially opened the Symposium representing the current Coordinating Country. He expressed gratitude to the Republic of Zimbabwe for hosting the Symposium, and paid particular tribute to the spirit of regional integration and cooperation represented through the KAZA TFCA. He noted that the development of the TFCA was a complex undertaking, and that there had been a significant number of achievements to date. He cautioned that the KAZA TFCA's full realization would require further commitment from all stakeholders.

Honourable Minister of Environment, Natural Resources, Conservation and Tourism of the Republic of Botswana, Mr Tshekedi Khama, made further opening remarks, focusing on management of natural resources, illegal wildlife trade and poaching. He urged participants to ensure that wildlife did not lose out to the equally important demands of humans, and encouraged the discussion to find innovative solutions.

He particularly drew attention to the power of African nations to determine their own futures, and encouraged KAZA TFCA PCs to work together and learn from each other.

Mr Colgar Sikopo, Director of the Directorate of Wildlife and National Parks in the Ministry of Environment and Tourism, Namibia, made opening remarks on behalf of the Honourable Minister of Environment and Tourism of the Republic of Namibia, Pohamba Shifeta. He focused on the issue of community participation and livelihood development in the context of the vast wildlife, tourism and cultural resources in the KAZA TFCA. He emphasized that successful community-based natural resource management approaches were the key to the success of the KAZA TFCA overall and called for mechanisms to ensure meaningful participation of local communities in achieving the objectives of the KAZA TFCA.

Mr Paul Zyambo, Director of Department of National Parks and Wildlife made opening remarks on behalf of the Honourable Minister of Tourism and Arts of the Republic of Zambia, Charles R. Banda. He focused on the importance of regional tourism development in the KAZA TFCA, for the benefit of all KAZA PCs. He drew attention to the need to implement sustainable tourism best practices, to overcome the infrastructure deficit in tourism in the region, and to work collaboratively to market the KAZA TFCA as a regional destination.

Chief Shana, a Traditional Leader in Zimbabwe, welcomed all Symposium participants and emphasized the importance of wildlife to the local communities of Zimbabwe. He drew particular attention to Victoria Falls, a global heritage in the KAZA TFCA.

A highlight of the opening ceremony was the signing of the Hosting Agreement (Figure 2) between the Honourable Minister of Environment, Natural Resources Conservation and Tourism from the Republic of Botswana and the Executive Director of the Secretariat. The formalisation of the Hosting Agreement paved the way for the Secretariat to attain legal status in the host country, which would facilitate progress on many fronts.



Figure 2: Honourable Minister of Environment, Natural Resources, Conservation and Tourism of the Republic of Botswana, Mr Tshekedi Khama and the KAZA Secretariat Executive Director, Dr Morris Mtsambiwa, signing the Hosting Agreement.



3. Symposium Overview

3.1 Overview and purpose of the Symposium: setting a transboundary context by Dr Morris Mtsambiwa

Dr Morris Mtsambiwa, Executive Director of the Secretariat, provided context on the scope and history of the KAZA TFCA. Covering about 520,000km² across Angola, Botswana, Namibia, Zambia and Zimbabwe (Figure 3), the KAZA TFCA hosts large populations of wildlife, and rich and diverse cultures, as well as three World Heritage Sites – Mosi-oa-Tunya Victoria Falls, Okavango Delta and Tsodilo Hills. Home to more than 2.5 million people, the KAZA TFCA is a unique landscape, worthy of long-term conservation for future generations, and part of the vision of the Heads of State of the five PCs.

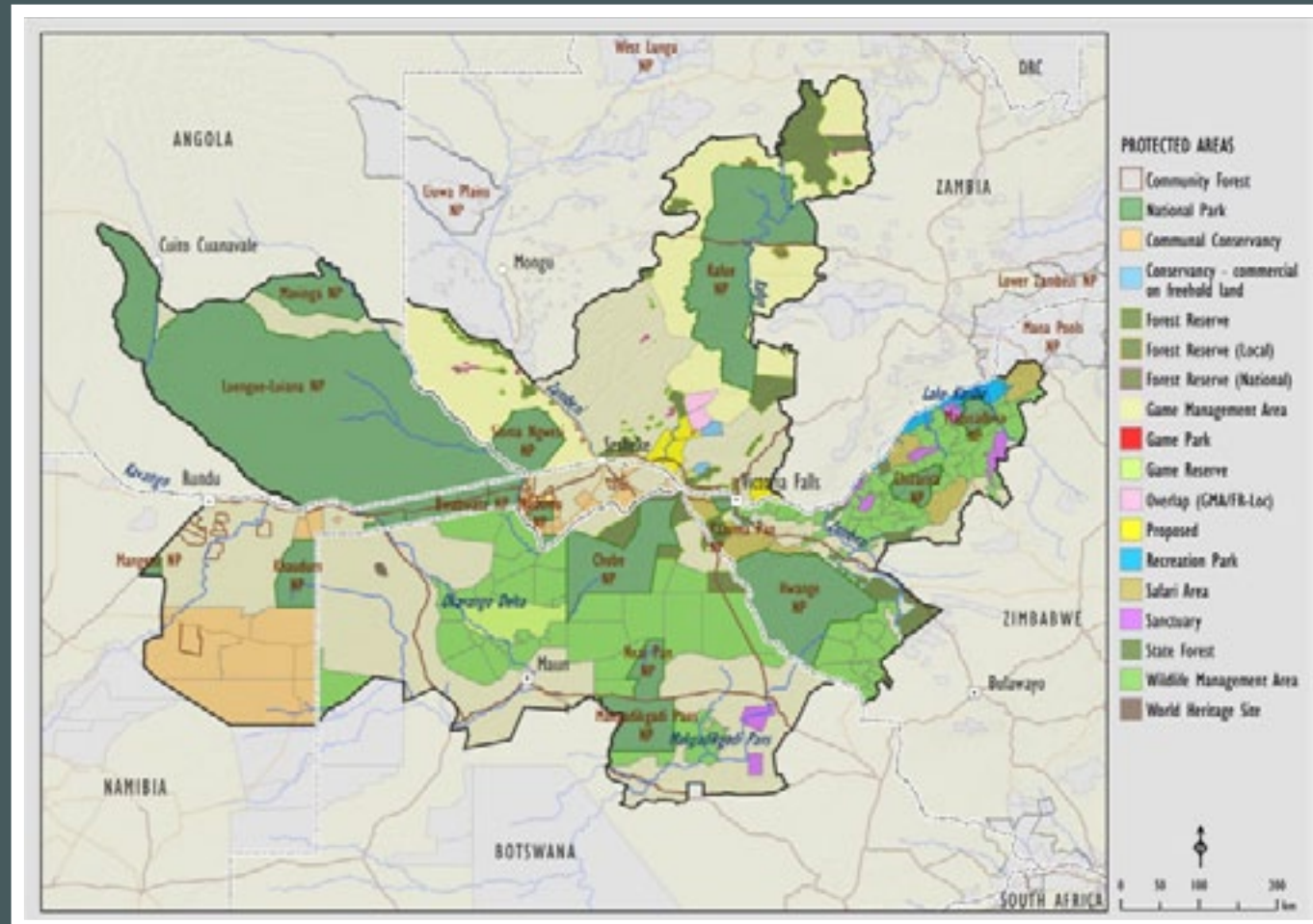


Figure 3: KAZA TFCA landscape and land uses

On 7 December 2006, a Memorandum of Understanding (MOU) was signed by relevant Ministers from the five PCs to facilitate negotiations to establish the KAZA TFCA. Following five years of negotiations, the Treaty establishing the TFCA was signed by relevant Heads of State on 18 August 2011 in Luanda, Angola.

The KAZA TFCA Mission is “to sustainably manage the Kavango Zambezi ecosystem, its heritage and cultural resources based on best conservation and tourism models for the socio-economic wellbeing of the communities and other stakeholders in and around the eco-region through the harmonization of policies, strategies and practices.”

Through collaboration, the KAZA TFCA has already noted major successes, such as the development of governance and management structures for the TFCA, development of national Integrated Development Plans (IDPs) for all five PCs, as well as a Master IDP, (Figure 4) and a wide variety of strategies and action plans. Importantly the identification of six major Wildlife Dispersal Areas (WDAs) provides an important framework for moving forward with common goals and priorities.



Figure 4: KAZA TFCA National Development Plans and the Master Integrated Development Plan.

UNIVISA by Zambia and Zimbabwe has provided valuable insight into the opportunities and challenges for regional tourism integration.

Much of the achievement in the KAZA TFCA has been made possible through the support of international cooperating partners, in particular the Federal Republic of Germany through KfW, World Wildlife Fund (WWF), Peace Parks Foundation (PPF), and the Climate Resilient Infrastructure Development Facility (CRIDF).

3.2 The importance of TFCAs as vehicles for regional integration, biodiversity conservation and poverty reduction in the SADC region by Mr Tawanda Gotosa

Mr Tawanda Gotosa, TFCAs Technical Advisor for the SADC Secretariat, provided insight into the opportunities afforded by TFCAs in the SADC region. SADC, established in 1992, has a number of instruments relevant to conservation:

- The SADC Protocol on Wildlife Conservation and Law Enforcement (1999)
- The SADC Protocol on Forestry (2002)
- The SADC Protocol on Shared Water Courses (2002)
- The SADC Protocol on Fisheries (2006)
- The SADC Regional Biodiversity Strategy (2006)
- Law Enforcement and Anti Poaching Strategy (2015)

SADC defines TFCAs 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.” It recognizes the mandate of protected areas to include not only conservation, but also regional integration, tourism investment and rural development. SADC is home to 18 TFCAs at various stages of development (Figure 5: TFCAs in the SADC region in 2016 (Peace Parks Foundation)).

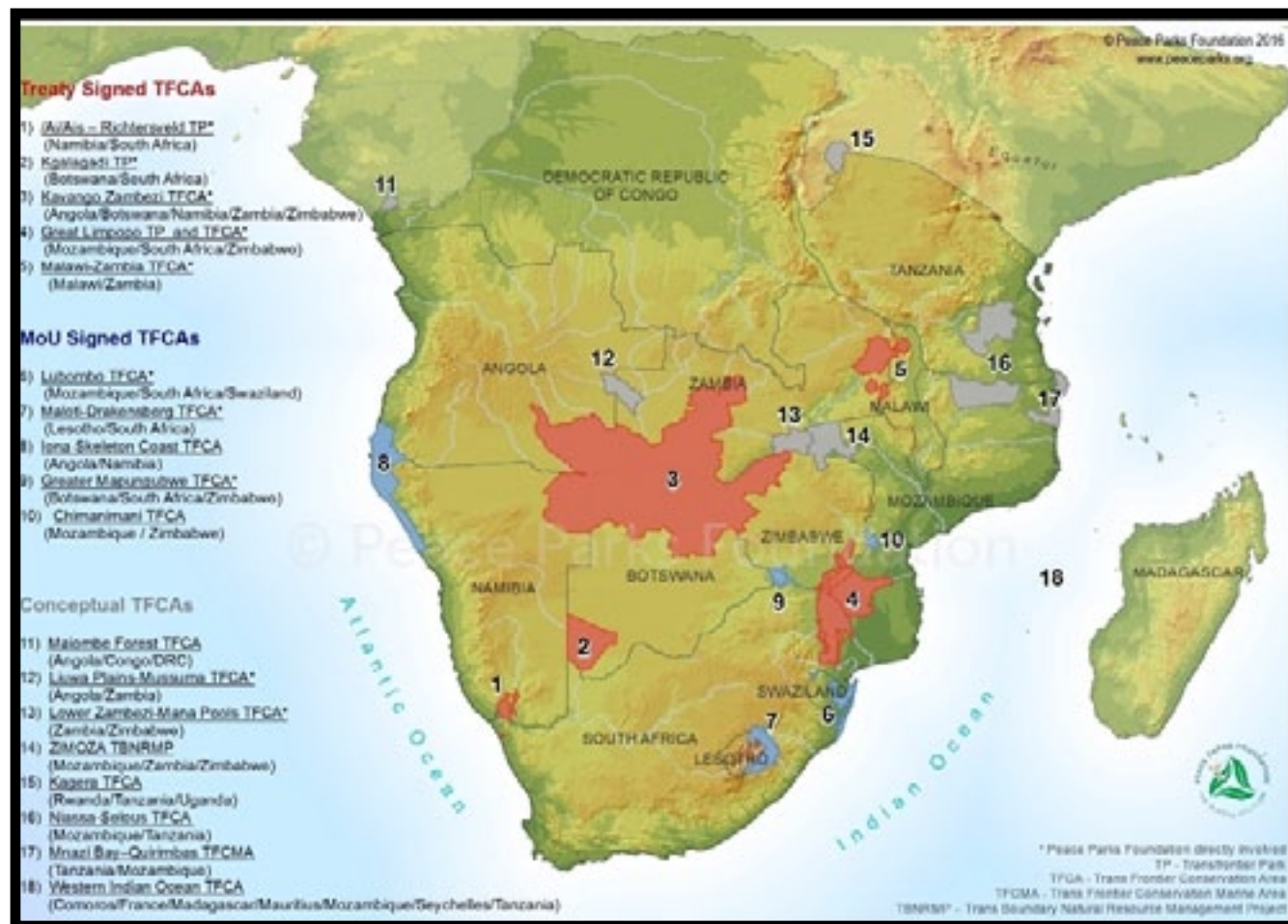


Figure 5: TFCAs in the SADC region in 2016 (Peace Parks Foundation)

Wildlife faces many challenges in the SADC region, including commercial poaching and trafficking, habitat fragmentation and modification, and Human Wildlife Conflict (HWC), resulting in increasing isolation of wildlife populations and decline in some species. The increasing poverty amongst those rural communities living with wildlife is also a concern.

Natural resources that straddle international boundaries are shared assets with the potential to meaningfully contribute to conservation of biodiversity and the socio-economic development of communities. TFCAs provide an opportunity and framework to face these challenges together and to operate at the appropriate scale, across sectors and with local communities.

The Mission of the SADC TFCAs Programme is “To develop SADC into a functional and integrated network of trans frontier conservation areas where shared natural resources are sustainably co-managed and conserved to foster socio-economic development, and regional integration for the benefit of people living within and around TFCAs, the SADC region, and the world.” The Programme has the following key components:

- advocacy and harmonisation of legislation;
- enhancement of financing mechanisms for TFCAs;
- capacity building for TFCAs stakeholders;
- establishment of data and knowledge management systems;
- enhancement of local livelihoods;
- reducing vulnerability of ecosystems and people to the effects of climate change; and,
- development of TFCAs into marketable regional tourism products.

TFCAs provide strong benefits to regional integration and stability, including:

- increased appreciation of shared resources between neighbouring states;
- building of local level relationships and networking for greater achievements;
- promotion of cross border interaction of people and visitors;
- joint planning and standardised conservation strategies; and,
- joint inter-state field operations to deal with shared challenges.

The key stakeholders in TFCAs development are member States, UN agencies, IUCN Commissions, international cooperating partners, community-based organizations, the private sector, NGOs and SADC. The SADC Secretariat provides strategic advisory services to Member States; coordinates policies, strategies and programmes; organises consultative conferences and meetings of decision-making structures; and provides professional programme management.

3.3 The KAZA TFCAs: where it all started by Mr Sedia Modise

Mr Sedia Modise, Country Programme Manager for PPF in Botswana gave a brief history of the KAZA TFCAs. In 1993, the concept was first raised at an IUCN / SADC workshop, following which the Okavango Upper Zambezi International Tourism Initiative provided a testing ground for regional economic integration. African Wildlife Foundation then developed the ‘Four Corners’ programme for transboundary natural resource management. In 2003, an agreement in Katima Mulilo between the five PCs demonstrated ownership of the initiative between these States, and an initial institutional framework was formed. In June 2006, SADC

recognized the TFCA, soon after which the MOU was signed in December 2006. The Secretariat was established in January 2007, and the KAZA TFCA Treaty was signed in August 2011 by Heads of State.

The KAZA TFCA is a long-term conservation and development programme, owned and led by PCs. Stakeholders are critical in the development of the TFCA and have been engaged from planning to implementation. A number of partners have been involved in the KAZA TFCA's development since its early stages including Animal & Human Health for the Environment And Development (AHEAD); Conservation International; Directorate-General for International Cooperation, the Netherlands; the German Government through KfW; PPF; SADC; Swiss Agency for Development and Cooperation (SDC); World Wildlife Fund (WWF); amongst others.

The KAZA TFCA faces severe challenges, including a growing human population, lack of capital and inadequate infrastructure, differences in capacities across the region, divergent land use practices, rapid land transformation, and a variety of activities at local, national and regional levels. However, it also presents major opportunities, including consolidation of natural ecosystems and linking habitats, expansion areas for species and reduction of biodiversity loss, sharing of resources and pooling of expertise by agencies, joint planning and programming, and a forum for cooperation and integration.

3.4 The KAZA TFCA: the dream, the people, and the resources by Mr Colgar Sikopo

Mr Colgar Sikopo, Director for the Directorate of Wildlife and National Parks, Ministry of Environment and Tourism in Namibia gave a presentation on the KAZA TFCA vision and mission. The KAZA TFCA dream has been to “establish a world-class Transfrontier Conservation Area and tourism destination in the Kavango and Zambezi River Basin regions of Angola, Botswana, Namibia, Zambia and Zimbabwe within the context of sustainable development”.

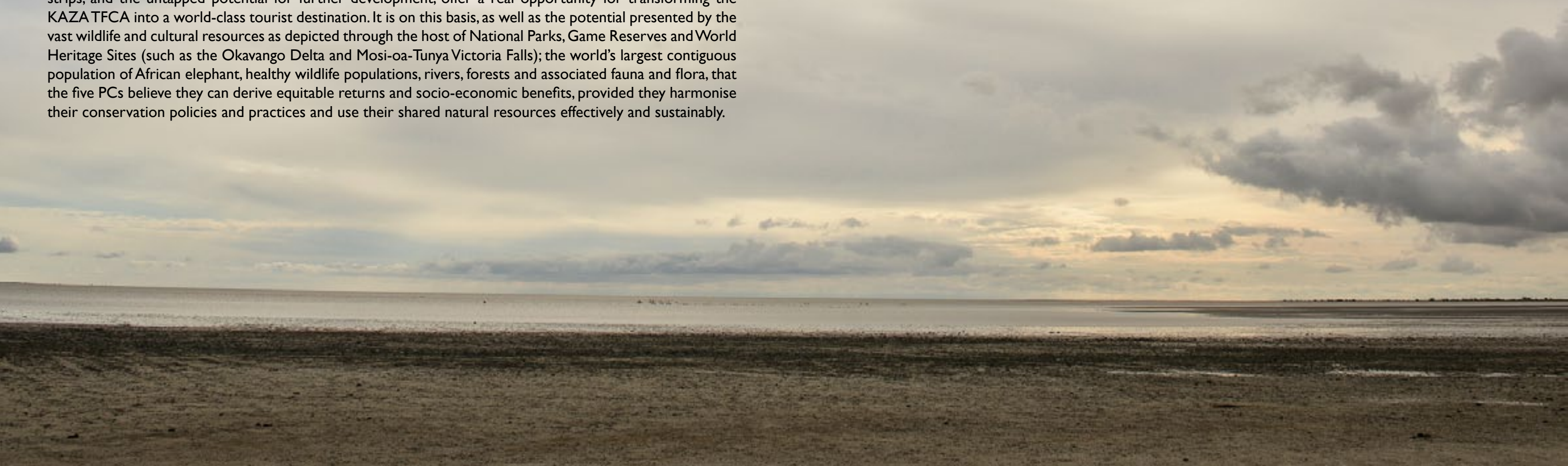
The existing tourism infrastructure, comprising of hotels, lodges, safari camps, roads, border posts, airports/ strips, and the untapped potential for further development, offer a real opportunity for transforming the KAZA TFCA into a world-class tourist destination. It is on this basis, as well as the potential presented by the vast wildlife and cultural resources as depicted through the host of National Parks, Game Reserves and World Heritage Sites (such as the Okavango Delta and Mosi-oa-Tunya Victoria Falls); the world's largest contiguous population of African elephant, healthy wildlife populations, rivers, forests and associated fauna and flora, that the five PCs believe they can derive equitable returns and socio-economic benefits, provided they harmonise their conservation policies and practices and use their shared natural resources effectively and sustainably.

Within the context of the KAZA TFCA, the first step towards realising ‘the dream’ is the establishment of the institutional framework that recognises its people as major partners and stakeholders of development. Priorities for development of the KAZA TFCA require:

- Functional, effective institutional arrangements;
- Secured core conservation estate with corridors to link eco-regions at the regional level;
- Promulgation and implementation of protocols for managing shared natural resources and developing tourism;
- Awareness of, and engagement with local communities;
- Collaboration and cooperation between institutions operating in the same area;
- Capacity building through training and mentorship;
- Mitigation of HWC;
- Quantification of implementation costs and identification of funding; and
- Policies for sharing costs and benefits.

3.5 Partnerships and investments by Mr Achim Burkart

Ambassador-designate to Zambia from the Federal Republic of Germany, Achim Burkart, emphasised that the KAZA TFCA is home to a common world heritage and the German Government through KfW is proud to support this important initiative. He underscored that the KAZA TFCA is not only a conservation initiative, but also an important political institution that brings countries together to harmonize commercial and conservation interests. He indicated that the challenges are enormous but the solutions are on the way and the German government wishes KAZA TFCA a great success.



4. SESSION I: 10 years on – Achievements and Challenges

4.1 Session summary – Where have we come from, where are we now and where are we going?

The session consisted of three presentations and a brief panel discussion, all summarized in this section of the proceedings. The session highlighted key achievements and challenges over the last ten years in the area of integrated natural resource management and land use; tourism development; and community development and livelihoods. Presentations were made collaboratively by representatives of the KAZA PCs under the auspices of the conservation working group; tourism and communications working group; and community working group respectively.

Strong political will and commitment over the ten years since the establishment of the KAZA TFCA as a concept has resulted in a number of key achievements. The Secretariat, hosted by Botswana, is underpinned by robust governance structures (Ministerial Committee, Committee of Senior Officials, and Joint Management Committee). The Master IDP has been written and agreed, demonstrating a shared vision, and key WDAs have been identified. There are several regional cooperation initiatives underway on transboundary law enforcement and research, in particular on large herbivore movements, large carnivores and fisheries. A number of strategies have been developed in a participatory manner across the KAZA TFCA. The protected area estate has been expanded in Angola, Namibia and Zambia and transboundary natural resource management (TBNRM) forums have been established and are functioning well. There is also increasing engagement by community and traditional leaders in the affairs of the TFCA at a local and regional level, reflecting a shift from a top-down to a more bottom-up approach. The wildlife-based economy across many areas of the KAZA TFCA is growing.



Despite these steps in the right direction, several challenges remain, including increasing human populations, corruption and greed. Formerly healthy fisheries are collapsing and poaching for high-value wildlife products and bush meat is a major problem. HWC is constant, if not increasing. Climate variability is a short and long-term threat, particularly across such a complex landscape as the KAZA TFCA. Landscape fragmentation, caused by veterinary cordon fences, poor integrated land use planning, and increasing ribbon development along major infrastructure such as new roads, continues to threaten ecosystem integrity and protected area connectivity in the KAZA TFCA.

Private sector participation is considered essential in the development of the tourism sector but remains weak. The capacity of communities within the KAZA TFCA to participate meaningfully in the wildlife economy remains low. Information management systems, currently uncoordinated in many aspects such as: species population monitoring, protected area management effectiveness evaluation, tourism, HWC, socio-economic factors, and law enforcement, require improvement.

The KAZA TFCA has made real progress in achieving its objectives. Looking forward, increased investment in tourism infrastructure is required to harness the power of the KAZA TFCA tourism product. Mechanisms for real engagement and partnership with the people of the KAZA TFCA are essential, including through tangible benefits from the wildlife economy. Adaptive management of complex, multi-use ecosystems is critical. With growing urban centres, environmental pollution is an emerging issue. Finally, the KAZA TFCA requires adequate expertise and sustainable funding to fully realize its vast potential.

4.2 Integrated natural resource management and land use by Ms Lusizi Mwale, Mr Godfrey Sitengu, and Mr Joao Mayembe Baptista

Ms Lusizi Mwale, Senior Wildlife Warden in the Department of National Parks and Wildlife, Zambia, gave a presentation on protected areas and wildlife management, on behalf of the KAZA TFCA Conservation Working Group.



Figure 6: Protected areas in the KAZA TFCA

Over the past 10 years, the TFCA has increased in size, with the addition of two new protected areas in Zambia, two in Angola, as well as one National Park and three new community conservancies in Namibia, while approximately 250km² have been ceded to communities in Zimbabwe. The KAZA TFCA is now home to over 240 different protected areas (Figure 6: Protected areas in the KAZA TFCA). Protected areas in the KAZA TFCA have many uses, including grass harvesting, firewood, subsistence agriculture, fishing, conservation agriculture, as well as adventure tourism, photographic tourism, and hunting.

Challenges exist in obtaining reliable and comparable estimates of the status of wildlife species across the KAZA TFCA due to the different methods and other survey parameters used. However, some transboundary wildlife movement has been monitored and an initial understanding of important wildlife corridors has been established (Figure 7).



Figure 7: Transboundary wildlife movement in the last ten years

Threats to wildlife in the TFCA are wildlife crime and human-wildlife conflict. Obtaining wildlife law enforcement statistics is a challenge, with data available for the Zimbabwean and Namibian components of the KAZA TFCA, and for Zambia nationally. It was however not possible to get statistics for Botswana and Angola. Across the KAZA TFCA PCs, there is a need for harmonization of laws, policies and legal definitions as well as collaborative joint law enforcement operations and activities. Joint Permanent Commissions (JPCs), inter-State meetings, and Interpol provide existing mechanisms that can be utilised to enhance such collaborative activities.

Successful strategies for protected area and wildlife conservation in the KAZA TFCA have included: political will; cooperation, information sharing, joint planning and operations between PCs; and development and adoption of a KAZA TFCA-wide species specific management strategy for wild dog. Challenges include: lack

of policy harmonization; bureaucracy in decision-making process; and accessibility to and conditionality of donor funds.

Mr Godfrey Sitengu, Chief Fisheries Biologist in the Ministry of Fisheries and Marine Resources in Namibia, gave a presentation on fisheries and forest management, on behalf of the KAZA Conservation Working Group. He outlined the different types of forests in the KAZA TFCA region (State Forests, Community Forests, Commercial Forests and Protected Forests/Forest Reserves) covering a total forest area of:

- 420,742ha in Botswana,
- 892,629ha in Namibia and
- 800,000ha in Zimbabwe

No statistics were available for Angola and Zambia.

Different legislation across the five PCs is a challenge to forest management, but a trade MOU between the States has been drafted and a workshop has been held on cross-border timber trading to enhance collaboration.

While most forests are considered healthy, there are major threats, including illegal veld fires, charcoal production, and illegal timber harvesting and trade. Most countries have fire management plans in place. In Zambia and Namibia, community forest management is taking root, with 18 community forests gazetted in Namibia. Key non-timber forest products include devils claw, monkoyo herb, water lily, chikanda and mopane worms.

Mr Sitengu also provided an overview of the status of fisheries in the KAZA TFCA region. In the Zambezi/Chobe system, there has been a dramatic decline from 1997 to 2015 in catch per unit effort (CPUE), indicating a major decline in fish stocks. In the core area of the Kwando River system, the CPUE has been stable. The Lake Liambezi system has seen a modest decline in CPUE, as has the Okavango system.

The policies and regulations governing fisheries activities across the five PCs are largely similar and provide a strong opportunity for policy harmonization, particularly on:

- registration and licensing;
- restriction on gillnet numbers;
- regulation on mesh size and length of gillnets;
- bag and size limits for recreational license holders;
- regulation of monofilament nets;
- introduction of exotic species; and,
- regulation of fish protected areas.

Transboundary fisheries management plans have been developed and research is already taking place, and these represent major opportunities for enhanced collaboration.

Joint law enforcement activities are taking place, particularly between Namibia, Botswana and Zambia, but challenges, including an influx of illegal fishermen, lack of resources to monitor illegal fishing activities, and the increasing use of illegal fishing methods remain.

Community engagement in fisheries management is insufficient, and the focus on fisheries management is largely restricted to protected areas, rather than those fisheries existing outside formal protected areas. Research on the overall health of the fishery is also insufficient. It was suggested that information sharing could be enhanced by the establishment of an e-library. Dedicated fisheries law enforcement personnel are needed on all major river systems in the KAZA TFCA.

Mr Mayembe Baptista, Tourism Officer for the Ministry of Hotels and Tourism of Angola, gave a presentation on infrastructure and equipment, on behalf of the KAZA Conservation Working Group. In order to enhance protected area management, a great deal of work has taken place to improve infrastructure in KAZA TFCA protected areas over the last 10 years. Some ranger accommodation units, park gates and airstrips have been upgraded, although there are many that still require work. Transportation and communication assets, such as aircraft and vehicles, have been acquired but remain insufficient for the needs. There is no KAZA TFCA-wide radio communication system available and many stations require upgrading. The road network is generally poor and most principal roads need work on as this affects the operations of the law enforcement authorities.

Despite the remaining needs, the limited infrastructure is facilitating some law enforcement and provided accommodation which motivates the staff. The cooperation between the Secretariat, PCs and development partners is positive and a number of management plans for protected areas in the KAZA TFCA have been developed over the past 10 years however some of these needs revision and some are yet to be developed, see protected area status in the KAZA TFCA in Table 1 below.

Table 1: Status of protected area management plans across the KAZA TFCA

COUNTRY	PLAN STATUS
Angola	2 plans developed and awaiting approval (Mavinga and Luengue Luiana National Parks).
Botswana	3 protected areas with existing plans. 3 National Parks with plans requiring revision. 5 forest reserves with plans under development.
Namibia	5 protected areas and 22 Conservancies with plans in place.
Zambia	2 National Parks (not including Sioma Ngwezi) and 10 Game Management Areas (GMAs) with plans in place. Simalaha Community Conservancy has a business plan in place. No forest reserves have plans in place.
Zimbabwe	Only 2 of the 12 protected areas have plans in place. No forest reserves have plans in place.

A number of questions and comments were raised to all three presenters, and these are summarized below:

- It is critical to monitor the status, not only of wildlife species, but also the condition of protected areas.
- Standardized monitoring of law enforcement effort and results is critical.
- Disease in the upper basins of rivers is mainly due to pollution, and can therefore be managed through pollution management.
- Concern was raised about the ‘bubble’ effect, whereby a ban or market closure in one country may just displace the problem to a neighbouring country.
- Very few indigenous fish species are found in the local markets.
- It is critical to find ways to add value to products in the KAZA TFCA, rather than relying only on primary production, such as agricultural production.
- Monofilament nets are extremely harmful to the river ecosystem, and Zambia, Botswana and Namibia are all considering bans.
- Results and progress should be presented in the context of the agreed targets for progress, as well as the reasons for delays and challenges in implementation.
- The status of development of integrated land use management plans should also be assessed.

4.3 Tourism development by Mrs Chilala Habasimbi and Mr Mokganedi Ntana

Mrs Chilala Habasimbi, Principal Tourism Development and Research Officer for the Ministry of Tourism and Arts, Zambia gave a presentation on behalf of the KAZA Tourism and Communication Working Group. Tourism is central to the KAZA TFCA’s vision, mission and objectives. Facilitation of tourism for sustainable development requires tourism products (and their conservation), infrastructure, investment, connectivity, goods and services. The KAZA TFCA has significant tourism products (Table 2), including natural attractions, cultural attractions and historical sites.

Table 2: Key tourism products and models in the KAZA TFCA

COUNTRY	KEY DESTINATIONS	TOURISM MODEL
Angola	Cuito Cuanavale Jamba, Bico de Angola	Multiple Models (mixed)
Botswana	Okavango Delta Chobe National Park Makgadikgadi Pans National Park	High Value Low Volume (specifically for eco-sensitive areas of Okavango delta, Chobe and Makgadikgadi)
Namibia	Bwabwata, Mudumu and Nkasa Rupara National Parks Popa Falls Conservancies	Multiple Models e.g. hunting (high value low volume)
Zambia	Victoria Falls Ngonye Falls Kafue and Sioma Ngwezi National Parks	Multiple Models (mixed)
Zimbabwe	Victoria Falls Hwange and Zambezi NPs Lake Kariba Batoka Gorge	Multiple models (mixed)

A variety of policies and legislation govern tourism activity across the five KAZA TFCA PCs. All PCs are taking steps to increase engagement with both communities and the private sector in tourism. Apart from Botswana, all PCs engage in hunting, while all five PCs engage in photographic tourism.

Adult Tourist ages range from 25 to 65 and comprise both self-drive and organized tours. Many tourists visit more than one KAZA TFCA PC on their visit, although this generally excludes Angola.

Statistics are mainly available from entry into National Parks, rather than museums or national monuments, and are therefore not fully representative of tourism activity, but have generally increased since 2013. The contribution of tourism to GDP ranges from 2.6% (Angola) to 5.2% (Zimbabwe). It is not possible to analyse trends in tourism employment due to a lack of data.

All PCs, except Angola, have a form of ecotourism certification. No cross-border tourism products have been developed since the KAZA TFCA’s inception, although there are many potential opportunities. Branding and marketing efforts of the KAZA TFCA have been made through a website, brochure, logo and standardized signage.

In the last 10 years, tourism facilities (Figure 8) and infrastructure has improved, such as border facilities, tourism nodes and accessibility, pontoons, bridges, road network, airports and airlines. Border control mechanisms and processes have seen improvement, but still require streamlining.

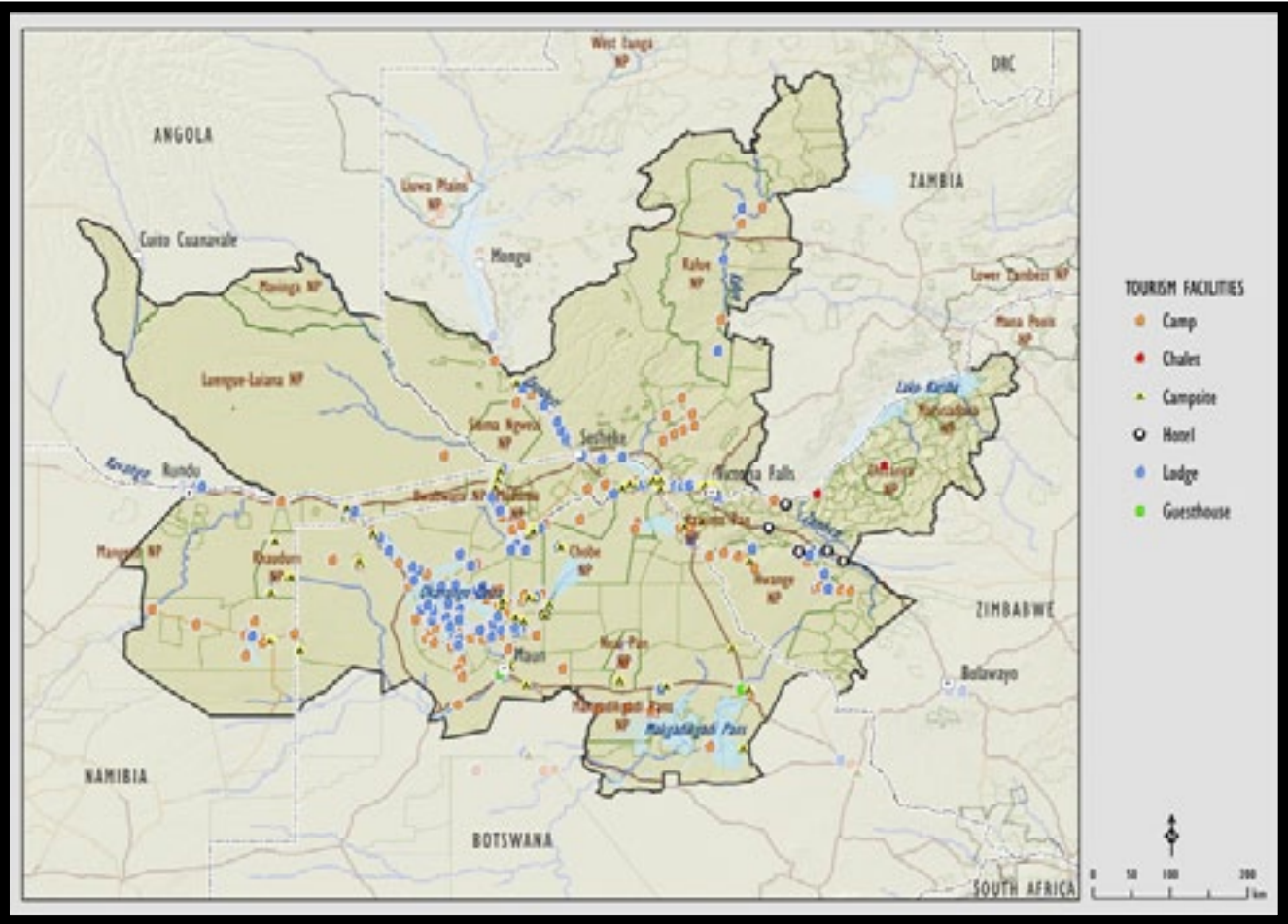


Figure 8: Tourism facilities across KAZA TFCA

The KAZA UNIVISA was launched as pilot in November 2014 between Zambia and Zimbabwe. Operators and tourists embraced the KAZA UNIVISA, but there were challenges, including running out of stickers, differences in immigration policies, hardware and software maintenance issues, and integration with the main immigration control system.

Mr Mokganedi Ntana, Tourism Development Manager for the Botswana Tourism Organization, summarized the lessons learned by the Tourism Working Group to date. There is cooperation and willingness to work together through regular structured meetings for technical committees and working groups. Challenges include availability of aligned statistical data; limited use of joint marketing; limited development of cross-border tourism products; underutilization of tourism attractions and opening up of new tourism routes; and implementation of proposed policy harmonization.

- A number of questions and comments were raised to the presenters, and these are summarized below:
- Tourism facilitation, particularly for small and medium enterprises, is an important component of the Master IDP.
 - KAZA TFCA's unique selling point is wildlife.
 - Outside of the UNIVISA, another practical option might be to have KAZA TFCA 'Ambassadors' at port of entries and Border post, who will provide information to the tourist as they arrive to welcome them and ease tourism movements.
 - It is critical to ensure that tourism revenues are reaching those living in the KAZA TFCA.
 - The development of the Future of Sustainable Lodges programme is still on-going.
 - RETOSA is working to develop tourism satellite accounts for SADC countries, which could assist with statistics.

4.4 Community development and alternative livelihoods by Mr Bright Sanzila

Mr Bright Sanzila, Community-Based Natural Resource Management (CBNRM) Warden of the Ministry of Environment and Tourism, Namibia gave a presentation on behalf of the KAZA TFCA Community Working Group. Numerous community-based organizations (CBOs) (Table 3), 36 to date, have been formed since the inception of the KAZA TFCA, along with four TBNRM forums (Figure 9: Transboundary Natural Resources Management forums in the KAZA TFCA (KAZA TFCA Community Working Group)).

Table 3: CBOs in the KAZA TFCA

INSITUTION TYPE	ANGOLA	BOTSWANA	NAMIBIA	ZAMBIA	ZIMBABWE	Formed during implementation of the KAZA TFCA Programme
Community Resource Boards				11		2
Conservancies			22	1	1	8
Associations		2	1		1	
Community Forests	1		19			11
Community Trusts		28		5		12
CAMPFIRE					7	
Community Partnership Parks				1		1
Fish Reserves			2			2

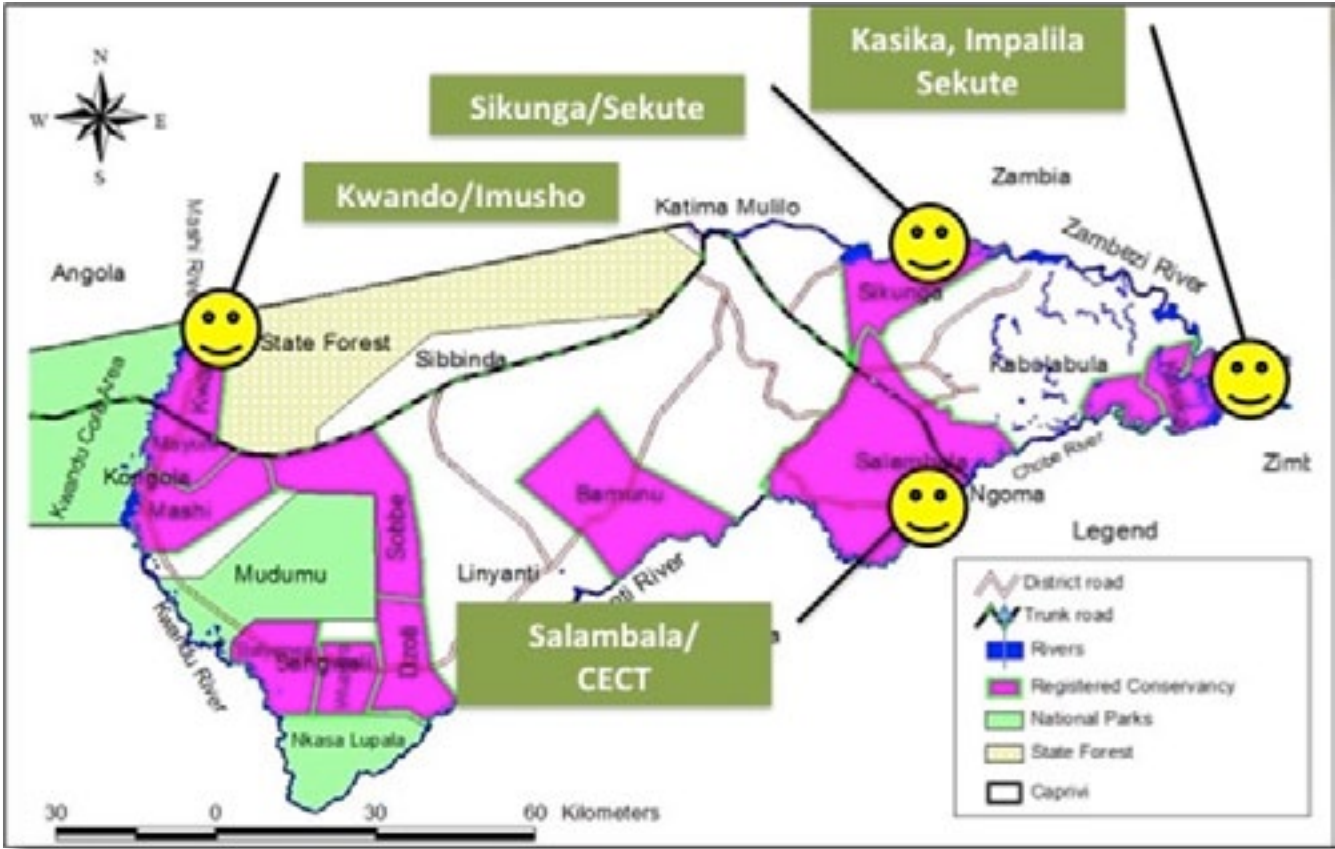


Figure 9: Transboundary Natural Resources Management forums in the KAZA TFCA (KAZA TFCA Community Working Group)

Each KAZA TFCA PC has legislation to support community-based conservation, and these bestow different types of rights over resources (Table 4), allowing different models for CBOs managing a variety of benefits from natural resources. There has been a dramatic increase in the number of tourism ventures in which communities are either partners or play a leading role. In addition to employment and the benefits from meat and fish, the other main sources of income to CBOs in the KAZA TFCA are:

- trophy hunting;
- tourism;
- various small and medium enterprises such as provision of products to tour operators;
- non-timber forest products;
- crocodile egg collection;
- agriculture;
- capture and sale of wildlife; and
- crafts.

Income accruing through these activities is invested in:

- infrastructure development (tourism facilities, roads, bridges, clinics, schools, etc.);
- funeral assistance to members;
- HWC mitigation and insurance;
- grinding mills;
- leather processing plants;
- scholarships;
- water reticulation (boreholes, stand pipes);
- natural resource monitoring and management;
- conservation farming; and
- annual household dividends.

Table 4: Rights, models and governance structures for community-based organizations across the KAZA TFCA

COUNTRY	MODEL	GOVERNANCE STRUCTURES	TYPE RIGHTS	ROLE OF GOVERNMENT
Botswana	Community Trusts	Government, Members, Board of Trustees, Trust Administrators	Conditional user & Management rights	Advice, monitors & creates an enabling environment
Namibia	Conservancies Community Associations Community Forests	Government, Community, Management, Committee, Staff members (may apply in some integrated Community Forests) Traditional Authorities	Conditional user & Management rights	Enabling environment & Compliance monitoring
Zambia	Resource boards Community trusts Conservancies Fishery management committees	Village action groups, community resource boards, Traditional authorities Traditional authorities Community trusts,	Conditional user & Management rights	Creates an enabling environment & co-management
Zimbabwe	CAMPFIRE	Rural District Councils, CAMPFIRE Committee & Ward-based Environmental Sub-Committees, CAMPFIRE Association	Conditional user & Management rights	Creates an enabling environment & regulation

A variety of KAZA TFCA structures offer platforms for engagement with community representatives including National Committees, KAZA-wide Traditional Leaders Forum, Community Working Group, and TBNRM Forums. There is increasing buy-in by communities; skills development and capacity building has been enhanced and women are increasingly empowered to participate in decision-making. Conservation agriculture serves as a useful entry point for community involvement in natural resource management.

Several key challenges continue to face community development including; lack of proper information management systems resulting in a loss of institutional memory; an increase in commercial poaching; insufficient mechanisms to offset losses from HWC; limited capacity to run community tourism enterprises; and in some cases benefits not reaching the household level.

A number of questions and comments were raised to the presenter as summarized below:

- Different management regimes in different countries can cause conflict among the partner states, for example hunting is allowed in some KAZA countries but has been banned in others.
- Governments should engage with their communities before making the decision to change management approaches.
- Is it realistic to have all communities benefiting from wildlife? If not, what alternative livelihoods can be explored?
- Community development is a fundamental pillar of the KAZA TFCA along with conservation and tourism. Ultimately, communities must benefit from the activities undertaken within the KAZA TFCA.
- Data is critical to ensure that programmes are designed effectively to meet the needs of both communities and conservation.

Panel discussion

Michael Flyman, moderated the panel discussion that closed Session I. Panellists were Kudakwashe Chigodo and Alec Dangare from ZIMPARKS, Zimbabwe; Naambo Josephine lipinge from Ministry of Environment and Tourism, Namibia; and Chilule Mlazier who is the KAZA Liaison Officer for Botswana).

The discussion was far wide-ranging and included the following key points:

- There is immense potential to develop tourism in the KAZA TFCA, but it requires collaboration across the PCs.
- The impressive growth of CBNRM must be further sustained, and community benefits need to be tangible and accrued at the household level, particularly in the context of severe HWC.
- Differences across the KAZA TFCA, even within a single PC, need to be examined and areas with lower tourism activity need further attention to find additional income streams.
- PCs must also pay attention to environmental pollution.
- Funds have been successfully raised to implement many programmes within the KAZA TFCA, but the long-term sustainability should be considered carefully, and PCs must consider what they are willing to commit.
- There are major expertise gaps, particularly in fisheries and business development.

Panellists noted key successes, such as the piloting of the KAZA UNIVISA, the involvement of communities through TBNRM forums, and establishment of community wildlife concessions.

5. SESSION II: Benefits and Ownership - Institutional, Governance and Policy Change in Natural Resource Stewardship in the KAZA TFCA

5.1 Session summary – Where have we come from, where are we now and where are we going?

Session II, with a focus on the institutional, governance and policy framework that underpins natural resource stewardship, consisted of eight presentations, ranging from important theoretical overviews to direct experience from the KAZA TFCA PCs.

Engagement of traditional leaders and communities in achieving the vision of the KAZA TFCA, while limited when the TFCA was launched, has improved. National-level CBNRM programmes were in various stages of development and implementation when the KAZA TFCA began, and there have been both gains and losses in CBNRM in the intervening ten years. There is now strong recognition that communities are at the heart of the KAZA TFCA and are in fact the key to achieving the KAZA TFCA's vision. TBNRM forums and cross-border initiatives between a number of PCs demonstrate the possibilities that exist. There are numerous examples of real success, if only on a small scale. Traditional leaders are increasingly engaging in dialogue around the issues and challenges facing the KAZA TFCA.

- Clear and practical mechanisms are needed to bring communities into the decision-making processes of the KAZA TFCA. A number of recommendations arose out of the session:
- Ensure stronger devolution of community rights over resources, including wildlife, fisheries and forests;
- Redefine benefits from community-based natural resource management to include intangible benefits;
- Undertake interventions that can increase farm level productivity such as conservation farming;
- Enhance capacities of communities to manage and benefit from their resources;
- Establish standards to enhance local competitiveness in the wildlife-based economies across the KAZA TFCA;
- Diversify CBNRM benefits to high end enterprises; and
- Ensure communities are adequately represented on KAZA Working Groups and through other TFCA structures.

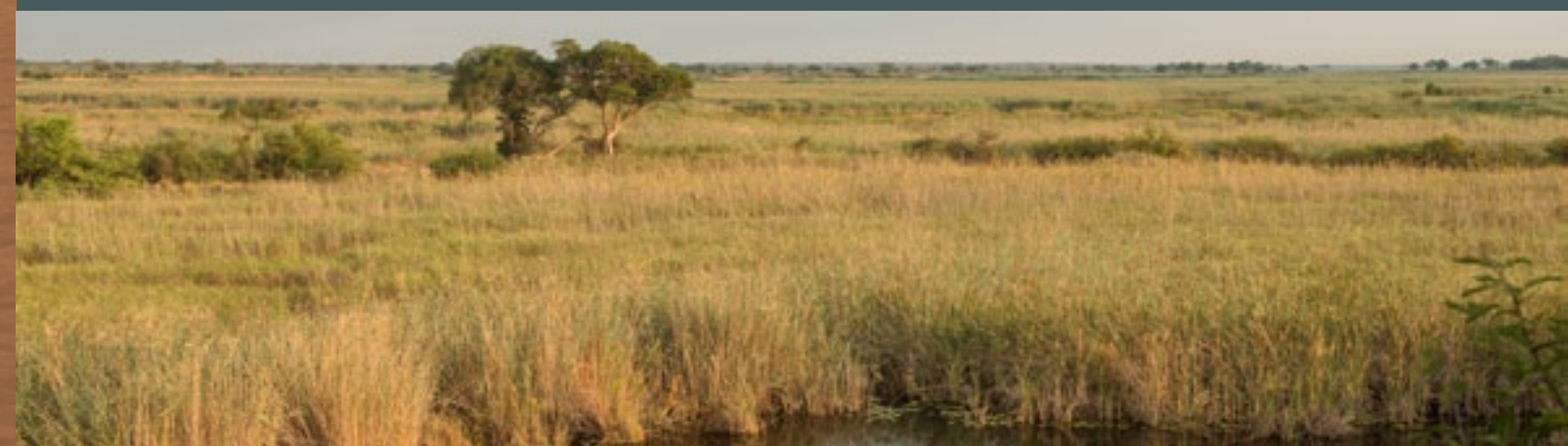
Box 1: Keynote Address: The role of traditional leadership in the KAZA TFCA



To kick off the second day of the Symposium, His Royal Highness, Senior Chief Mukuni gave a keynote address on the role of traditional leadership in KAZA. The full address is available in Annex 3.

Communities and traditional leaders did not have a sense of ownership of the KAZA TFCA when it began, seeing farming as a more viable land use option, and suffering high levels of HWC. The traditional authorities have since been engaged collectively, laying the groundwork for communities to be custodians and equal partners in

conservation and development. Firearms and fences alone are insufficient – the people that live with the resource must be involved in its management.



5.2 Benefits and ownership – institutional governance and policy status of natural resource stewardship in the KAZA TFCA by Dr Patricia Mupeta-Muyamwa, Dr Joseph Mbaiwa, Mrs Karine Nuulimba, Mr Shylock Muyengwa, and Dr Simon Anstey

Presented by Mrs Karine Nuulimba, Programme Director for Integrated Rural Development and Nature Conservation (IRDNC), the presentation looked at each PC's progress towards increasing community rights over land and resources, building institutions that are accountable to its members, and deriving appropriate benefits from CBNRM.

In Angola, there has been an expansion of protected areas and there is a general desire to increase the rights of people living in and around protected areas, however as yet there are no direct benefits accruing from CBNRM.

While the popularity of CBNRM in Botswana was very high in the 1990s, with a number of Community Trusts being formed, there has been a gradual recentralization and reversal of CBNRM, as well as a reduction in options for wildlife-based land use, with the suspension of trophy hunting. The national CBNRM Policy provides guidance, but inadequate rights.

Under the Namibian conservancy model, communities have rights over ownership of huntable game, revenues from the sale of game or game products, and tourism. Community benefits from conservancies include cash, meat, employment, improvements to local infrastructure, and HWC mitigation.

A number of pieces of legislation bestow rights over resources to communities in Zambia under a variety of models from co-management to full devolution. These extend beyond the wildlife sector into fisheries and forestry.

Zimbabwe's CAMPFIRE (Communal Areas Management Programme for Indigenous Resources) story is well known and has suffered from governance challenges and a reduction in the viability of the wildlife industry.

Mrs Nuulimba concluded by noting that, although there has been devolution of the right to benefit from natural resources, wildlife resources remain largely under the control of the State across the KAZA TFCA. New models are emerging, but basic principles must not be ignored to ensure robust governance at the appropriate scale. The KAZA TFCA must ensure that it is enabling secure and long-term community tenure over resources.

5.3 The role of local landscape conservation areas and TBNRM Forums in the KAZA TFCA: giving communities a stronger voice by Ms Naambo Josephine lipinge, and Mr John Kamwi

A presentation by Ms Naambo Josephine lipinge, Control Warden of the Namibian Ministry of Environment and Tourism and Mr John Kamwi, TBNRM Coordinator for IRDNC, gave an overview of the landscape conservation and TBNRM approaches in the KAZA TFCA.

Landscape conservation puts local people and their contributions at the centre of conservation, involving communities in planning, implementation, monitoring and decision-making. This approach requires a strong enabling environment that not only requires government authorities to engage with local communities, but also enables communities to exert rights over processes and resources. A number of examples from the Namibian conservancy programme in Zambezi Region were provided. It is proposed that lessons from the landscape conservation approach be included in new wildlife legislation in Namibia.

Community-level transboundary natural resource management in the KAZA TFCA started in 2002 and there are now four forums, with MOUs and joint work plans (see Figure 9: Transboundary Natural Resources Management forums in the KAZA TFCA (KAZA TFCA Community Working Group)). TBNRM Forums

engage and promote harmonized activities across borders, for example the joint closed fishing season between Zambia, Botswana and Namibia. The forums also create a community platform where issues of mutual concern can be discussed to reduce friction, empower local voices and are a critical mechanism for ensuring connectivity in key WDAs.

5.4 Taking ownership over natural resources: the case of the Simalaha Community Conservancy in Zambia by Induna Anasambala and Mr Alan Sparrow

Induna Anasambala of the Simalaha Community Conservancy Trust gave a presentation on this unique partnership between two Chiefdoms, situated in the middle of the Chobe-Kafue Zambezi Floodplain WDA. The two chiefdoms of Senior Chief Inyambo Yeta and Chief Sekute agreed to establish a fully functional conservation programme that balances the needs of the people with the needs of the environment.

An intensive consultation process resulted in an integrated development plan, and the Conservancy has now been legally established as a wildlife management area with a formal Trust in place. 25,000ha have been designated as a core wildlife sanctuary and nearly 1,000 animals have returned to the Simalaha floodplain. 500 farmers have been formally trained in conservation agriculture, village action groups have been established and trained, 22 wildlife monitors have been trained, and a working group oversees the conservancy.

Key success factors include boundary delineation, institutional structures, sanctuary establishment, and conservation agriculture. Leadership from the chiefs and support from the government have also been critical. Challenges include encroachment, fires, over-fishing and deforestation. A more aggressive approach to developing partnerships with the private sector is required, as is a plan to reduce charcoal production.

5.5 Facilitating policy harmonization and governance of shared water resources by Dr Chonguica Ebenizario, Mr Sekgowa Motsumi, and Mr Chris Brooks

Dr Eben Chonguica, Executive Director of the Permanent Okavango River Basin Water Commission (OKACOM) Secretariat, gave an overview of OKACOM's role in promoting collaborative governance of shared water resources. OKACOM provides technical support to member states on how to manage a river basin system in an integrated and transboundary context, balancing different development priorities of three nations (Angola, Botswana and Namibia) and different political and socio-economic environments.

OKACOM uses a two-phased approach, first building a joint understanding of the status and trends in the river basin, as well as the political and socio-economic issues across the impacted countries, and then working to formulate the necessary institutional architecture. Scenario planning provides a basis for negotiation over managing trade offs of different possible developments. Four key areas of concern have been identified, including variation and reduction of hydrological flow, changes in sediment dynamics, changes in water quality, and in abundance and distribution of biota. These are impacted by land use change, population dynamics and climate change. A Strategic Action Programme has been developed laying out clear priorities and commitments for action to resolve the priority problems identified.

A number of projects have been funded to support the programme from which key lessons have been learned:

- Country-specific governance principles must be addressed with care.
- Environmental flow assessments and scenario planning should be done before any planning or design.
- Rural people rely on rivers for far more than water, and ecosystem conditions and its links to livelihoods must be factored into flow assessments. Basin-wide flow assessments can provide insights into win-win situations that are not apparent in project-based assessments. The complex technical languages of technical and scientific studies need to be simplified to the needs of policy makers.

5.6 Ensuring greater benefits to host communities: addressing leakages from the tourism industry **by Dr Joseph Mbaiwa**

Dr Joseph Mbaiwa, Professor of Tourism at the Okavango Research Institute, outlined the missed opportunities for the KAZA TFCA to benefit meaningfully from tourism. While Africa has a small share of tourist arrivals globally, the tourist attractions in the KAZA TFCA are significant, particularly the natural and cultural assets.

However, major challenges exist in the region. Only 10% of the region's hotel rooms meet international standards, with most accommodation being unbranded guesthouses and lodges. Road transport is generally poor and air transport is insufficient and significantly more expensive than comparable air transport in other parts of the world. A significant proportion of tourism revenue leaks from developing to developed countries through taxation, accommodation and airline industries. Foreign companies earn handsome profits by charging management fees, making limited direct investment, and through various licensing, franchise and service agreements. This allows the repatriation of most of the foreign exchange. Many tourism enterprises (and accompanying industries such as airlines) are foreign-owned. Although tourism generates a substantial amount of employment opportunities for local people, the jobs which citizens usually hold require minimal skills and are low-paying. Links to local industries, such as agriculture, are generally poor.

Strategies to improve this situation include: finding ways to have greater local stake in airlines and accommodation; increasing domestic tourism; ensuring a competitive market; and creating a policy framework that will encourage local investment and ensure financial, economic, environmental and social sustainability.

5.7 Community participation in identification, securing, and institutionalizing corridors at a micro level: a case of the Zambezi Region by Mr Brian Jones, Mr Dominic Muema, and Mr Elvis S. Mwilima

Mr Elvis Mwilima, KAZA TFCA Liaison Officer for Namibia, presented a case study from the Zambezi region on the development of micro corridors by communities in the Kwando WDA.

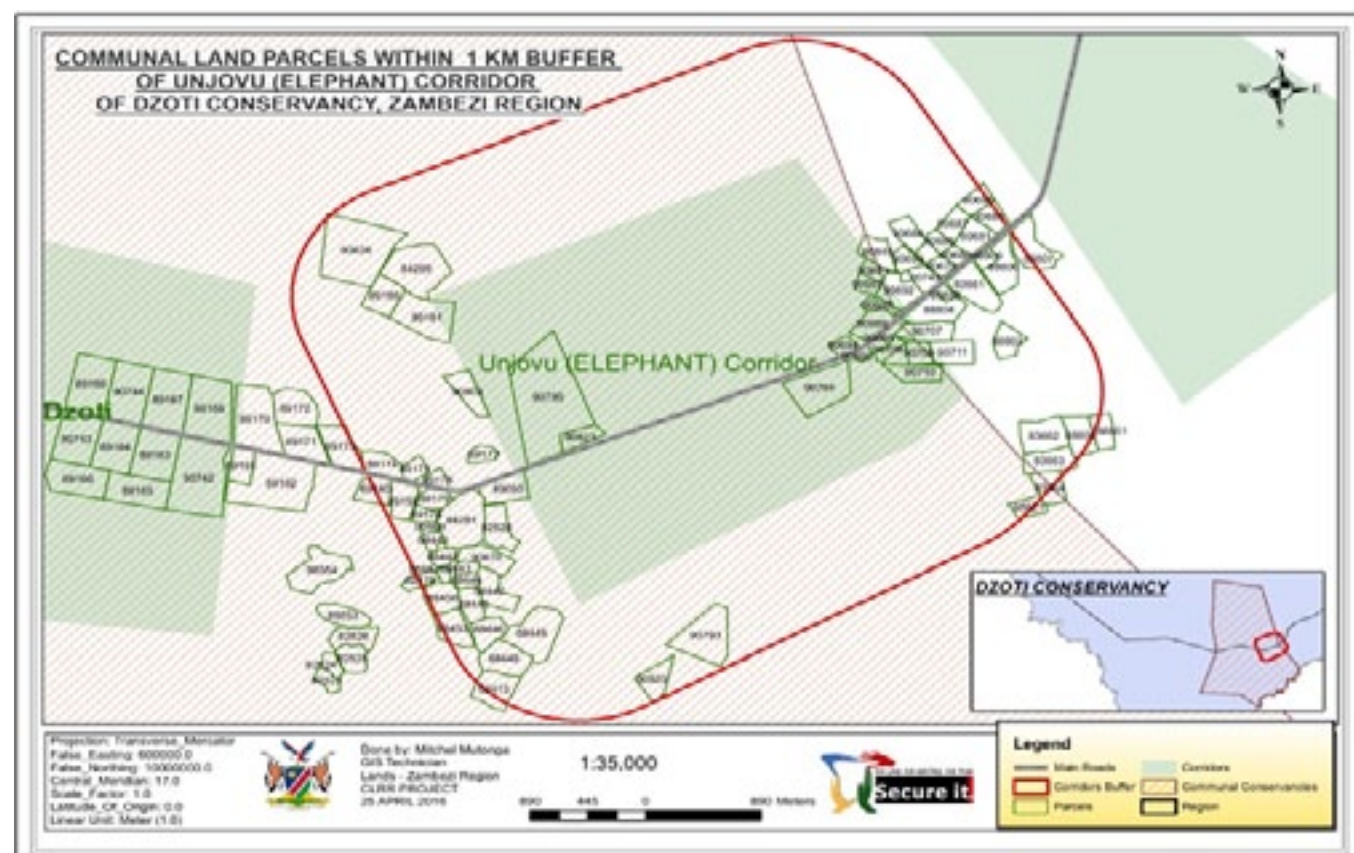


Figure 10: Micro Land Use Mapping in Dzoti Conservancy, Namibia (MET)



Working in the Dzoti, Sobbe, Bamunu, Mayuni, and Salambala areas through a participatory process, awareness of the importance of corridors was raised, corridors were mapped, and research conducted into the number of residents in the identified corridors. Conservancies developed plans for securing and maintaining corridors (Figure 10: Micro Land Use Mapping in Dzoti Conservancy, Namibia (MET)). People were generally willing to move out of a corridor, providing they were given alternative land by the traditional authorities, and provided with livelihood support. There was a general willingness to maintain corridors and strong commitment from the traditional authorities and conservancy committees to establish rules to govern the management of these corridors. Payment for ecosystem services (PES) as an innovative conservation financing mechanism is being explored in Sobbe and Dzoti.

There are challenges, with some community members registering land within wildlife corridors and a growing human population increasing the pressure to allocate or develop land in corridors. Activities of line ministries in other sectors, such as provision of water, also lead to people moving into corridors. There is currently no legislation to support the gazettement of wildlife corridors. A number of strategies could be explored to secure identified corridors, such as further research into PES or leasehold solutions, and strengthening enabling legislation for wildlife corridors.

5.8 Joint venture models in communal areas of KAZA by Mr Richard W. Diggle, Mr Rueben Mafati, Mr Charles Jonga, Mr Mokganedi Ntana, and Mr Mwape Sichilongo

Mr Richard Diggle, CBNRM Business Specialist from WWF in Namibia presented on joint venture tourism models. Tourism joint ventures are contractual partnerships between a community structure and a private sector organization to work together to establish and operate a tourism business. With increasing devolution of rights over wildlife to communities, tourism joint ventures are a way to effectively increase incentives for community conservation. There is a full spectrum of models for joint ventures, with communities having different roles and levels of involvement in the management of the tourism business.

The more devolved the policy and legislation, the more responsibilities communities generally take and the more benefits flow to them, particularly where communities have formal legal entities and experience in tourism. However, the complexity of agreements can often exceed the capacity to manage and expectations are not always reconcilable.

Key elements for success include:

- legal structures that allow communities to engage in business arrangements;
- access for communities to obtain the 'head' concession';
- access to capital;
- availability of an 'honest broker'; and
- a strong day-to-day relationship between partners.

5.9 Conservation agriculture contributing to food security in the context of biodiversity conservation: Case studies from KAZA by Dr Nyambe Nyambe, Mr Crispin Muchindu, Mrs Britta Hackenberg, and Dr Graham McCulloch

Dr Nyambe Nyambe, Country Director for WWF Zambia, presented on the role of conservation agriculture in the KAZA TFCA. Conservation agriculture, which relies on minimal soil disturbance and suitable crop rotations and associations, has benefits for natural ecosystems. Projects across the KAZA TFCA, in the Okavango Delta in Botswana, the Kavango and Zambezi areas of Namibia, the Silowana Complex and Simalaha Community Conservancy in Zambia, and various areas in Zimbabwe, have trained a significant number of farmers in this approach. The support has included farmer identification, training and awareness, input support access, technical support, institutional support structures and mechanisms, land use planning and HWC, post harvest management, and the promotion of mechanisation.

Significant impacts have been demonstrated, including improved yields, development of savings clubs, quality tested seed, and improved access to seed. Challenges include the long adoption phase, sustainability challenges in the absence of project funding, conflicts with wildlife and livestock management, storage, value addition and marketing, and weed management. Farmer groups are key and continuous teaching and demonstration is required. Good fencing and HWC mitigation is considered essential.

5.10 Discussion, comments and questions

A number of questions and comments were raised to the presenters and during the discussion session as summarized below:

- The KAZA TFCA needs to find ways to support and expand those programmes in which communities are real partners in conservation.
- Non-financial benefits need to be closely examined and community attitudes should be understood.
- The balance between household and community level benefits is very delicate.
- The exit strategies for projects to ensure sustainability and that the communities 'own' the conservation strategies need to be considered.
- There was general agreement on the challenges raised with regard to leakage of tourism revenue.
- There is a need to build decisions at the community level, rather than impose rules from above.



6. SESSION III: Maintaining and Restoring Ecosystem Integrity in the face of Development

6.1 Session summary – Where have we come from, where are we now and where are we going?

Session III, with a focus on ecosystem integrity, consisted of eight presentations that provided lessons learned throughout the KAZA TFCA on monitoring ecosystem connectivity and planning for long-term restoration and protection of key ecosystems and corridors.

While the KAZA TFCA was first focused on the core protected areas found within the boundaries of the TFCA, there is an increasing recognition that connectivity between these protected areas is critical for the long-term sustainability of the wildlife resource base and therefore the long-term integrity of the TFCA itself. The Master Integrated Development Plan, with its designation of six Wildlife Dispersal Areas, represents a major step forward in recognizing this important need.

There is a strong understanding that the KAZA TFCA is a complex adaptive system operating at multiple scales and that conservation and development approaches must take into account this complexity to formulate the appropriate scale-sensitive responses. The KAZA TFCA PCs and stakeholders have undertaken a great deal of work to understand the landscape and its critical corridors, and to test strategies, such as de-mining, conservation agriculture and participatory spatial analysis, to understand, restore and protect ecosystem integrity.



While critical WDAs have been identified, implementation and monitoring must now accelerate to ensure that these corridors are truly effective in maintaining ecosystem integrity across the KAZA TFCA. The following recommendations arose out of the session:

- Promote resilience and transformative capacity at appropriate scales;
- Focus much greater attention on the value of ecosystem services;
- Undertake scenario planning to understand the long-term impact of different development pathways;
- Facilitate the emergence of scale-sensitive natural resource governance institutions;
- Assess the effectiveness of WDAs and micro corridors and make the necessary adjustments;
- Ensure that IDPs are reflected in national-level sectoral plans to ensure that they can be implemented and enforced;
- Support further efforts in micro land use planning, which can be extremely effective in enhancing tolerance and resilience and reducing conflict; and
- Develop and enable strong economic drivers that will allow communities to participate in the wildlife-based economy, but which will also drive effective and efficient use of available land and habitats.

6.2 Maintaining and restoring ecosystem integrity in the face of development by Dr David Cumming

Dr David Cumming, affiliated with the University of Cape Town, the Tropical Resource Ecology Programme at the University of Zimbabwe and AHEAD, gave a context-setting presentation. The KAZA TFCA's objectives are both ecological and socio-economic, raising the all-important issue of whether development can happen without disrupting ecosystem integrity. In a socio-ecological system (SES) such as the KAZA TFCA, multiple actors and agendas perceive and influence TFCAs in different and sometimes conflicting ways, and at varying scales.

The KAZA TFCA, an area of over 520,000km², is a complex adaptive socio-ecological system, with a human population of approximately 2.7 million. The area has significant natural resources and provides critical ecosystem services (Figure 11: The KAZA TFCA's key Natural Resources and Ecosystem services (D. Cumming)). Approximately 70% of the area is under communal tenure, with about 20% under state protection. Climate change scenarios largely predict increasing temperatures, wetter in the north and east and drier in the south and west, making dryland cropping in most of the region neither sustainable nor productive.

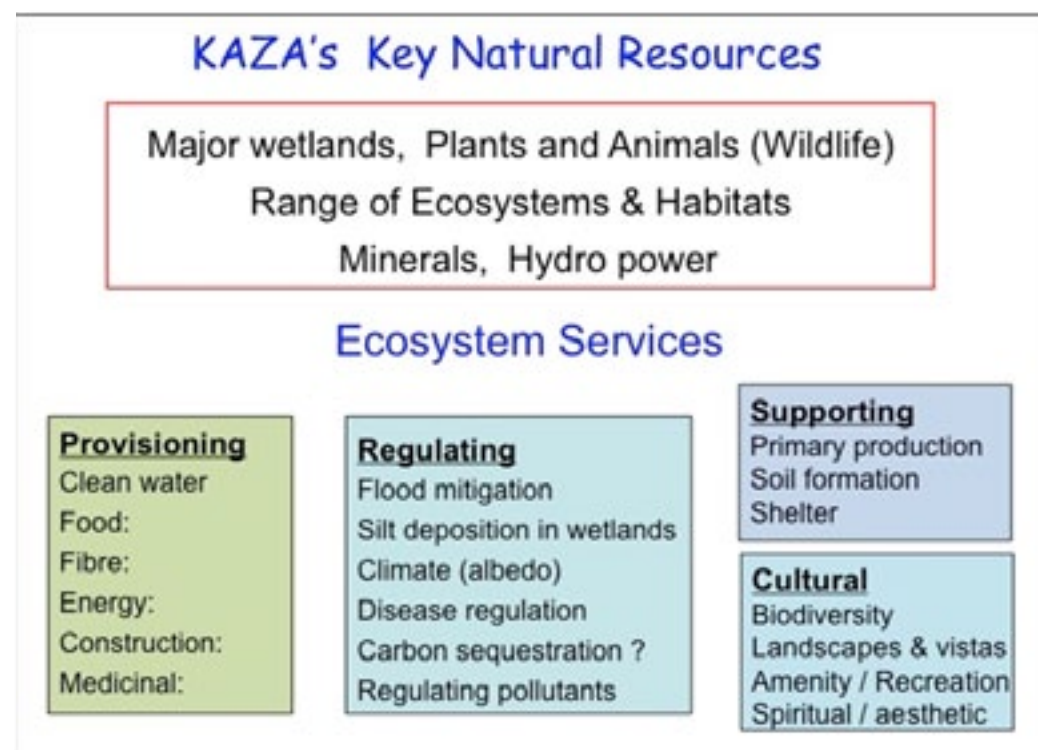


Figure 11: The KAZA TFCA's key Natural Resources and Ecosystem services (D. Cumming)

Strategic approaches to ensure ecological integrity in the KAZA TFCA include: the exploration of alternative future scenarios, allowing management of the KAZA TFCA within the framework of a complex adaptive socio-ecological system approach; focusing greater attention on the value of ecosystem services; explicitly promoting resilience and transformative capacity at appropriate scales; and facilitation of the emergence of scale sensitive natural resource governance institutions that can restore ecosystem integrity across the KAZA TFCA landscape.

Scenario planning should take place at multiple scales (Figure 12: Scenario Planning in the KAZA TFCA (D. Cumming)). More detailed outcomes should be developed with associated targets and timelines. Likewise, the situation should be modelled historically to understand the impacts of the development pathways that have occurred to date in the KAZA PCs and the impacts on ecological integrity.

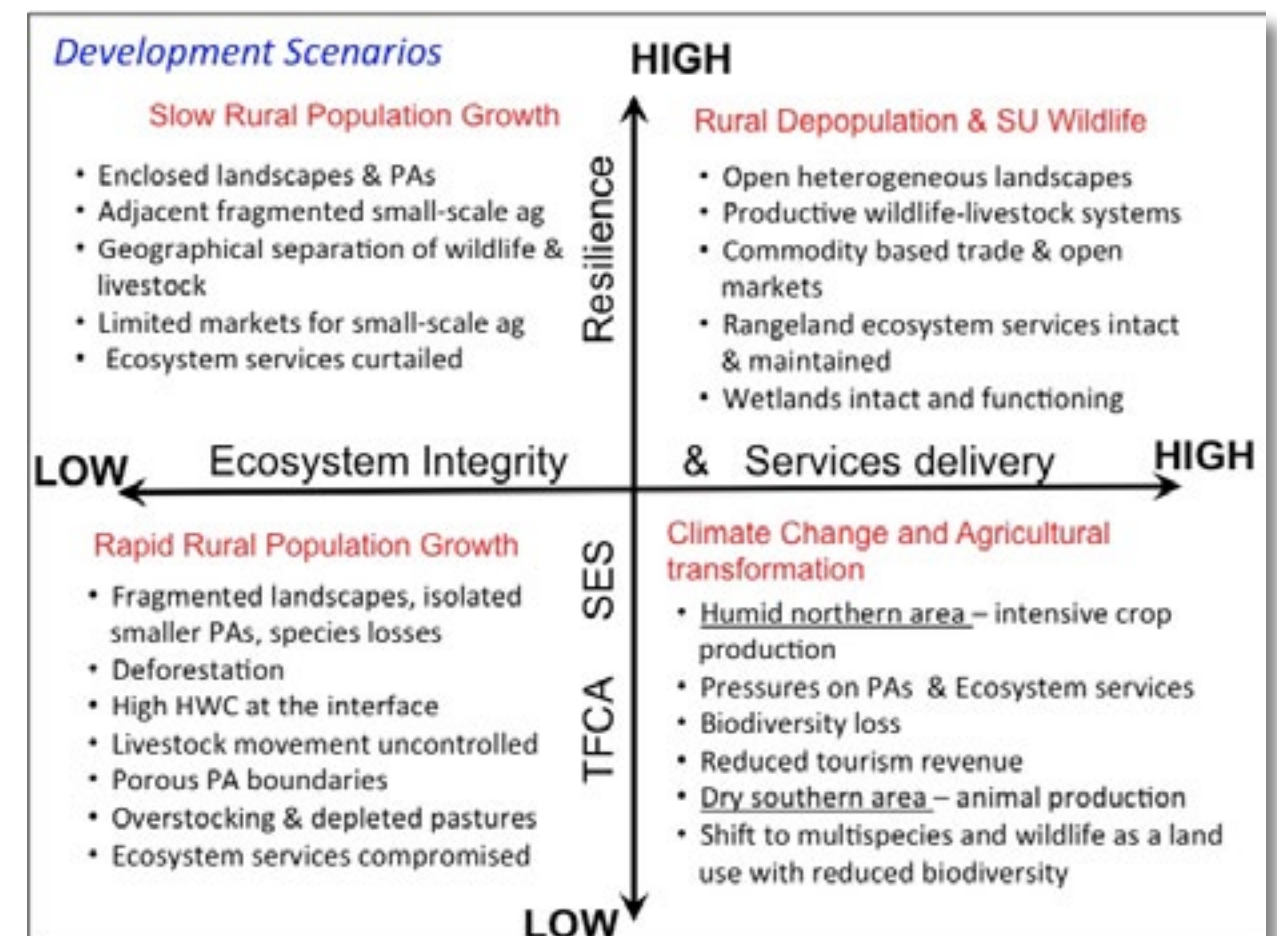


Figure 12: Scenario Planning in the KAZA TFCA (D. Cumming)

6.3 Connectivity, corridors and Wildlife Dispersal Areas by Dr Robin Naidoo and Mr Paul Bewsher

Dr Robin Naidoo, Conservation Scientist, WWF US, gave a presentation examining the effectiveness of identified corridors in the KAZA TFCA in covering connectivity for wildlife movement in the landscape. A number of micro corridors have been identified in the larger Kwando WDA.

Connectivity can be measured using a method based on circuit theory, which quantifies barriers to movement. A resistance layer was developed, using observed daily elephant movements from collared data, and an analysis of the environmental factors associated with the paths that were either used or not used by the elephants. Using Circuitscape 4.0 (freely available software), each WDA pathway and micro corridor was then compared to the underlying resistance layer, and evaluated as to its success in capturing elephant connectivity. The detailed results will be available in a published paper.

There are limitations, however, particularly the fact that the model is based only on elephant data, and other species may use the landscape in different ways. This exercise should be refined as needed and then applied to the other WDAs in the KAZA TFCA, to support decision-making and policy. It can also be used to support future scenario planning under different development pathways and taking into account climate change, infrastructure and human development trends.

6.4 Participatory land use planning in the KAZA TFCA: the Greater Kafue Ecosystem by Mr Chuma Simukonda

Mr Chuma Simukonda, Assistant Director Research and Veterinary Services in the Department of National Parks and Wildlife in Zambia, gave a presentation on the merits of participatory land use planning, using the Greater Kafue Ecosystem as an example.

The Kafue landscape, part of Zambia's component of the KAZA TFCA, is extensive with multiple administrative and tenure arrangements. The ecosystem has many different components, and a variety of threats undermine the ecological integrity of the area. Participatory land use planning is a useful tool for managing the use of resources and meeting the needs of diverse stakeholders, but is a process that requires a number of different steps. To begin with, information on resources, threats, and stakeholders must be gathered and analysed, preferably in partnership with communities and relevant stakeholders. A series of stakeholder workshops are then held to verify data, identify challenges, develop shared objectives, allocate different areas into management zones, and develop implementation plans. The pace of development of the plan must match the pace of understanding of the stakeholders.

Such processes are usually expensive and take a long time, but are critical in ensuring wide, cross-sectoral agreement on the use of a large landscape, as long as the processes are underpinned by implementation plans and resources. Communities are a key stakeholders, as well as representatives of sectors that may pose a threat to the ecosystem (e.g. mining). Integrated plans must always be supported by sector-specific plans, to ensure enforceability.

6.5 Land use planning at the community-elephant interface by Dr Anna Songhurst, Dr Graham McCulloch, Dr Amanda Stronza, Mr Fannuel Radifalana, Mrs Gabofhete Radithladi, Mrs Reamogetse Yakenge, Mr Mauano, Mr Chris Brooks, and Mr Kent Burger

Dr Anna Songhurst, Director of Ecoexist, gave a presentation on the results of micro level land use planning in the Kwando WDA, in the Eastern Okavango Panhandle in Botswana, particularly NG11 and NG13. 15,000 people live in the area, with approximately 15,000 elephants moving through the area to use woodland resources, resulting in direct and indirect conflict with people. Research starting in 2008 demonstrated that elephants use specific pathways, and that a robust driver of the likelihood of crop raiding is the distance from the elephant pathway to the field.

Over three years, these pathways were monitored using bimonthly ground surveys to determine the intensity of use of each pathway by elephants (Figure 13: Elephant pathways: intensity of use over three years (Songhurst, A., McCulloch, G. & Coulson, T. (2015)). The project then used the Land Use Conflict Identification Strategy (LUCIS), a goal-driven GIS model that produces a spatial representation of probable patterns of future land use, to identify areas that are appropriate for development, agriculture and wildlife. The LUCIS process is highly participatory and has resulted in the identification of a number of priority elephant corridors, which have been demarcated with full community and local government participation. The local land board has incorporated the information into local land use planning, and those living inside the corridor can opt to move, with necessary support from the local land board. The process has been endorsed by Ministry of Land Management, and has been incorporated into National Development Plan II.

A second phase of the project will be to train land board employees and surveyors, and to support the allocation of land with minimal conflicts. These efforts at the most local scale are critical to ensuring the success of larger regional corridors and WDAs.

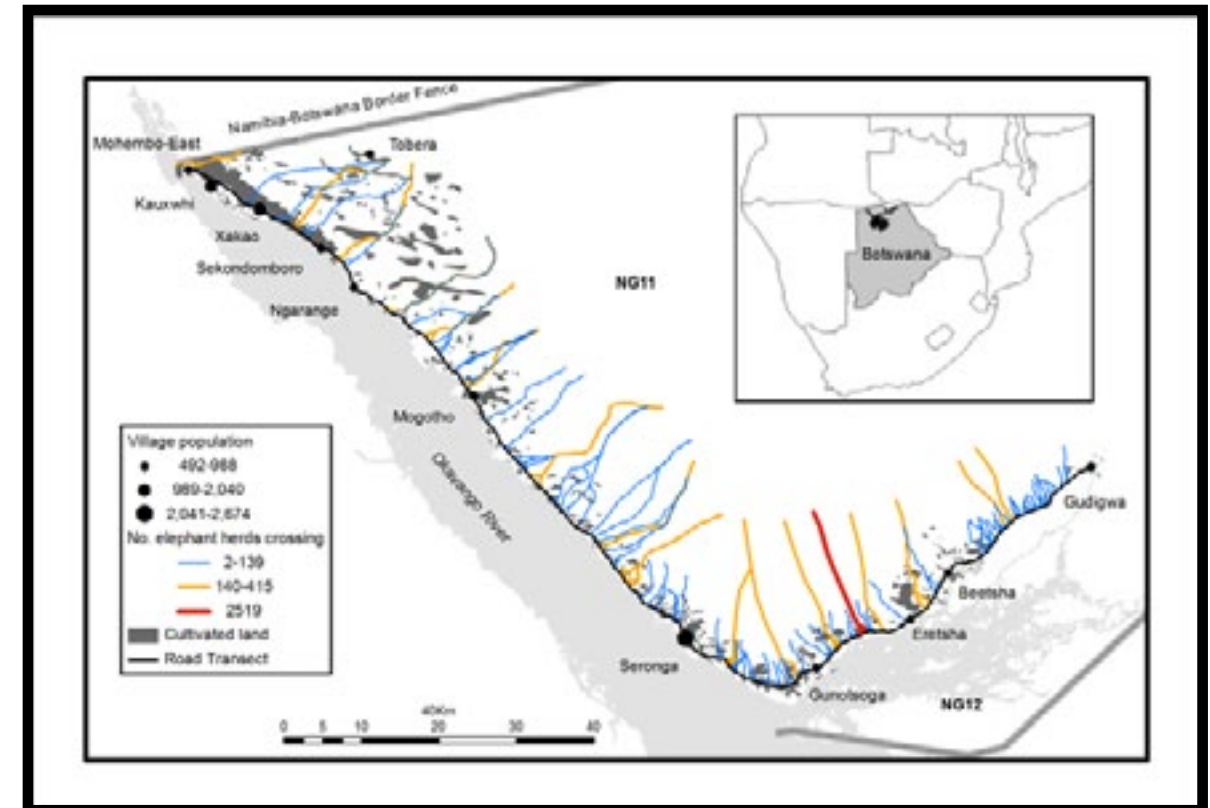


Figure 13: Elephant pathways: intensity of use over three years (Songhurst, A., McCulloch, G. & Coulson, T. (2015) Finding pathways to human-elephant coexistence: a risky business. *Oryx*, 49, 1-8).

6.6 Demining: Realising Angola's dream for KAZA by Mr Rui Lisboa

Mr Rui Lisboa, KAZA Liaison Officer for Angola, gave a presentation on Angola's efforts in the KAZA TFCA region since the end of its war. In Cuando Cubango province, the legacy of war was the destruction of infrastructure and the placement of land mines across much of the area. Without demining, it would not be possible to have free movement of people or wildlife. In 2011, a demining plan was put into action, using police, armed forces, and the National Institute for Demining and supported by the Angolan government and the European Union. Over 5,492 anti-personnel mines and 2,650 anti-tank mines have since been destroyed.

Challenges include the lack of accurate maps, the presence of dangerous animals, and the scarcity of water in the area. Despite these challenges, Angola is committed to completing demining in the Angolan component of the KAZA TFCA.

An additional presentation was given on the design of a navigable canal link between Zambia and Angola (Shangombo and Rivungo). Finally, His Excellency, Minister of Hotels and Tourism of Angola, Dr Paulino Domingos Baptista, made some concluding comments regarding the important potential represented in the KAZA TFCA region for Angola's tourism industry, which requires careful planning to attract investment.

6.7 Consumptive resource uses and crop agriculture in the KAZA TFCA: addressing intersectoral land use conflicts at national and regional levels by Dr Pauline Lindeque and Mr Bruce Mead

Dr Pauline Lindeque, Manager at AGRA ProVision, made a presentation on work completed under the Climate Resilient Infrastructure Development Facility (CRIDF) to promote climate-resilient livelihoods in the KAZA TFCA.

The KAZA TFCA is made up of a mosaic of land uses with adjacent areas often having conflicting and incompatible uses. Participation in the benefits of the national tourism sectors is largely limited to formal participation by the private sector. Engagement of local communities is currently limited to some local employment with only peripheral participation in local enterprises. With increasing wildlife numbers, the incidence of human-wildlife conflict is escalating, and with no added benefits, communities experience a net loss in quality of life. HWC and unplanned land use practices pose a threat to wildlife dispersal areas.

In addition, the KAZA TFCA is in an area of high and increasing climate variability, further exposing already marginalised communities to climate vulnerability. The private sector is the driver of the economic engine in the tourism industry – and major consumers of produce – but a large proportion of items consumed are imported from outside of the KAZA TFCA region.

Through the Master IDP, the KAZA TFCA is striving to open areas for wildlife movements and to increase tourism. However, conflicting land uses are overlapping, resulting in a lot of conflicts.

An examination of the tourism value chain revealed that approximately 44,000 tons of primary produce (equivalent to US\$64.2 million) is consumed in the KAZA TFCA, representing a significant opportunity for catalytic change. On the one hand it would be necessary to convince subsistence producers to move out of core wildlife areas, perhaps through provision of water and irrigation in other areas, and to support commercial production, as well as adding value beyond primary production. On the other hand, the market would need to be willing to consider local suppliers, perhaps through some sort of incentivisation scheme. This could be a business-based approach towards achieving the KAZA TFCA goals. Constraints include issues of consistency, health, and maintenance of supply, particularly for large companies that have multiple lodges.

6.8 Promoting integrated fire management and monitoring in the KAZA TFCA landscape by Mr Godfrey Mtare and Mr Henry Ndaimini

Mr Godfrey Mtare, KAZA Liaison Officer for Zimbabwe and Mr Henry Ndaimini from University of Zimbabwe, gave a presentation on fire management and monitoring in the KAZA TFCA. Understanding the impact of fires is critical for wildlife management and particularly important in a transboundary context. Fires are caused by a variety of factors, and have impacts (sometimes positive) on wildlife and habitats.

Botswana, Namibia and Zimbabwe have fire management and/or monitoring programmes in place. Remote sensing can assist in monitoring fires on an on going basis, but cannot differentiate between natural and man-made fires. There has been an overall reduction in fires in the areas monitored between 2012 and 2015, although the reasons for this reduction have not been fully analysed. It is recommended that a KAZA TFCA Integrated Fire Management Plan be developed, along with a synchronized monitoring system, coordinated with SADC mechanisms and protocols.

6.9 Managing a transboundary World Heritage Site in the KAZA TFCA: the case of the Victoria Falls World Heritage Site by Mrs Musawa Musonda-Hamusonde

Mrs Musawa Musonda-Hamusonde, Senior Ecologist for the National Heritage Conservation Commission in Zambia, gave a presentation on the management strategies for the transboundary Mosi-oa-Tunya Victoria Falls World Heritage site (MTVFWHS). Inscribed in the World Heritage list in 1989 for its exceptional geomorphologic and aesthetic features and attributes, the vision is to “to ensure the integrity and long-term survival of the physical, natural and cultural resources of the MTVFWHS, and the water area around it, for the enjoyment and benefit of Zambia and Zimbabwe, the local urban and rural communities, and the national and international visitors”. The site is managed by the National Heritage Conservation Commission in Zambia and the Zimbabwe Parks and Wildlife Management Authority.

Each country has an underlying institutional framework to support management of the site and additionally each country is Party to the World Heritage Convention, KAZA TFCA, and global biodiversity conventions, such as CITES, Ramsar and CBD. A joint integrated management plan was developed and the two management authorities meet periodically to review its implementation. A Sustainable Tourism Strategy was also produced for the destination. Prior to the joint hosting of the World Tourism Organization's General Assembly in 2013, staff were jointly trained. Standard protocols for control and monitoring of invasive alien species are in place, and joint patrols take place. There are also periodic Joint Technical Committee and Joint Site Management Committee meetings and exchange visits. The number of visitors has been on an upward trend over the last ten years (Figure 14: Visitor entries in the MTVFWHS from 2004 to 2015).

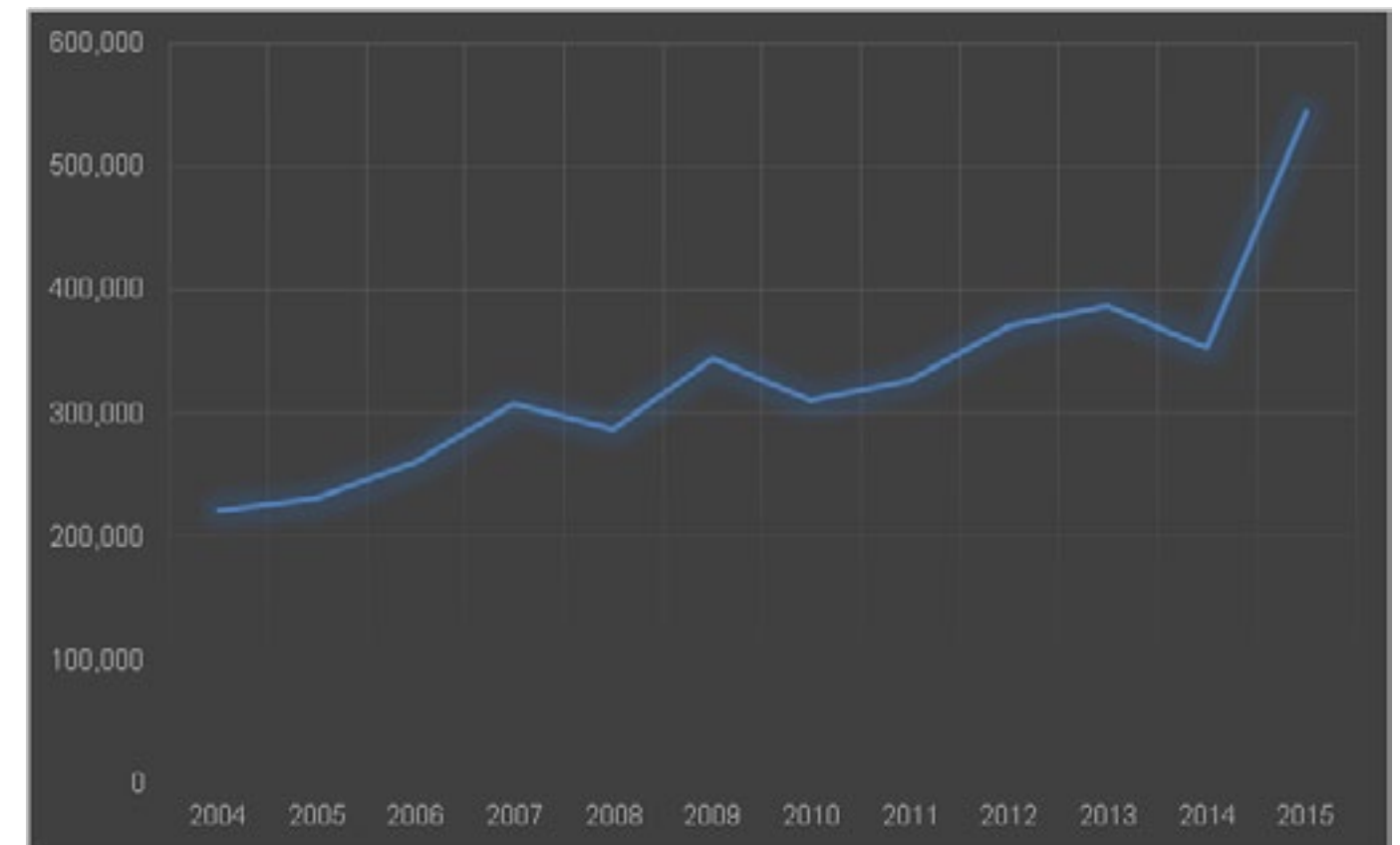


Figure 14: Visitor entries in the MTVFWHS from 2004 to 2015

Areas where collaboration could be improved include policy harmonization, joint marketing and mobilizing finances for joint research. Additional challenges include the pressure of tourism and urban developments, human-wildlife conflict, and illegal harvesting of wildlife. Strengthened monitoring and evaluation and enhanced mechanisms for community participation and beneficiation are also critical. Despite these challenges, the MTVFWHS maintains the right impetus through its World Heritage status and location at the heart of the KAZA TFCA to significantly contribute to the region's comparative advantage.



7. SESSION IV: Landscape Level Conservation - Myth or Reality?

7.1 Session summary – Where have we come from, where are we now and where are we going?

Session IV, focusing on the realities of achieving landscape level conservation, consisted of seven presentations covering elephant and lion conservation across the landscape as well as the disease management challenges associated with systems supportive of both wildlife and cattle.

The KAZA TFCA represents one of the most important landscapes for conservation of large charismatic megafauna, such as lion and elephant. These species require landscape-level conservation to sustain them into the future, and while the KAZA TFCA landscape has historically been open, with large tracts of intact wildlife habitat, these areas are becoming constrained by increased agricultural and urban development. In this context, the management of the transmission of disease between wildlife and livestock has become a perennial challenge.

Wildlife corridors have been identified to serve as priorities for landscape scale conservation, although these largely reflect areas where agriculture is not the dominant land use, as opposed to areas that support true ecosystem resilience and connectivity. Protection of ecosystems is expensive and likely not met by the revenues generated by protected areas. PCs and stakeholders have implemented a variety of different models

for communities living in or adjacent to protected areas to engage in wildlife-based enterprises. Many PCs have elephant and lion management and conservation strategies and action plans, but the implementation of these can be improved. There has been some recent changes to international sanitary standards related to trade in livestock commodities which provide significant opportunity for mixed livestock-wildlife production.

The KAZA TFCA represents one of the most important landscapes for the long-term future of many globally important wildlife species. With an increasing human population across the KAZA TFCA, an increasing number of stakeholders operating across the region, as well as major ecological barriers, such as veterinary cordon fences, landscape level conservation is a complex undertaking, particularly in the context of climate change. Stakeholders agree, however, that it is critical to achieving the KAZA TFCA vision for both conservation and livelihoods. The following recommendations arose out of the session:

- Develop a KAZA TFCA-scale tourism product;
- Urgently establish a better understanding of the KAZA TFCA's natural capital, in particular through a coordinated survey of elephants and large mammals across the region;
- Develop a KAZA TFCA-wide elephant management plan;
- Secure resources to implement existing strategies for key species and natural resources;
- Improve law enforcement on wildlife crime;
- Secure buffer zones around, and connectivity between, core areas;
- Implement multispecies systems that include both wildlife and livestock, including through support of commodity-based trade of beef products (which can alleviate the need for some FMD fencing); and
- Approach key livestock markets to explore opening access for beef produced through commodity-based trade approaches.

7.2 Landscape level conservation – myth or reality? By Mr Piet Theron

Mr Piet Theron, International Coordinator for the Greater Limpopo Transfrontier Conservation Area (GLTFCA) presented on behalf of the Transboundary Conservation Specialist Group (TBC SG) of the IUCN World Commission on Protected Areas (WCPA). The TBC SG was established in 1997 and has more than 200 members, with the objectives of supporting implementation of the CBD's Programme of Work on Protected Areas and supporting transboundary conservation initiatives through improved knowledge management, networking and capacity building. A number of publications and online networks are supported by the TBC SG, including Best Practice Guidelines on Transboundary Conservation.

Landscape level conservation areas have multiple benefits, enhancing ecological functionality and species survival, and the potential of shared ecosystems to deliver a broad range of ecosystem goods and services. They enhance the cultural significance of nature by bringing divided cultures back together again and the efficiency of day-to-day management of shared issues. Such areas also create the momentum for the harmonisation of legal and policy frameworks and provide a foundation to build trust and political relationships.

Key threats and challenges include: land rights and tenure issues; poverty and unemployment; health impacts associated with the prevalence of diseases; food security and physical security impacts associated with HWC; safety and security, economic and social impacts associated with wildlife crime (and associated crime in villages); inadequate legal and policy frameworks to incentivize wildlife based land uses; and the lack of resources to manage conservation areas effectively.

The key factors to success in transboundary conservation are: the management and protection of the resource base; benefit sharing, at the appropriate scale; tourism; appropriate governance structures and processes at the right scales; coordinated science, research and information management; and strong resource mobilisation and partnerships.



7.3 Status of KAZA's elephant within the KAZA TFCA: conservation at a landscape scale by Dr Russell Taylor

Dr Russell Taylor, Transboundary Conservation Advisor for WWF in Namibia, presented on the status of the African elephant, on behalf of the IUCN/SSC African Elephant Specialist Group (AfESG). The African Elephant Status Report (AESR) provides continental, regional and national estimates of elephant populations and their range across Africa. For 2015, estimates from systematic surveys were approximately 415,000 elephants compared to 508,000 provided in the 2007 AESR. Informed guesses of approximately 139,000 and 117,000 elephants in the 2007 and 2016 AESR respectively were reported.

With over 293,000 elephants, Southern Africa holds the bulk of the continent's elephants. Botswana and Zimbabwe together account for approximately 50% of Africa's population, mostly in the KAZA TFCA region.

Long-term trends from successive AESRs between 1995 and the present indicate that elephants in southeast Angola and southwest Zambia have suffered major declines due to poaching. In the Kavango and Zambezi regions of Namibia elephant populations are increasing, despite a poaching increase. A relatively stable population in Botswana is no less threatened and Zimbabwe's Sebungwe elephant population has collapsed by 75%. Botswana's numbers remain equivocal as the cause for the apparent decline from 150,000 in 2006 to 130,000 in 2015 may be due to one or more factors relating to poaching, range expansion, uncounted elephants and/or miscounted elephants.

It remains difficult to provide a reliable estimate of the elephant population in the KAZA TFCA, as the full extent of the known and possible range was not surveyed. There is some range expansion, representing major opportunities for expanding wildlife-based land use, and enhancing community engagement in wildlife management. The major threats to the elephant population within the KAZA TFCA are poaching and illegal wildlife trade (IWT), human elephant conflict, habitat loss and encroachment, and in some cases local overabundance of elephants.

The largest contiguous population in Africa as found in the KAZA TFCA, requires integrated conservation and management, building on individual country plans. This requires a strong understanding of the elephant population through systematic, coordinated and simultaneous surveys using standardized methods. It is of highest priority to develop and implement a KAZA TFCA wide elephant conservation strategy and action plan.

7.4 Securing habitat networks for KAZA's large carnivores by Dr Paul Funston, Dr Matt Becker, Peter Blinston, Dr Rosemary Groom, Ms Lise Hanssen, Ms Jane Horgan, Dr Andy Loveridge, Dr Greg Rasmussen, Dr Esther van der Meer, Dr Leanne van der Weyde, and Dr Kim Young

Dr Paul Funston, Senior Director for Panthera, gave a presentation on the implementation of an integrated and strategic conservation approach for conserving large carnivores across the KAZA TFCA landscape. It represents the greatest opportunity for Africa to maintain carnivore habitats and source populations, maintain connectivity between populations, and ensure socio-economic development. Ongoing research allows identification of those areas between protected areas that are most critical for maintaining intact habitat and connectivity and where human-lion conflict is of greatest concern (Figure 15: Human-lion conflict hotspots in the KAZA TFCA (P. Funston)).

Human-lion conflict remains a major threat for the species, and there is an urgent need to address the safety of livestock through innovative means, such as predator-proof bomas. The KAZA Carnivore Conservation Coalition has identified a number of priority projects for support and implementation, although resources are limited.

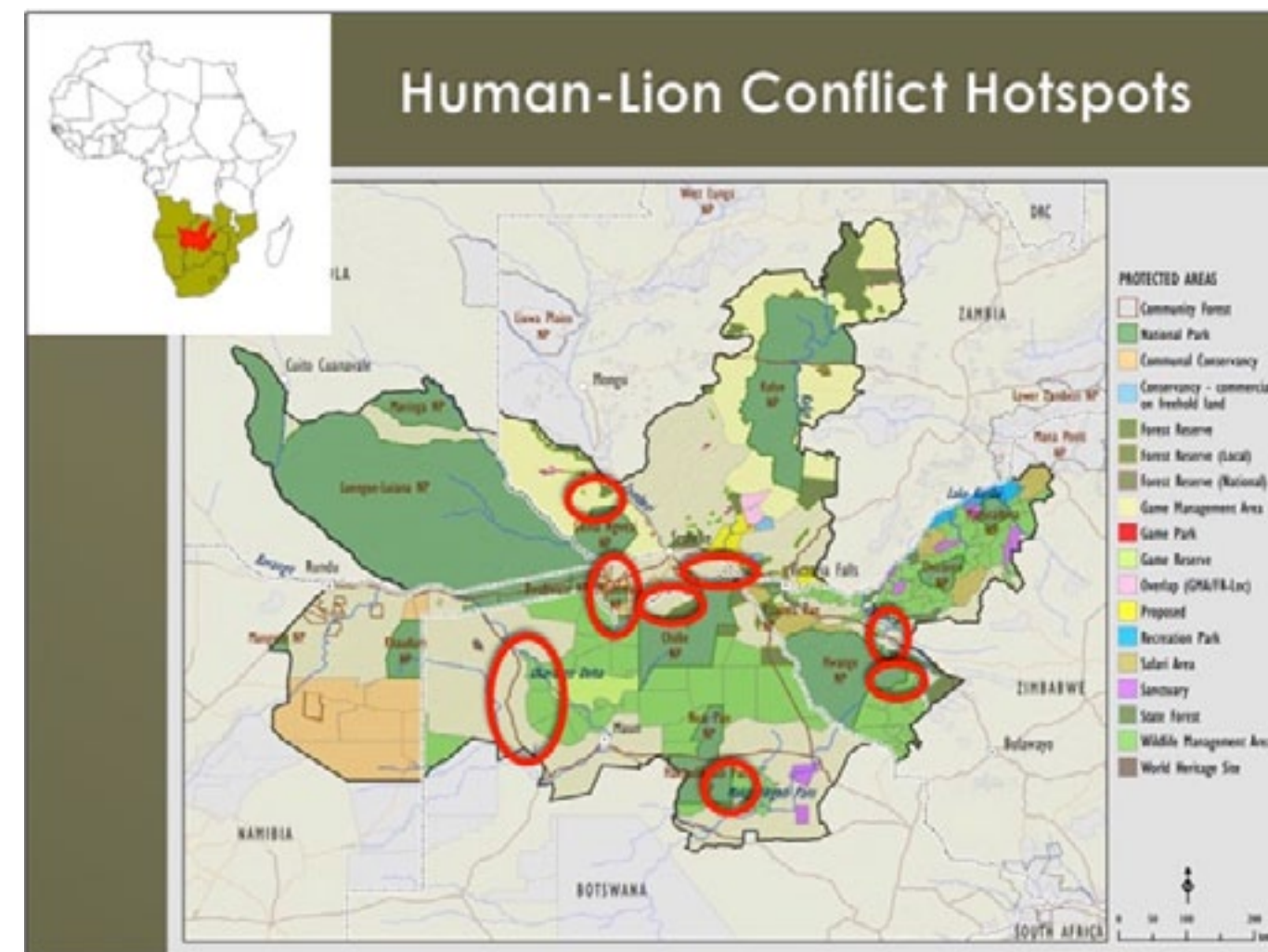


Figure 15: Human-lion conflict hotspots in the KAZA TFCA (P. Funston)

7.5 Phytochorology, connectivity and resilience within the KAZA TFCA: a cautionary case of the Kalahari System by Dr Jeremy Perkins and Dr Robin Naidoo

Dr Jeremy Perkins, a lecturer at the University of Botswana, made a presentation on the challenges in establishing real connectivity in large landscapes, focusing on the Kalahari ecosystem as a useful case study.

Corridors link protected areas through agricultural landscapes made up of settlements, livestock and crops. Without clear land use planning to conserve key corridors associated with clear benefits from wildlife accruing to local communities, land use change will continue and result in increased HWC. The example of the Kalahari ecosystem shows a situation where continued treatment of symptoms, rather than underlying causes, has resulted in continuing erosion of true connectivity for wildlife between protected areas.

Looking at the KAZA TFCA, the sustainability of key ecological corridors within the KAZA TFCA is questionable, with identified corridors largely reflecting areas where agriculture is not the dominant land use, as opposed to areas which support true ecosystem resilience and connectivity.

The maps of conservation organisations show very different landscapes to those of veterinary and agricultural departments. External and internal subsidies of the agricultural sector have a significant impact on the location and expansion of agriculture, including livestock. HWC continues to be a major issue throughout the KAZA TFCA. Development interventions are working at the wrong spatial and temporal scale, and generally are not focused on the concept of shared wildlife/livestock landscapes. Elite capture of key resources - water, land, livestock and wildlife is a real threat and reduces the true benefits to those living with wildlife and making on-the-ground decisions about converting land to alternative uses.

A more visionary approach is required for conservation landscapes, to ensure that this cycle is broken, with the adoption of a much longer timeline (50-200 years) and genuinely regional spatial scale. Bold decisions are required to remove agricultural subsidies that impair the promotion of shared wildlife/livestock landscapes. Ecological realities should determine the identification of wildlife corridors in the KAZA TFCA rather than economic subsidies and short-term socio-political expediency.

7.6 The changing landscape of livestock disease control in the KAZA TFCA by Dr Yona Sinkala

Dr Yona Sinkala, Director of Zambia's Department of Veterinary Services, outlined the particular challenges faced in the KAZA TFCA with regard to animal disease control and the strategies that are used in the region. While animal disease control was largely state funded pre-independence and directly post-independence, the structural adjustment programmes of the 1990s resulted in privatization of veterinary services and ultimately a reduction in funding to control programmes and the emergence of diseases that were previously controlled.

There are a number of diseases of concern in the KAZA TFCA region. Trypanosomosis has major effects on cattle populations. Tsetse eradication operations have been undertaken across various parts of the KAZA TFCA, mostly recently in Kwando-Zambezi in 2014. Rabies impacts domestic dogs and wildlife species. A vaccination programme is ongoing as part of a wider initiative to eliminate dog-mediated rabies by 2025. An eradication programme is ongoing in Namibia and should be extended to other PCs. Anthrax, found naturally in soil, commonly affects domestic and wild animals around the world. The usual 10-year cycle of outbreaks appears to be changing to a five-year cycle. Warthogs and wild pigs are reservoir hosts of African swine fever, which can cause high mortality in domestic pigs, particularly for rural smallholders with no access to biosecurity facilities and other control measures. Contagious bovine pleuropneumonia (CBPP) is also present in the KAZA TFCA.

Foot and mouth disease (FMD) is a major challenge in the KAZA TFCA region, where buffalo populations are a reservoir for the virus, and where there is contact between wildlife populations and livestock. However, changes in the standards set by the World Organisation for Animal Health (OIE) now allow the use of commodity-based trade as an alternative to the strategy of geographic separation (fencing) as a disease control measure.

A mixed human-livestock-wildlife system with many challenges occurs within the KAZA TFCA. A failure to reconcile the interests and expectations of stakeholders with divergent views is affecting ecosystem resilience. Wildlife conservation conducted at the expense of human life and livestock has resulted in continued conflict. The KAZA TFCA lacks well-supported regional and multi-sectoral programmes on the understanding and management of transboundary animal diseases. Harmonization of animal disease control policies across the KAZA TFCA is critical, as is investment in risk management along value chains.

The KAZA TFCA does, however, offer opportunities for integrated animal disease control approaches that benefit humans, wildlife and livestock. While benefits from wildlife conservation accrue at a national level through GDP, benefits from livestock accrue at the individual and household scale. There is a need for integrated approaches to ensure both benefit streams are sustained or even increased. Poultry and small ruminants may present a more effective area of investment than cattle.

7.7 Cattle and wildlife: the case for 'win-win' outcomes for rural communities by Dr David Cumming

Dr David Cumming, affiliated with the University of Cape Town, the Tropical Resource Ecology Programme at the University of Zimbabwe and AHEAD, gave a presentation on the importance of finding win-win outcomes for rural communities through integration of wildlife and cattle.

In Southern Africa, with the shift from multi-species systems to single-species systems, the ecological resilience and productivity of Southern Africa's rangelands are at risk, with impacts on both wildlife diversity and

economic revenue generation options. The KAZA TFCA area is predicted to be hotter and dryer under current climate change predictions, putting even more pressure on these landscapes. An important strategy in this context is to decouple the generation of wealth from primary production, which can be most effectively done through a mixed wildlife-livestock landscape. Multispecies systems are more ecologically and economically viable, allow options for sustainable production, to conserve biodiversity and to provide resilience to climate change. The barriers to implementing multispecies systems are largely political and economic, rather than scientific or technical.



7.8 Official changes to the OIE Terrestrial Code create new opportunity for optimizing livelihoods from livestock and wildlife conservation in the KAZA TFCA by Dr Gavin Thomson and Dr Mary-Louise Penrith

Dr Gavin Thomson, Director of TAD Scientific and affiliated with the University of Pretoria and AHEAD, outlined recent changes to the Terrestrial Animal Health Code of the OIE.

International sanitary standards related to trade in livestock commodities have had and continue to have profound effects on wildlife populations and their management, especially in extensive rangeland systems in southern Africa. These standards are insufficiently cognisant of the principles of wildlife conservation and the realities regarding important African transboundary animal diseases, especially FMD.

The OIE is one of three international standard-setting bodies mandated through the World Trade Organization to protect human, animal and plant populations from infections potentially spread by international trade. The OIE's Terrestrial Animal Health Code defines international standards and recommendations for managing international trade in terrestrial animals and commodities derived from them potentially affected by transboundary animal diseases.

Geographic management of FMD in southern Africa has provided economic benefit but has also been environmentally damaging and created socio-economic injustice. AHEAD is promoting alternative, non-geographic management of FMD to lessen the perceived need for veterinary cordon fencing, and to ensure greater sustainability and to allow multispecies systems. In 2015, the OIE standards were adjusted

to allow non-geographic management of FMD, including sanitary risk mitigation measures along value chains (e.g. commodity-based trade). AHEAD and partners such as FAO have produced guidelines on the practical application of these standards in the KAZA TFCA context. Measurable progress has been made, but there is plenty more to achieve to ensure compatibility between wildlife conservation and livestock production in southern Africa's extensive rangeland systems

7.9 Discussion, comments and questions

A number of questions and comments were raised directly to the presenters and during the discussion session as summarized below:

- There are a variety of different models for communities living in or adjacent to protected areas to engage in wildlife-based enterprises.
- Tourism development in the KAZA TFCA needs to be stimulated, in order to fully take advantage of the huge opportunities that exist.
- While many countries have elephant management and protection strategies, there is a need for resources to implement them.
- Ecosystems have real economic value, as well as existence value. Protection of these ecosystems is expensive, and revenues generated by protected areas and species are likely not sufficient to cover the full cost of protection and conservation.
- Habitat connectivity needs to be considered at the SADC level to ensure that core zones are protected by buffer zones and connected to other core zones through corridors.
- Ecological connectivity in the KAZA TFCA is constrained by veterinary cordon fences (required and, historically, subsidized by EU policy). The KAZA TFCA should engage directly with the EU regarding landscape-level conservation approaches, linked to new approaches for beef production that benefit smallholder livestock producers. Other (non-EU) markets for beef from within the KAZA TFCA, including those within Africa itself, merit earnest exploration.
- Diverse livelihood options are required, particularly in the context of an increasing human population.



8. SESSION V: Converting Natural Resources from Liabilities to Assets

8.1 Session summary – Where have we come from, where are we now and where are we going?

Session V, focusing on the liabilities posed by living with natural resources and ways to convert these liabilities into assets, consisted of seven presentations, including an overall analysis of human-wildlife conflict across the KAZA TFCA and examples from PCs on incentive mechanisms to enhance livelihoods and reduce the costs of living with wildlife.

With traditional protected areas at the heart of the KAZA TFCA, the evolution of community-conserved areas has been critical in providing incentives for communities to protect and conserve wildlife and its habitat. There has also been a change in appreciation of the capabilities of rural people to manage their own futures and resources. This has been most notable in Namibia, where the conservancy programme has resulted in significant earnings for communities and an increase in the protected area estate. Throughout the KAZA TFCA, HWC remains a significant problem, and while there have been some studies, the understanding of the problem is insufficient, in particular the offtake resulting from problem animal control.



While some innovative approaches have resulted in positive results for ecosystems and livelihoods, across the KAZA TFCA more broadly, conservation is working for neither wildlife nor people. HWC continues to be a major challenge, and fisheries are undergoing dramatic collapses. The closing of international trophy hunting markets serves as a major threat for Namibia's conservancies. While donors are slowly experimenting with performance-based approaches, donor projects are still largely designed around inputs, rather than conservation or livelihood outcomes. A radical transformation of approach is needed to turn these liabilities into assets.

Wildlife within the KAZA TFCA is an incredibly rare global resource, and bold new approaches are required to ensure that it is valued as such and to pay for performance rather than inputs. The following recommendations arose out of the session:

- Harness technology (e.g. Harvest+) to transform micro economies and to facilitate communication between stakeholders;
- Integrate and formalize traditional methods of HWC mitigation;
- Design and implement innovative mechanisms that facilitate global payments for wildlife services;
- Expand community-managed fisheries protected areas;
- Experiment and innovate to find new wildlife-based economies;
- Ban monofilament fishing nets; and
- Change legislation to ensure devolution of rights over resources.

8.2 Converting natural resources from liabilities to assets by Mr Michael Murphree

Mr Michael Murphree, Acting Director for the African Centre for Disaster Studies, North West University, presented on the importance of diverse perspectives when trying to ensure that natural resources, especially wildlife species, are assets rather than liabilities. It is important, for example, to consider diverse interpretations of wealth, which could be cultural rather than financial. With major food security issues in southern Africa, it is clear that conservation is not working, and that a major overhaul of the business model is required. It was argued that in order for the KAZA TFCA to succeed, and for natural resources to be experienced as assets rather than liabilities, the following is required:

- Increased devolution of authority for the management of natural resources to host communities such that they are both the managers as well as the beneficiaries of the resources they live with.
- Management of natural resources to be guided by sustainable use, directly benefiting rural communities.
- Countries need to take control of their conservation objectives rather than be overly influenced by international legal mechanism such as CITES.
- Conservation must take place within the broader development agenda.

8.3 Comparing and contrasting benefits derived from tourism and hunting in communal conservancies in Namibia by Dr Robin Naidoo, Mr Chris Weaver, Mr Richard Diggle, Mr Greenwell Matongo, Dr Greg Stuart-Hill, and Dr Chris Thouless

Mr Chris Weaver, Managing Director of WWF in Namibia, presented research results on different revenue streams in Namibian conservancies. Through Namibia's CBNRM programme, communities are benefitting from photographic tourism and conservation hunting. Since the programme began in 1997, 82 conservancies have been established, covering 20% of the country and involving 190,000 people. There have been significant wildlife recoveries and range expansions, as well as major increases in cash and non-cash benefits (Figure 16: Financial and in-kind benefits to conservancies (N\$) 1998-2015 (C.Weaver)).

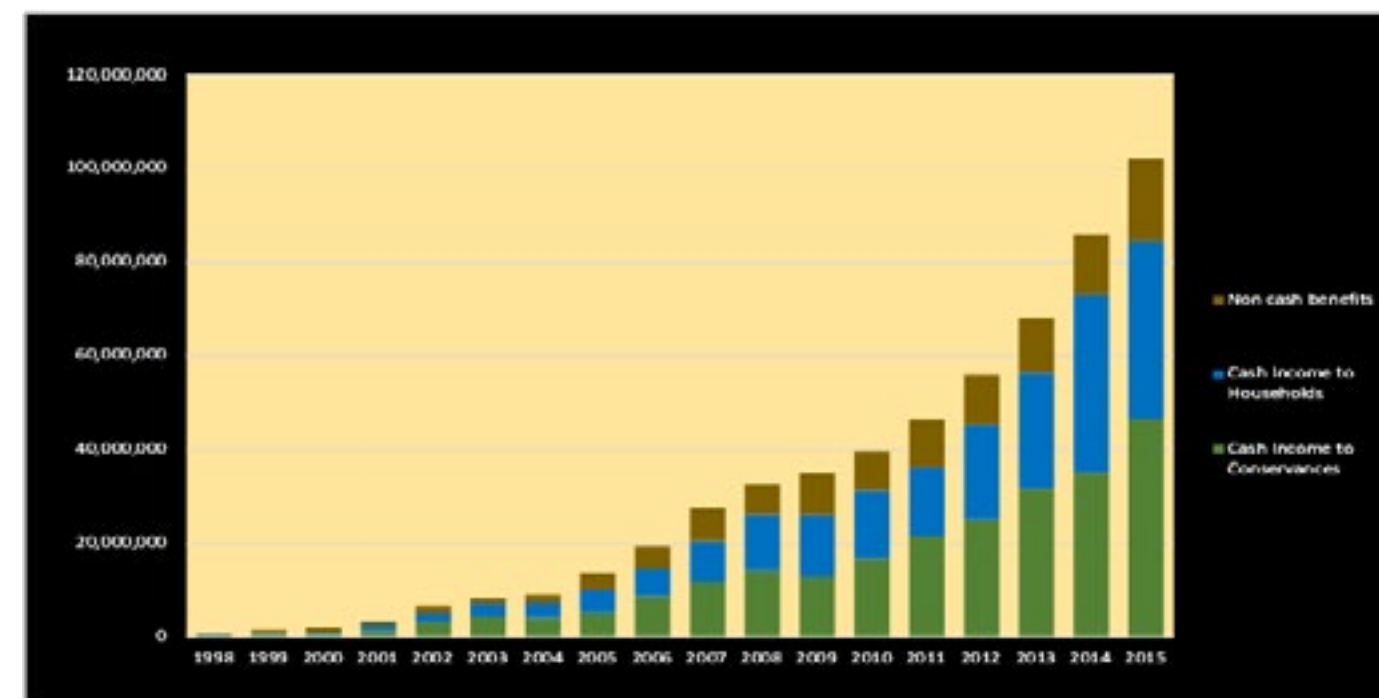


Figure 16: Financial and in-kind benefits to conservancies (N\$) 1998-2015 (C.Weaver)

There has been a major global opinion shift against trophy hunting, particularly since the “Cecil the Lion” incident in 2015. WWF in Namibia undertook research to understand what the impacts of removing trophy hunting would be on Namibia's communal conservancies. Benefit data from 77 conservancies was compiled and categorized as arising from either tourism or hunting.

The total benefits generated by hunting and photographic tourism were similar. Hunting generated almost 2.5 times as much cash revenue than photographic tourism, while photographic tourism generated nine times as much employment as hunting (Figure 17: Aggregate benefits vary by type of benefit (C.Weaver)). Hunting generated four times more in-kind benefits (for example, meat) than photographic tourism.

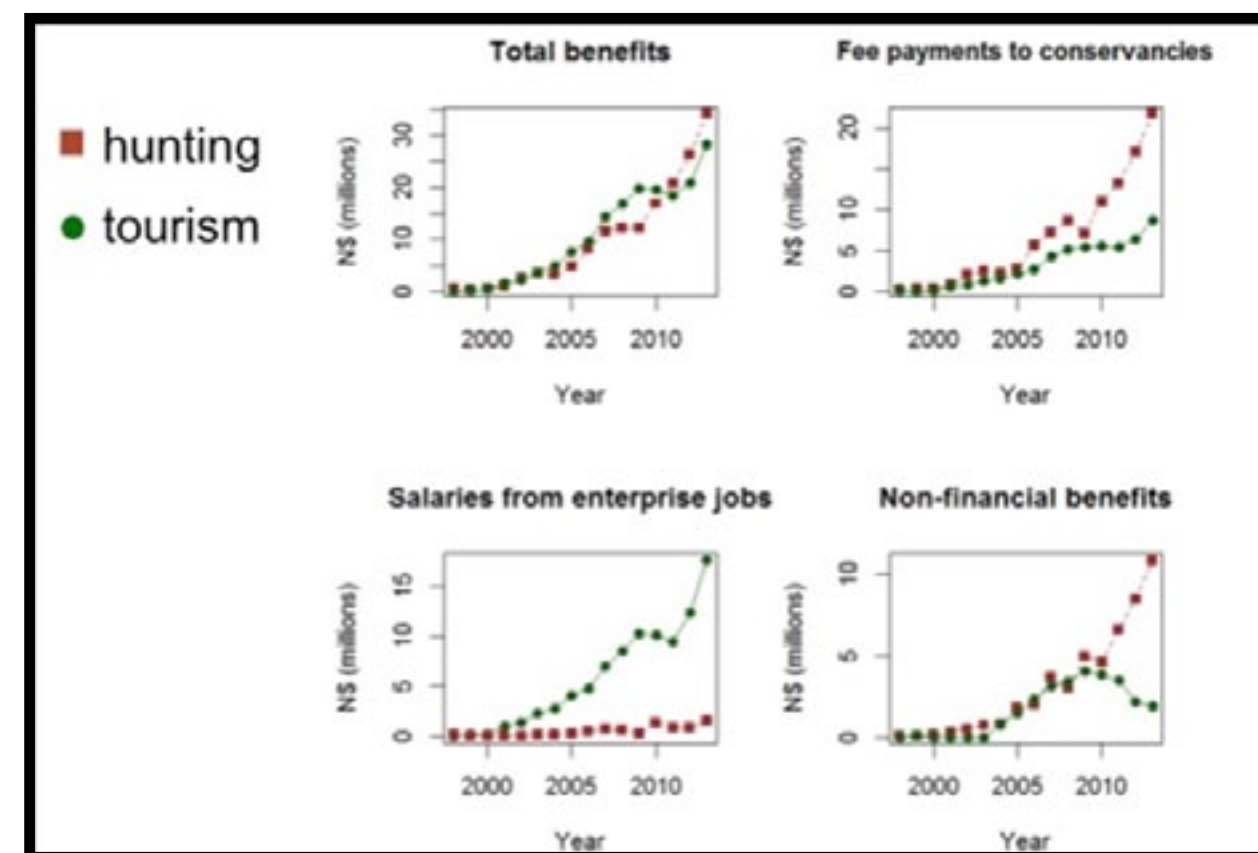


Figure 17: Aggregate benefits vary by type of benefit (C.Weaver)

The study also analysed the internal flow of benefits to different stakeholders within the community, including the conservancy management structures. At the current level, 77% of conservancies are covering their own operating costs, but if hunting were removed only 18% would be able to cover those costs.

Tourism and hunting are complementary, with different types of benefits being generated and flowing to different parts of the community. The benefits are not substitutable and both are necessary to allow conservancies to function and be sustainable.

8.4 Assessment of the HWC mitigation measures being implemented by the KAZA TFCA PCs by Mr Malvern Karidozo, Dr Ferrell V. Osborn, and Mr Michael la Grange

Dr Loki Osborn, Director of Connected Conservation, reported on the results of an analysis of HWC mitigation measures in the KAZA TFCA. The study found that HWC is on the increase and is neither well managed nor measured. It is a critical threat to the perceptions of the rural poor regarding wildlife conservation and conflict incidents almost always end in the death of an animal. Conflict species include hippo, elephant, lion, crocodile and baboon. Most communities are using traditional deterrent methods, with little innovation occurring, except with predators. Monitoring and evaluation systems in most PCs require upgrading and coordination. The lack of capacity, both knowledge and resources, to mitigate conflict is prevalent across all PCs.

The report recommended that in order to foster coexistence, better planning is required along with implementation of mitigation methods and awareness campaigns. The creation of benefits is critical, rather than benefit-sharing programmes alone. Decisions should be made based on sound information, and methods and best practices should be widely disseminated to those who can implement them.

The report proposed a HWC programme for the KAZA TFCA using a farmer-based software system called Harvest+, researching and implementing new approaches and tools for mitigation, linking farmer groups to markets and finding avenues to add value through production and processing of natural products.

8.5 Offsetting the costs of living with wildlife: payment for ecosystem services by Dr Greg Stuart-Hill and Mr Richard Diggle

Dr Greg Stuart-Hill, Natural Resources Advisor for WWF in Namibia, presented an innovative concept to incentivize tolerance of wildlife by local people. To date, experience has shown that a feeling of ownership and benefits from tourism (income and employment) and hunting (income and meat) are key success factors in incentivizing tolerance of wildlife. It is not clear, however, whether or not these benefits are enough to incentivize tolerance of those species that cause high levels of conflict. For example, lions consume livestock (direct conflict) and wildlife prey species (opportunity cost through the loss of potential revenue-generating wildlife).

Lions, and other conflict-causing species such as elephant, are extremely rare in the global context and therefore represent the region's competitive advantage, if only their true value can be unlocked through existence value markets. Communities could set up businesses to provide conservation services, such as maintaining habitat, and providing monitoring, protection and management services. Monitoring and compliance systems would be required, such as formal monitoring, but also through tourist sights of key species, camera traps, etc. Finance mechanisms could be geared from the local (direct payments for services) to the national (tourism wholesalers) to the international (payments for results through for example the Global Environment Facility) in the form of PES (Figure 18: Conceptual framework for predator scheme (G. Stuart-Hill)).

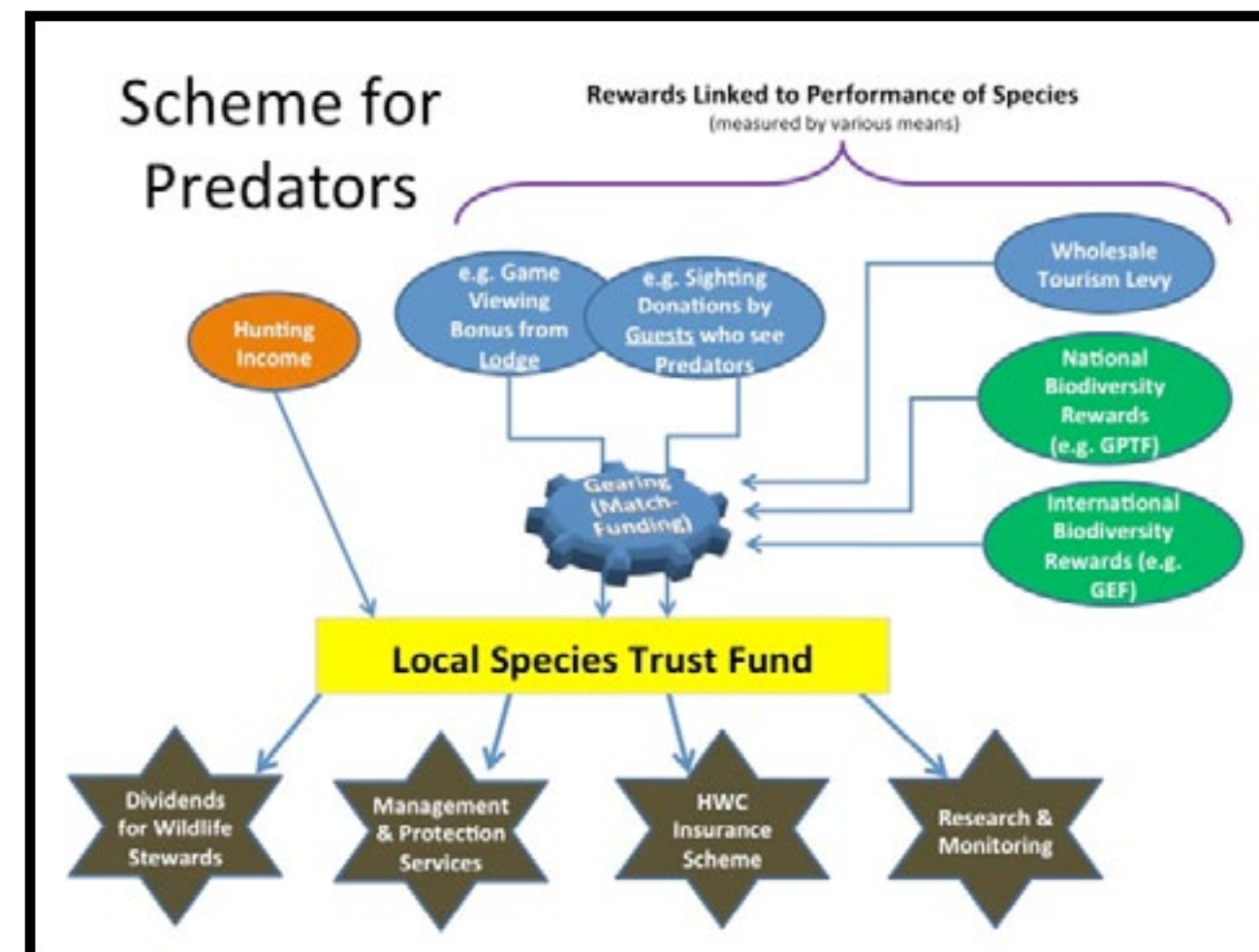


Figure 18: Conceptual framework for predator scheme (G. Stuart-Hill)

Such approaches could be applied to a variety of different contexts, e.g. conserving corridors, migratory or seasonal habitat being used by certain species, the number of rhino calves per year, the number of successful wild dog breeding events, etc. There are potential risks and unintended consequences of any new approach, but by reversing the equation and paying for performance, it could unlock local creativity and energy.

8.6 Managing shared fish resources in KAZA by Mr Denis Tweddle

Mr Denis Tweddle, Project Coordinator for the Namibia Nature Foundation, outlined the KAZA TFCA's role in transboundary fisheries management. The decline in size and diversity of fish available in local markets is a strong indicator that the KAZA TFCA fisheries resource is declining dramatically, with current fishing practices being destructive and unsustainable.

Monofilament nets are a major problem in all inland fisheries in Africa. Not only do old abandoned nets carry on killing fish (which are not utilized), but the nets are a major threat to other wildlife, such as birds, mammals, crocodiles, hippos, snakes, etc. The decline in CPUE rates for Zambezi fisheries is correlated to the introduction and use of monofilament nets. Fish protection areas have been established and gazetted in the Sikunga and Kasaya channels, and these areas have much healthier fish populations than elsewhere. There is significant potential for the establishment of more fish protected areas.

The Fisheries Sub-Working Group of the KAZA TFCA Conservation Working Group has been established precisely to coordinate transboundary fisheries activities.

8.7 Banking on the future: the HSBC case study by Mr Ignatius M. Musona, Ms Debra Magwada, and Mr Phillip Kuvawoga

Mr Ignatius Musona, Socio-economic Specialist for WWF Zimbabwe, presented the Global Environment Facility-funded Hwange Sanyati Biological Corridor project, a conservation initiative in Zimbabwe that is being managed by WWF Zimbabwe, and implemented in partnership with ZPWMA, the Environmental Management Agency, CAMPFIRE, and the Forestry Commission.

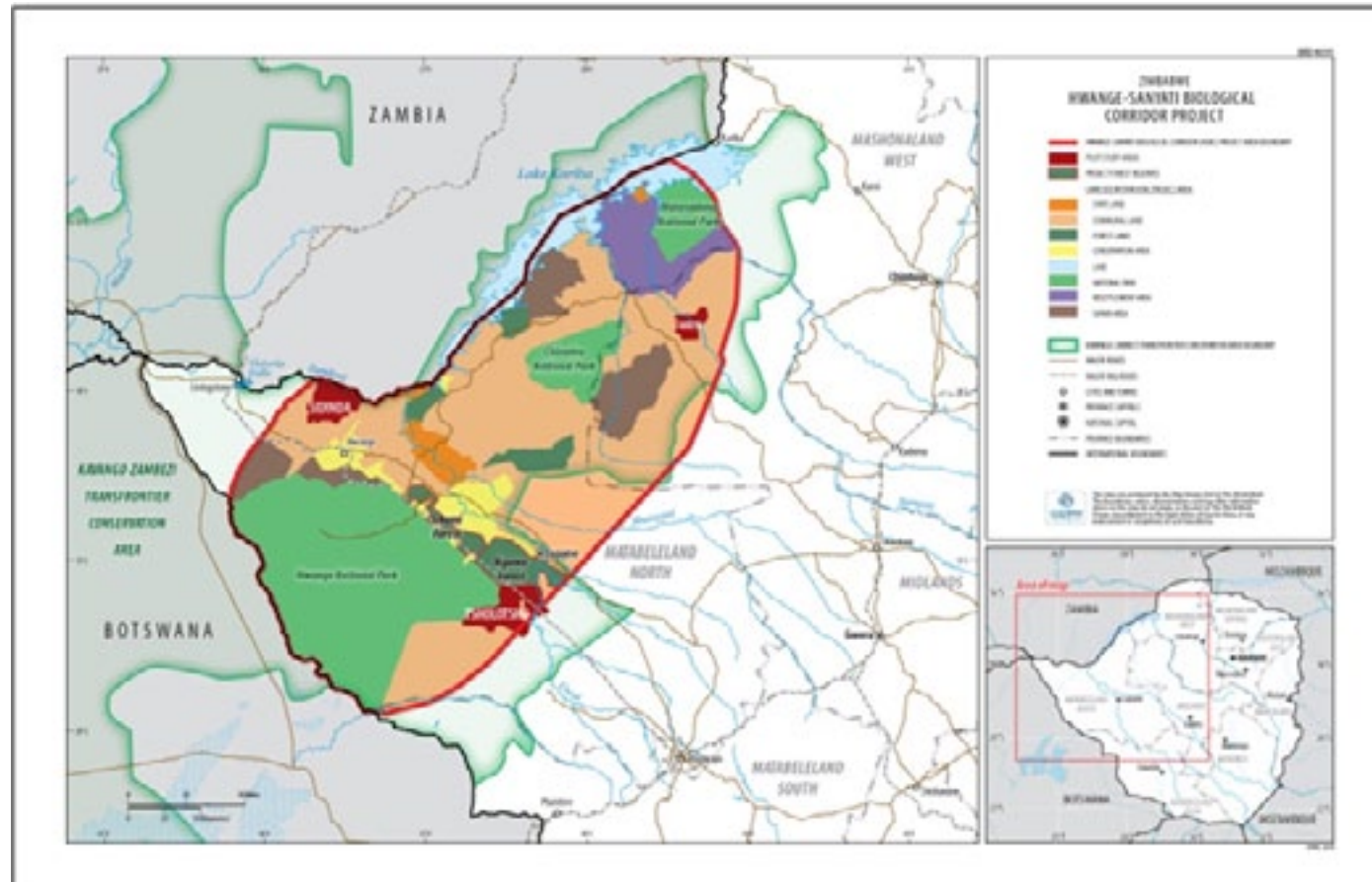


Figure 19: Hwange-Sanyati Biological Corridor Project (WWF)

The area, covering 5.4 million hectares (Figure 19: Hwange-Sanyati Biological Corridor Project (WWF)) consists of key habitats for people, livestock and wildlife and includes the second largest elephant population in the KAZA TFCA. Challenges include commercial and subsistence poaching, HWC, drought, climate change, and forest degradation. The project is taking a people-centred approach to conserving wildlife, land and forests, underpinned by key institutions and enabling policy. The project has four main areas: improving protected areas management and wildlife protection through anti-poaching, equipment and infrastructure and water supply management; improving community livelihoods through wildlife management, HWC mitigation and wildlife restocking for sustainable use; improving forestry management using REDD+, inventories of invasive alien species, and fire management; and rehabilitating land through sustainable land use management on sodic soils.

8.8 Reversing the cost-benefit imbalance for communities sharing space with elephants: building an “elephant economy” by Dr Graham McCulloch, Dr Anna Songhurst, and Dr Amanda Stronza

Dr Graham McCulloch, Director of Ecoexist project in Botswana, presented on efforts to find innovative revenue generation opportunities around elephant conservation in the Okavango Delta panhandle, in the Kwando River and Khaudum-Ngamiland WDAs. Human-elephant conflict is a major challenge to achieving the KAZA TFCA’s objectives, as it contributes to major negative perceptions of elephants among communities.

An “elephant economy” is being developed in the project area to address the lack of tangible benefits at a household level and to reverse the imbalance between costs and benefits for people sharing space with elephants. The economy is based on direct and sustainable, market linked benefits through non-consumptive use. Some projects include: tourism diversification, e.g. a “Life with Elephants” cultural tour group; new joint venture partnerships in San community areas; developing and marketing elephant-themed crafts; annual cultural festivals; and developing and marketing agricultural products from “elephant aware” farming.

8.9 Discussion, comments and questions

A number of questions and comments were raised directly to the presenters and during the discussion session as summarized below:

- The capabilities of rural people are often underestimated or undermined, and it is critical to understand why that is happening and to ensure that it changes so that rural people can take control of their own futures and resources.
- ‘Conservation hunting’ is a term used mainly in Namibia to encompass hunting for trophies, own use, controlled harvest for venison production, based on scientifically-based quotas and clear ethical standards to ensure that hunting remain sustainable.
- Most hunting for trophies in Namibia is with foreign hunters, and therefore closing foreign markets would be a major threat to Namibian conservancies.
- Better understanding of the scale of the HWC problem is necessary, including the off take due to problem animal control.
- Traditional HWC mitigation methods should be further interrogated and expanded or integrated with other innovative methods where appropriate.
- HWC Working Groups should be considered at the national and KAZA TFCA level.
- There are real possibilities for performance-based finance, particularly linked to cash transfer programmes for poverty reduction.
- Performance-based finance for wildlife conservation is a way to add resilience to the system so that it is not only reliant on photographic tourism and hunting.
- A challenge with performance-based finance is to generate demand and motivate conservation-conscious people from rich countries to pay for wildlife services.
- Stakeholders should move away from a language of having to work ‘with KAZA’ but rather recognize that together, all stakeholders are part of the KAZA TFCA programme.

Box 2: Whose “elephant” is it anyway?

8.10 Panel discussion: whose “elephant” is it anyway? Overcoming challenges in policy harmonization and management of shared natural resources



At the end of the second day of the Symposium, a panel discussion took place on the challenges associated with policy harmonization and management of shared resources. Chaired by Dr. Nyambe Nyambe, Country Director for WWF Zambia, the panel included Chief Mr Timex Molusiwa from Ngamiland in Botswana, Dr. Simon Munthali from Vuna and a former technical advisor to KAZA, Mr. Morgan Saisai, Chief Control Warden in the Namibian Ministry of Environment and Tourism and Dr. Niel Lubbe, a Lecturer at North

West University, South Africa.

The discussion was wide ranging, and included a number of important observations. KAZA is already immensely complicated, and before taking on a policy harmonization exercise, it is important to understand what the ultimate goal might be. There is major political will behind KAZA, and policy work should take place in that context and in the context of relevant mechanisms of the African Union and SADC.

Policies are not set in stone and do shift over time. In some places, gains are being eroded by shifting policies from bottom-up to top-down, reducing the agency of communities living with wildlife, and alienating rights to resources, making it challenging to have meaningful participation and empowerment of these communities.

There are not many examples of shared management of a shared resource, even in KAZA. The focus on elephants undermines the potential for partnership on other resources. Transboundary platforms for traditional authorities might be one mechanism to assist in drilling down to practical impacts.

Box 3: KAZA TFCA communities – from beneficiaries to partners Panel discussion: KAZA’s communities – from beneficiaries to partners

The final day of the Symposium started with a panel discussion on the communities of KAZA. Moderated by Dr. Brian Jones, Mr Charles Jonga of CAMPFIRE in Zimbabwe, Chief Mukuni from Zambia, Mr Kenneth Uiseb, Deputy Director for the Namibian Ministry of Environment and Tourism, Mr Antonio Chipita Executive Director of ACADIR in Angola, and Deputy Permanent Secretary Felix Monggae from the Botswana Ministry of Environment, Natural Resources, Conservation and Tourism served on the panel.

The discussion was wide ranging and included helpful insights to understand how the role of communities in the development of the KAZA TFCA has changed over time. At inception, the approach tended largely to be top-down, driven by government agencies and NGOs, with communities engaged only as resource keepers whilst still bearing the brunt of living with wildlife. As such, communities through their various forms of organisation were largely excluded from KAZA structures.

Community engagement is now a central issue for the KAZA TFCA, with the challenge being to create practical mechanisms that enable community engagement in decision-making at the various levels – local, national and regional. In particular, panelists agreed that communities must be partners in planning and decision-making processes rather than mere beneficiaries of decisions made without their involvement. This relies on mutual trust and consensus, and also requires processes to build mutual understanding and capacity across different stakeholders. A community charter expressing community opinions, hopes and needs was raised. Likewise, facilitating platforms for negotiation over conflicting objectives must involve not only different sectors and countries, but also communities. The importance of indigenous knowledge systems was further acknowledged. Finally, it was pointed out that existing community structures should be used, rather than creating duplication.



For the future of KAZA, the people of KAZA must be partners, not beneficiaries.



9. SESSION VI: Natural Resource Stewardship, Strong Protected Areas and the Reality of the Poaching Crisis

9.1 Session summary – Where have we come from, where are we now and where are we going?

Session VI, focused on the poaching crisis and the protected area system, consisted of six presentations, and examined not only local approaches to combatting wildlife crime, but also international and regional cooperation in fighting increasing levels of poaching.

In the early years of the KAZA TFCA, poaching levels were low, and innovative approaches were being explored around community-based natural resource management. Since then, and in the face of increased poaching and illegal wildlife trade, there appears to be a return to the 'fortress' mentality, with greater investment in law enforcement and protection. National, regional and international strategies and action plans have been developed to combat increasing poaching levels, and are in the early stages of implementation. Local transboundary approaches, such as that taking place in the Kwando River WDA and that used to combat the illegal timber trade, appear to be demonstrating success and are considered critical.



Drivers of poaching and illegal wildlife trade include poverty, corruption, and global demand for illegal wildlife products. At the KAZA TFCA level, efforts in law enforcement must be integrated with continued work on institutions and governance to ensure that management and benefits are equitably shared for the furtherance of both conservation and livelihood development. Additionally, to avoid the bubble effect whereby the problem is pushed around the region, law enforcement efforts must be made consistently across the region. The following recommendations arose out of the session:

- Undertake law enforcement approaches that engage rather than alienate communities;
- Implement comprehensive and coordinated strategies, with strong monitoring systems in place;
- Ensure supportive legislation and judicial processes;
- Build trust for local field operations and support small-scale, local-level initiatives;
- Coordinate across sectors and borders; and
- Learn from and build on successful initiatives, such as joint law enforcement work in the Kwando River WDA.

9.2 Natural resource stewardship, strong protected areas and the reality of the poaching crisis by Dr Russell Taylor

Dr Russell Taylor, Transboundary Conservation Advisor for WWF in Namibia, gave an overview of the major current threats to wildlife within the KAZA TFCA. Habitat loss and fragmentation, unsustainable utilization of natural resources, and illegal harvesting and trade (poaching, poisoning, illegal logging, trade and illegal, unregulated and unreported fishing) in timber, forest products, freshwater resources, bush meat, rhino horn and elephant ivory amongst others are the key threats.

Drivers of poaching and illegal trade include poverty at the site level, poor governance at a national level and across borders, and demand – locally, nationally, regionally, and internationally. As such, poaching and wildlife trade should not only be considered only in terms of law enforcement. State enforcement approaches can lead to human rights abuses and livelihood impacts, and can destroy or undermine trust, cooperation and the legitimacy of conservation regulations. It is critical to ensure that responses do not worsen the poaching situation by reducing the value of wildlife to local people, exacerbating habitat loss and agricultural encroachment.

Communities can be powerful and positive agents of change, highly motivated when they possess stewardship rights and gain tangible benefits from conservation. Strong cooperative relationships with arresting authorities are also crucial.

Earlier conservation paradigms focused on a fortress approach to achieving conservation goals, and ignored the needs of communities within, adjacent to or part of large conservation landscapes. Goals for biodiversity conservation need to be integrated with those of rural development and economic growth. Market based conservation is a key socio-economic investment strategy to improve rural livelihoods through income generation, job creation and sustainable wildlife use, providing incentives for community-based natural resource stewardship, management, empowerment and good governance.

Key objectives in a law enforcement and anti-poaching strategy or action plan should be to: enhance legislation and the judicial process; minimize wildlife crime and illegal trade; integrate people and nature into conservation and development processes; ensure sustained trade in, use of and benefit from natural resources; and improve and strengthen field level protection of wildlife resources

9.3 Regional responses to curb poaching and illegal wildlife trade – SADC Law Enforcement and Anti-Poaching Strategy by Ms Deborah Kahatano and Mr Moses Chakanga

Mr Moses Chakanga, SADC Technical Advisor for GIZ, presented on the SADC Law Enforcement and Anti-Poaching (LEAP) Strategy. The SADC region is endowed with abundant natural resources including forests,

wild animals, fish and marine life, most of which are transboundary in nature. The region supports the largest remaining populations of elephants and rhinos in the world. More than 50% of gross domestic product in member states is earned from the agriculture, mining, forestry, tourism and wildlife sectors. Most rural communities directly depend on natural resources for their livelihoods.

Threats to the natural resource base are habitat loss and fragmentation, over exploitation and/or unsustainable utilization of resources, illegal harvesting and trade in wild fauna and flora species and their products, uncontrolled fires, invasive alien species, pollution, and climate change. Root causes and drivers are poverty, poor governance, increasing demand for wildlife products, uncontrolled commercial bush meat trade, corruption, and inadequate funding. The consequences of illegal trade and poaching are: the erosion of biodiversity; undermining the wealth of nations while generating monetary gain for organised crime; and the loss of SADC's most valuable wild species of fauna and flora.

Poaching and the illegal wildlife trade crisis represent a truly global problem with responses at the international, regional and national level. At the international level, the UN General Assembly has adopted a resolution on the illegal trade in wildlife and a number of international agencies are engaged on the issue. At the SADC level, a number of major international conferences on the issue have taken place in Botswana, and action plans and strategies on various species have been developed by member states over the last 10 years.

The SADC Ministers of Environment and Natural Resources mandated the development of the LEAP Strategy in response to increased levels of poaching and illegal wildlife trade. They also recommended the establishment of a Wildlife Crime Prevention and Coordination Unit within the SADC Secretariat and the strengthening of institutional capacity at the national level for improved enforcement. The LEAP Strategy was approved in November 2015, and is ready for implementation.

The LEAP Strategy exists in the context of the SADC Treaty, the SADC Protocols on Wildlife Conservation and Law Enforcement, Forestry and Fisheries, the SADC Regional Indicative Strategic Development Plan, and the SADC Biodiversity Strategy. The overall objective of LEAP is to significantly reduce the level of poaching and illegal trade in wildlife fauna and flora and enhance law enforcement capacity in the SADC region by 2021.

There are five priority areas for action:

- enhancement of legislation and judicial processes;
- minimization of wildlife crime and illegal trade;
- integration of people and nature into conservation and development processes;
- sustainable trade and use of natural resources; and
- improvement and strengthening of field protection of wildlife resources.

The LEAP Strategy has a logical framework with indicators, outputs, actions, timeframe and responsibilities, to allow monitoring and evaluation of progress. Detailed work plans and budgets still need to be developed. The role of the Regional Crime Prevention and Coordination Unit is to coordinate the enforcement of natural resources-related laws and monitoring of illegal harvesting of these across Member States. More resources including finances are needed to implement the LEAP Strategy.

The Strategy provides consistency and unity of purpose among SADC member states on regional priority areas for collaboration, to combat poaching and illegal wildlife trade as well as framework for joint action and cross-border collaboration by member states, stakeholders and International Cooperating Partners.

9.4 KAZA's regional cooperation in combating illegal wildlife trade and poaching by Mr Rui Lisboa

Mr Rui Lisboa, KAZA Liaison Officer for Angola, presented on efforts in the KAZA TFCA to collaborate in combating poaching and illegal wildlife trade. An increase in wildlife crime poses a threat to the conservation of shared natural resources and sustainable development of the region. These challenges must be addressed

jointly through common approaches and well-capacitated authorities, such as Joint Permanent Commissions and bilateral cooperation.

The KAZA TFCA held a number of regional cooperation workshops for law enforcement and anti-poaching in 2014 and 2016. The purpose of these workshops was to understand challenges faced by the PCs, key differences and similarities in approaches to wildlife crime and legislation across the KAZA TFCA region, with the ultimate goal of developing a comprehensive KAZA TFCA LEAP Strategy. The following challenges were identified across the TFCA: inadequately trained and incentivized field patrols, insufficient specialist investigators and prosecutors; lack of resources (financial, human and equipment); inadequate penalties; and lack of standardized operational procedures to enable law enforcement agencies to collaborate across borders. Additional challenges include: lack of sharing of information, intelligence, and strategies on law enforcement at a regional level; difference in efforts by PCs in anti-poaching; lack of training and capacity building in new technologies and approaches in combatting wildlife crime; and lack of community involvement in wildlife management.

Legislative differences were noted across the KAZA TFCA PCs and concern was raised about differences in penalties and species coverage, which provide loopholes for criminal syndicates, and threaten the integrity of the KAZA TFCA landscape. Strong, well-applied, legislation in one PC may push the problem of poaching and illegal trade to others in the region. While a great deal of investment continues to go into improving the effectiveness of law enforcement patrols in protected areas, resources and training are now needed to ensure that once a wildlife crime has been committed, it is efficiently managed to facilitate successful prosecutions that provide a deterrent effect for future crime. PCs identified an approach to develop a regional strategy, as well as a list of capacity building and resources needs.

9.5 Community responses to the poaching crisis – the case of the Zambezi Region, Namibia by Mr Dominic Muema

Mr Dominic Muema, Operations Manager for IRDNC, presented an interesting case study from the Zambezi Region of Namibia. Across 16 registered community-based conservancies, income accrued from wildlife is used for the management of that wildlife resource base. The Zambezi conservancies identified poaching as a key threat in 2013, not only to wildlife, but also to livelihoods, economic development and job opportunities. To address the threat, Zambezi conservancies developed an anti-poaching strategy for the region (Figure 20: Anti-poaching strategy for Zambezi Region conservancies (D. Muema)). Mr Muema emphasized the critical importance of balancing CBNRM with programmes to combat wildlife crime (Figure 21: Balance between CBNRM and wildlife crime programmes (D. Muema)).

Since then, four anti-poaching patrol camps with water and basic facilities have been made operational, 1,877 people have attended wildlife crime awareness meetings, joint complex meetings and patrols are conducted quarterly, and an anti-poaching fund has been established to reward informers. Equipment has been procured for community game guards, and trainings have been conducted on scene of crime procedure and tracking. Women are involved in anti-poaching activities and there is enhanced collaboration with law enforcement agencies. Consequently, poaching has reduced in the concerned area.

9.6 Joint law enforcement in the Kwando River WDA by Mr Maiba Morgan Saisai, Mr Dominic Muema, and Mr Elvis S. Mwilima

Mr Maiba Morgan Saisai, Chief Control Warden for the Ministry of Environment and Tourism in Namibia, presented on efforts to conduct joint law enforcement in the Kwando River WDA. There are a number of existing structures and stakeholders involved, including NAMBOT and NAMZAM, both of which are Joint Permanent Security Commissions; community-managed wildlife areas; community forests; and NGOs

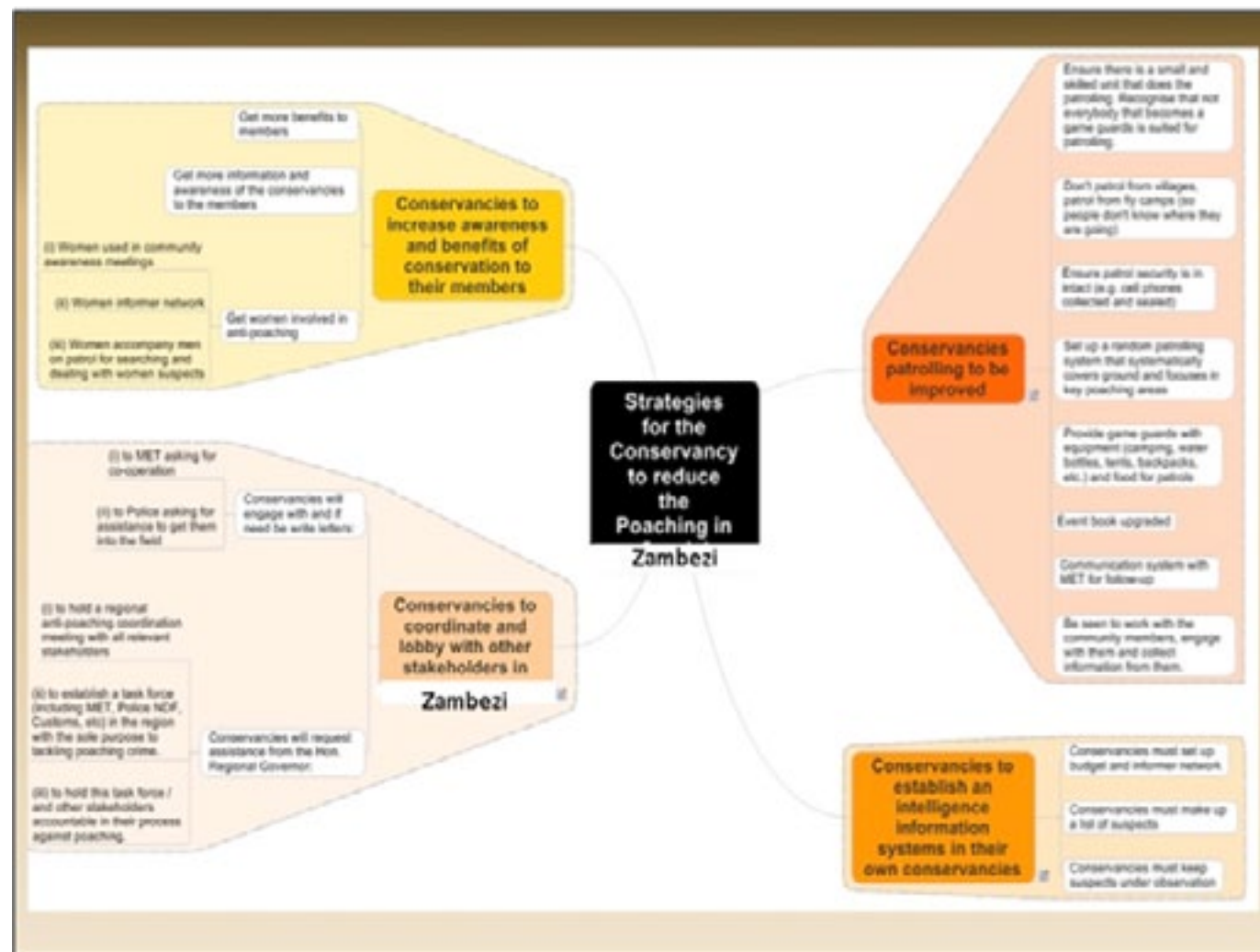
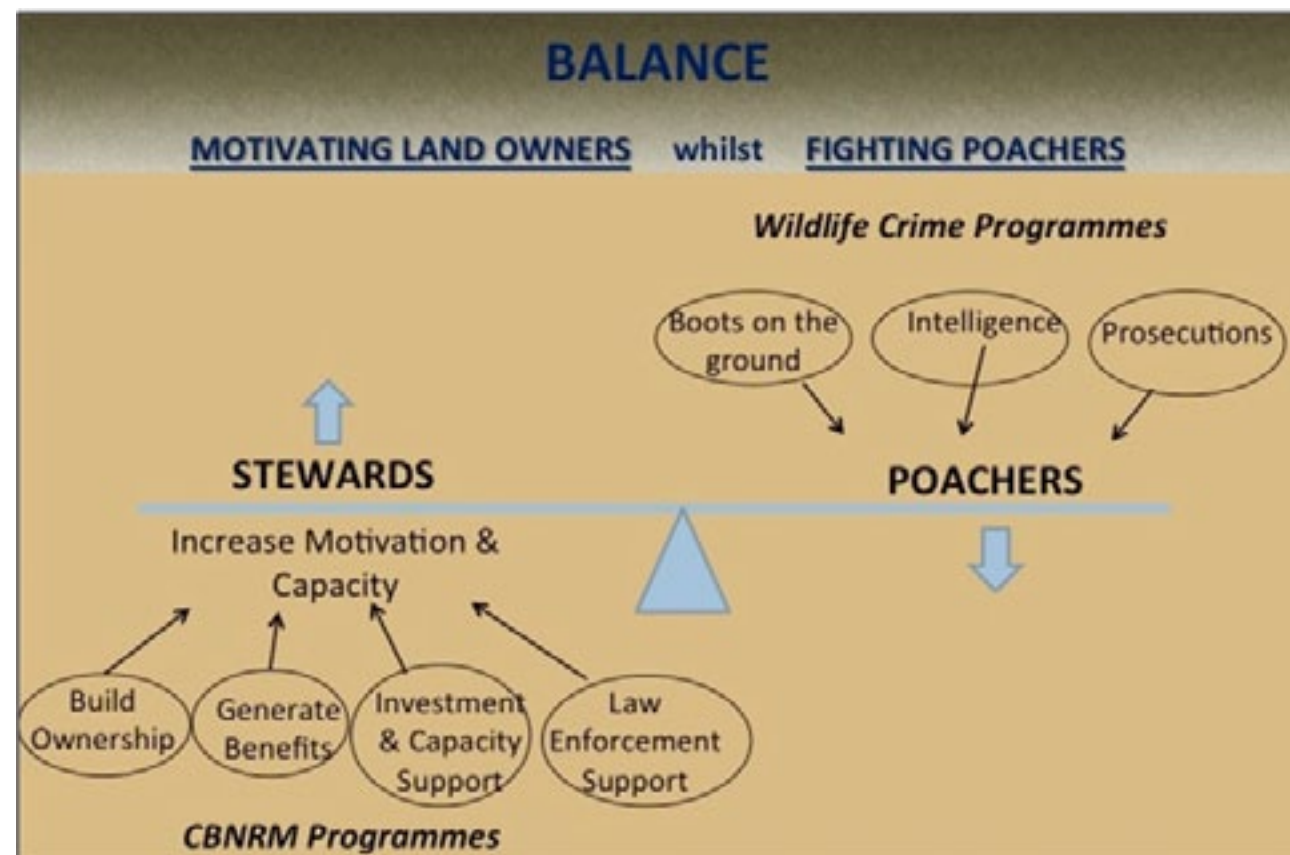


Figure 20: Anti-poaching strategy for Zambezi Region conservancies (D. Muema)

Figure 21: Balance between CBNRM and wildlife crime programmes (D. Muema)



NAMBOT undertakes joint quarterly patrols (16 to date) and investigations, joint community sensitization meetings (300 to date), intelligence sharing, and exchange visits (one to date) and annual meetings of the Joint Permanent Commission on Defence and Security (four to date).

NAMZAM undertakes biannual joint patrols (eight to date) and investigation and community sensitization events (64 to date), intelligence sharing, exchange visits (four to date) and annual meetings of the Joint Permanent Commission on Defence and Security (three to date).

Initial arrangements between Namibia and Angola have been put in place, including joint investigations and intelligence sharing, exchange visits (one to date), and annual meetings of the Joint Permanent Commission on Defence and Security (four to date).

9.7 Wildlife trade – an overview of key issues and dynamics with a focus on timber trade by Mr Markus Burgener

Markus Burgener, Senior Programme Officer for TRAFFIC South Africa, first provided a brief case study of abalone (a form of shellfish) poaching and illegal trade in South Africa. Abalone is a high value illegal product, which has undergone very high poaching levels for 15 years in communities characterized by poverty, unemployment and high levels of crime. Syndicated criminal networks are involved, with links to the drug trade, gangs, tax evasion, money laundering, and corruption. The trade has resulted in a huge loss of revenue to South Africa and the country has spent millions tackling the issue with limited success in part due to a lack of community involvement.

Mr Burgener then went on to explain how TRAFFIC worked with IRDNC and the Namibian Directorate of Forestry to assess the economic and environmental sustainability of the Namibian indigenous forest / timber industry. TRAFFIC conducted a literature review, consulted with stakeholders and examined source timber trade and transport data, following which a workshop was held with the directorates of forestry from Namibia, Angola and Zambia. A time-bound action plan and MOU were developed, including activities for cross-border training and awareness workshops. It was determined, in collaboration with Angolan officials that all permits submitted to Namibian authorities for Angolan timber being exported to Namibia, or in transit through Namibia for the period 2010 – 2014 were not official documents. Following this, the number of transport permits issued at Rundu, for timber from Angola, dropped significantly indicating much greater vigilance from the Angolan authorities. Consultations revealed that timber consignments on trucks crossing the Zambian and Angolan borders into Namibia were not being inspected as the border officials lacked knowledge and tools to be able to identify the timber. A timber identification wheel was developed and officials received training on permit requirements and timber identification.

In conclusion, it was noted that it is critical to address organized crime, support inter-agency collaboration, conduct ongoing capacity building and ensure community involvement.

9.8 Discussion, comments and questions

A number of questions and comments were raised directly to the presenters and during the discussion session as summarized below:

- Should the design of the protected area system be revisited considering the new and different threats faced?
- The costs of protecting core areas can be reduced by involving surrounding communities.
- Countries where illegal products are consumed, outside of Africa and the KAZA TFCA, should be taking the lead in engaging consumers.
- Attention must urgently be paid to securing sufficient resources to implement the various strategies that have been developed.
- The importance of multi-agency approaches to combating wildlife crime was discussed at length.
- High-level strategies must be supplemented by local-level initiatives.
- A major challenge is securing crime scenes and gathering evidence that can hold up during prosecution.
- Law enforcement must be intelligence-driven.
- Internal trafficking of products must also be considered.
- Engagement with the transport sector (land, air and sea) is critical.
- It is also important to track and publicise successful law enforcement activities, to create deterrents for would-be poachers.



10. SESSION VII: Understanding Baselines, Measuring Impacts and Realities of Data Management in the Context of TFCAs

10.1 Session summary – Where have we come from, where are we now and where are going?

Session VII, focusing on the importance of information management in TFCAs, consisted of six presentations, covering general monitoring and information systems for TFCAs as well as specific approaches on land cover, carnivores and tourism within the KAZA TFCA.

Understanding the KAZA TFCA is a complex task, considering the region's history and the huge diversity across the five PCs. Despite this, great strides have been made and there is a significant amount of information and data available, although these data are not centralized or coordinated.

A socio-economic baseline was established in 2014 and a better understanding of the situation across the KAZA TFCA is now in place. Many PCs are using ranger-based monitoring systems in protected areas, with efforts being made to move all PCs in the KAZA TFCA to use SMART (Spatial Monitoring and Reporting Tool). Systems for data management for specific species, such as carnivores, and activities, such as tourism, have been established. Critical gaps in the monitoring systems include habitat, benefits accrued at the household level, HWC, and protected area management effectiveness.

Standardized and timeous data are still required across the full extent of the KAZA TFCA. Technological tools are very important for monitoring data and managing information within the KAZA TFCA, but collaboration and partnerships are critical to ensure that they generate standardized information and measure critical impacts. The following recommendations arose out of the session:

- Enhance capacity at all levels to use technologies;
- Develop harmonized data collection, management, and sharing tools and protocols; and
- Publish State of KAZA TFCA Report.



10.2 Understanding baselines, measuring impact and the realities of data management in the context of TFCAs by Mrs Christine Mentzel

Mrs Christine Mentzel, Senior Programme Officer for IUCN, presented the importance of data management and adaptive monitoring for management across transboundary landscapes. Adaptive management is required in order to know whether TFCAs are achieving their regional goals and conservation, social and economic objectives. The ingredients of adaptive management are: indicators and monitoring framework; data collection protocols; data collection; data sharing; data management; and analysis. Adaptive management should have two main outcomes: 1) information on progress against targets; resulting in 2) adaptation of plans and management. In SADC there are a number of existing frameworks for monitoring in TFCAs, including the SADC TFCA programme, individual TFCA Treaties, IDPs, and joint management plans. However, many challenges are faced, including inconsistent data collection protocols, data standardization, and handling of sensitive data.

The assessment tool developed by Peace Parks Foundation (Figure 22: TFCA Development Assessment Tool (C.Mentzel)) is designed to assess progress in the establishment and development of TFCAs, establish best practices from TFCAs that have progressed, share experiences with other TFCAs, and identify factors that have retarded progress in establishing and developing TFCAs.

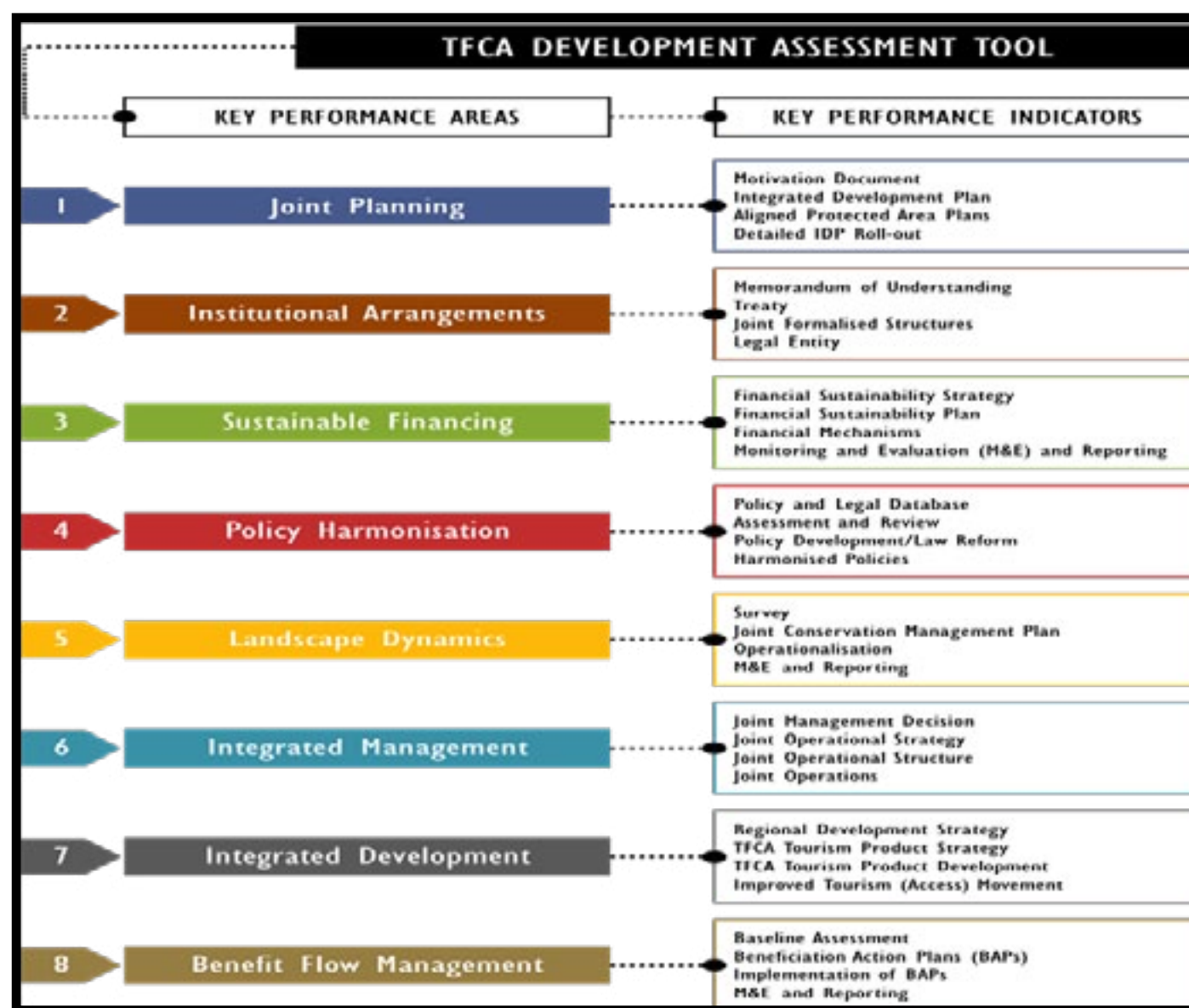


Figure 22: TFCA Development Assessment Tool (C.Mentzel)

Within the KAZA TFCA, a number of key biological and socio-economic indicators (grouped into tourism, HWC, land use, land cover, socio-economic, species population, infrastructure, conservation/ecosystem integrity) have been identified from KAZA TFCA operational and strategic documents, and an online interactive mapping tool to analyse changes in key indicators over time is in development. The ultimate aim is to produce regular State of KAZA reports.

A number of tools are used in KAZA TFCA PCs, such as MOMS (Management Oriented Monitoring System), SMART (Spatial Monitoring and Reporting Tool) and MIKE (Monitoring the Illegal Killing of Elephants), amongst others. Gaps in the monitoring system include monitoring of impact on habitat, benefits accrued at the household level, HWC, and protected area management effectiveness. The overall goals for the monitoring programme are for the KAZA TFCA indicator framework to be widely known and used by all PCs and their partners; data collection protocols to be established for key indicators; data sharing policy and/or agreements to be established; all PCs, researchers and other stakeholders to make relevant data available; and an online system to be established to allow easy access to relevant information on trends and status of key indicators.

10.3 The socio-economic baseline survey for KAZA TFCA by Mr Mbiganyi Frederick Dipotso

Mr Mbiganyi Frederick Dipotso, Programme Manager for the KAZA Secretariat, presented the results of the KAZA TFCA Socio-Economic Baseline Survey. Sustainable rural development and livelihood improvement through benefits derived from natural resources and cultural resources is one of the envisaged outcomes of the KAZA TFCA. In order to measure the impact of KAZA TFCA programmes a socio-economic baseline survey for the KAZA TFCA was undertaken from December 2014 to January 2015, using a livelihood framework tool that describes the main factors affecting people's livelihood. The objective was to obtain baseline data about livelihoods at the household level in rural areas and to develop a key indicator set as a foundation for future monitoring. Attributes of the livelihood framework include human, natural, physical, financial as well as social capital.

A sample of 2-3% of the population was surveyed with 1,565 household interviews and 76 community interviews. The survey affirmed that all five PCs are largely rural/agricultural, engaged in crop farming, livestock, natural resource harvesting and fishing, with Botswana and Namibia engaged more heavily in tourism. In Zimbabwe, there is higher engagement in agriculture, particularly production of vegetables and fruits for local markets. There is considerable use of local material in building residential structures. Household sizes are generally smaller (Zimbabwe had the largest) and the level of education varies (Angola very low; Botswana and Zimbabwe higher). Even in areas with higher education levels, household heads are generally engaged in agriculture or informal markets. The most common threats to livelihood assets mentioned in almost all PCs are HWC, human health, animal health, floods, drought and variable rainfall.

Most rural communities within the KAZA TFCA are located in areas with high tourism opportunities, but are generally unable to benefit from these resources. Capacity building in the tourism enterprise development and management is therefore one of the key needs of many communities across the KAZA TFCA. HWC mitigation is also critically needed to reduce HWC, increase tolerance and support coexistence. Activities that directly address the socio-economic needs of the communities of the TFCA are important, particularly through enhancing human capital and creating more opportunities for tourism ventures. The KAZA TFCA should continue to find ways to improve community engagement/involvement in the management of natural resources and increased benefits to communities.

A Livelihood Survey Handbook and a Socio-Economic Monitoring Handbook have been developed, and an annual rapid assessment is recommended as well as a mid-term review after three years, with full repetition of the survey after five years.

10.4 Existing and developing data management and data capture tools for KAZA

Mr. Craig Beech, Ms. Marina Faber, Mr. Brennan Walsh, Mr. Kingsley Payne, Mr. Denton Joachim, Ms. Arlene Herbst and Mr. Nico Grundlingh

Mr Craig Beech, Information Systems Manager for Peace Parks Foundation, reviewed the past, present and potential future of data management in the KAZA TFCA. When the KAZA TFCA started, data capture and management was a mammoth task considering the region's history and the huge diversity across the five PCs. A better understanding of the situation now exists and should be collated in the State of KAZA Report. However, standardized and timeous data are still required across the full extent of the TFCA.

Looking to the future, it is important to establish systems for engagement and to have a clear monitoring and evaluation system for the TFCA. SMART is being utilised supported by nine NGOs and linked by SMART Connect. While the introduction of new tools and software is welcome, it is critical to understand how these would fit into the overarching monitoring and evaluation system, and to ensure that they are consistently applied across the PCs. There is also a need to collaborate and draw tools together under the appropriate working groups.

10.5 Collaborating for conservation: the case of the KAZA Carnivore Conservation Coalition by Dr Kim Young, Mr Mbiganyi F. Dipotso, Dr Paul Funston, Dr Rosemary Groom, and Dr Russell Taylor

Dr Kim Young, Director of Panthera's Cheetah Programme, presented on the collaboration underpinning the KAZA Carnivore Conservation Coalition. Large carnivores drive the structure and function of savannah systems. As they are reliant on prey species, a full carnivore guild requires all sizes of herbivore guild. These species also have high tourism value and drive a large part of the wildlife economy. However, they face serious threats, and their range has significantly retracted in recent years. The KAZA TFCA is the most significant opportunity to conserve large carnivores across large landscapes at scale, with 20% of the African lion population, 25% of the African wild dog population, and approximately 50% of the wild cheetah population.

Recognising the need to change the scale of thinking and acting to ensure ecological relevance across boundaries, a workshop in October 2015 established the KAZA Carnivore Conservation Coalition, which includes government and non-government practitioners, with the goal of developing a strategic and unified programme of outcome focused activities that will secure a network of key habitats and connectivity pathways for large carnivores across the KAZA TFCA as a vehicle to uplift communities. Eight connectivity pathways and five key habitats were identified and categorised into five priority focal areas of highest value and highest need.

Each focal area has an associated working group tasked with formulating a vision for the area, developing a programme of activities to meet those goals and building priority projects ready for funding and implementation. Ultimately all these plans form a unified, outcome-focused strategic action plan for large carnivores across the KAZA TFCA. This strategic plan allows efficiencies to be maximized, and the coalition to pursue funding as a cohesive group of conservation and development organisations working together under one umbrella with a clear strategic framework. It also facilitates the sharing of resources and expertise across KAZA TFCA focal areas independent of organisational operational footprint, and monitoring of progress in a standardized manner.

Since June 2016, the Coalition is a formal sub-working group of the KAZA Conservation Working Group. Four of the working groups have met and defined the boundary, vision and goal for the focal area, and prepared a programme of activities, as well as a set of priority projects and associated action plans (Figure 23: KAZA Carnivore Conservation Coalition Projects Phase I (K.Young)).

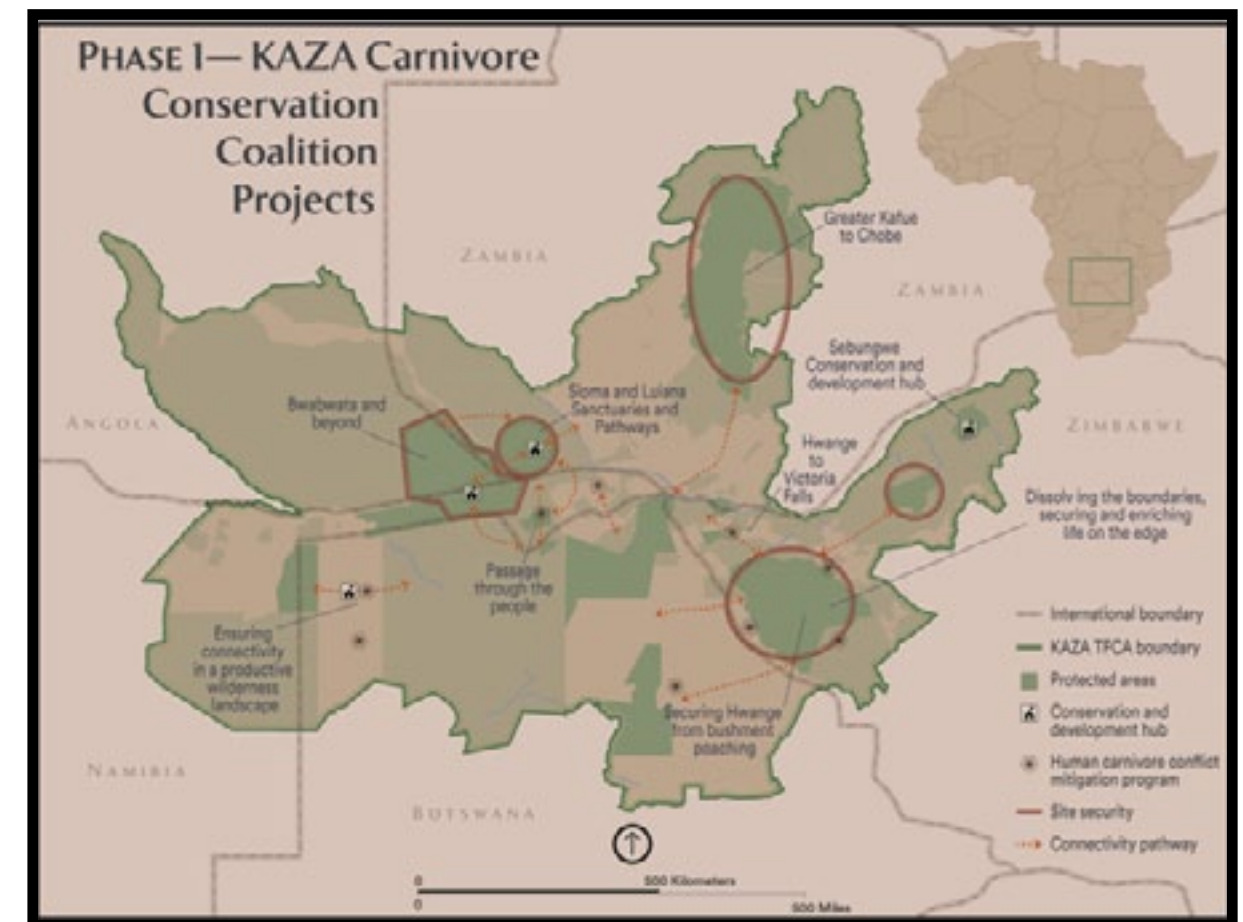


Figure 23: KAZA Carnivore Conservation Coalition Projects Phase I (K.Young)

10.6 KAZA land cover mapping: trends, application and use by Miss Aurélie C. Shapiro, Mr Craig Beech, Dr Russell Taylor, Michael Schultz, Ms Brit Reichelt-Zolho, and Mr Mark Thompson

Miss Aurélie Shapiro, Remote Sensing Specialist for WWF Germany, presented on the possibilities for monitoring the KAZA TFCA using land cover mapping. An informal KAZA TFCA Remote Sensing and GIS working group, supported by WWF and PPF, is in place. A 2005 land cover baseline was established with 22 land cover types and the development of a 'human impact' layer. Landsat Global imagery and field information are processed using GLOBIL, WWF's Global Observation and Biodiversity Information Portal to produce land cover maps and analyse change over time (Figure 24: Land cover mapping in the KAZA TFCA (WWF Germany)).

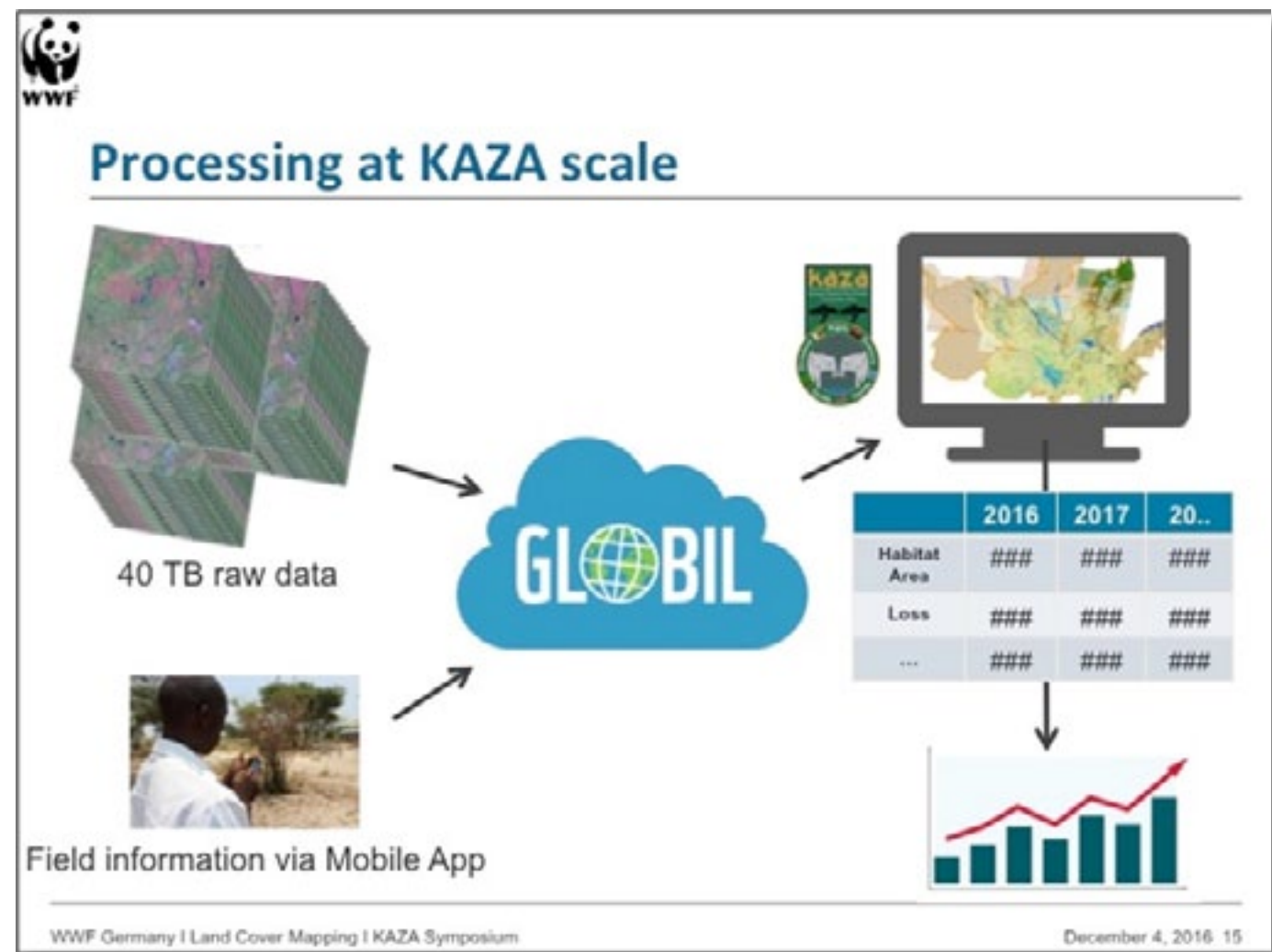


Figure 24: Land cover mapping in the KAZA TFCA (WWF Germany)

10.7 A practical tool for tourism: the KAZA Tourism Grid by Dr Russell Taylor, Mr Clive Poultnery, Ms Katharina Dierkes, Mr Craig Beech, Miss Aurélie Shapiro, Mr Mbiganyi Frederick Dipotso, and Mr Richard Diggle

Miss Shapiro, Remote Sensing Specialist for WWF Germany, also presented on the KAZA TFCA Tourism Grid, which is being developed as a practical tool for the KAZA TFCA to manage and facilitate tourism opportunities. In order to achieve the KAZA TFCA's objectives, a tourism strategy has been developed, tourism routes have been assessed, and a transboundary tourism barrier study conducted. Promotional material and signage for the TFCA has been produced, and a KAZA Tourism Development Association has been established.

The KAZA Tourism Grid serves as a tool for planning and assessing tourism by providing: an inventory of tourism operations within the KAZA TFCA and a gap analysis; a comprehensive and integrated understanding of KAZA TFCA-wide tourism possibilities; the ability to plan for this future potential; and a visualization of tourism assets, which can be overlaid with KAZA TFCA conservation and development activities. The grid is underpinned by a database that has more than 600 facilities, related ancillary information, major tourist routes, WDAs and other amenities. It is therefore a living grid, and truly transboundary, and totally interactive via a public access website (Figure 25: Public access to the KAZA TFCA Tourism Grid (A. Shapiro)).

There are a number of ideas moving forward, including: greater integration with the KAZA TFCA monitoring system; embedding the grid into the KAZA TFCA website; support for a tourism specialist within the Secretariat; incentivizing agencies and lodges to update their information; including news, videos, reviews as well as traveller photos.

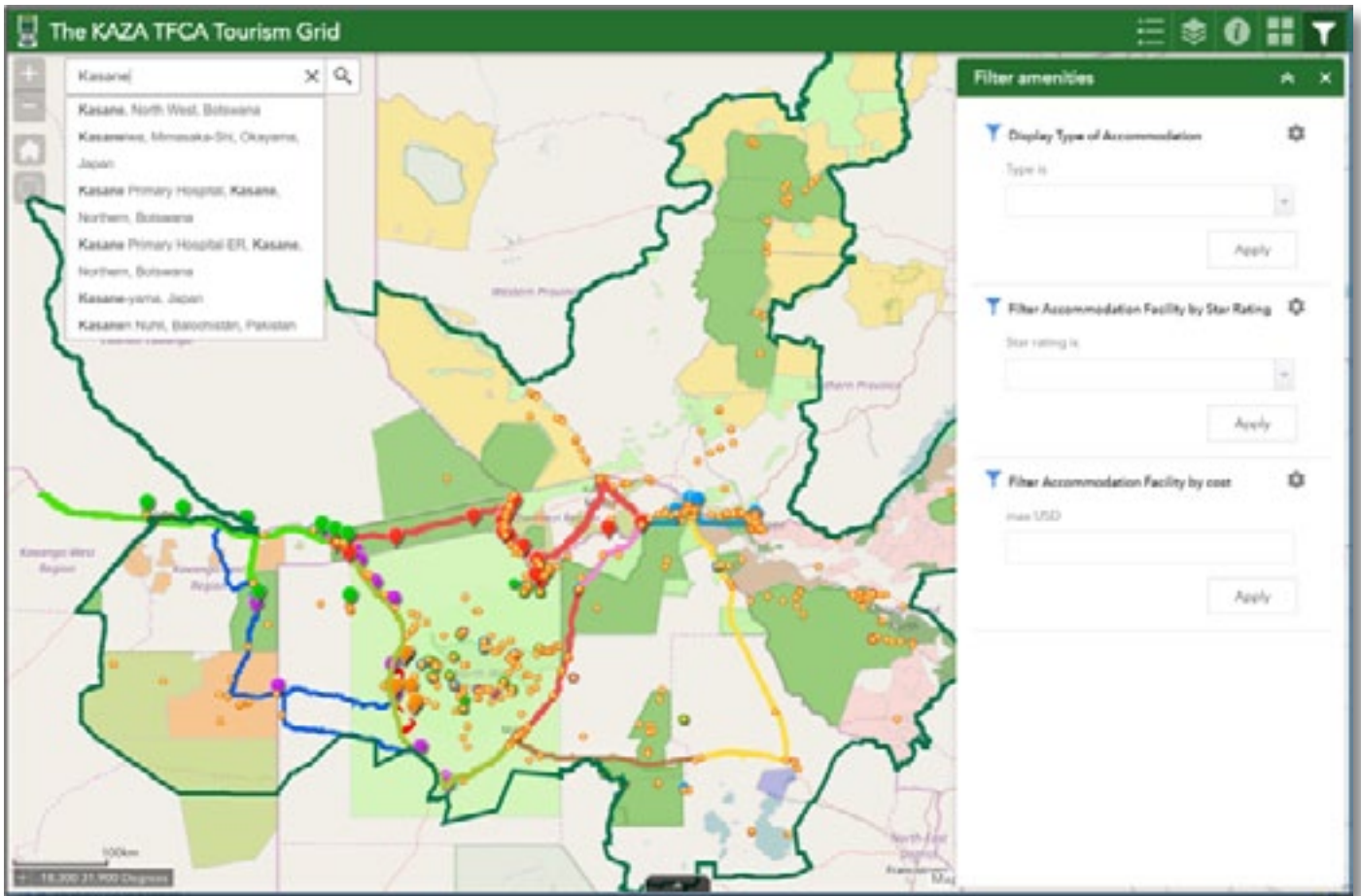


Figure 25: Public access to the KAZA TFCA Tourism Grid (A. Shapiro)

10.8 Discussion, comments and questions

A number of questions and comments were raised directly to the presenters and during the discussion session as summarized below:

- Data tools need to be specifically linked to key drivers and threats.
- Data management must be treated as a priority and resources availed to support data collection, management and analysis.
- The KAZA TFCA socio-economic baseline survey was restricted to rural households. With growing urban centres within the KAZA TFCA, it is important to understand the socio-economic status of urban households as well.
- The model and process of the KAZA Carnivore Conservation Coalition is very innovative and breaks down boundaries of organizational and national 'territory'.
- Limits of acceptable change need to be established so that the monitoring systems can trigger management action.
- There are major sustainability issues for these initiatives, which require high levels of technical knowledge and capacity-building programmes must go alongside the development and use of these tools and systems.
- Scenario planning requires robust data, which is now starting to be available.



II. SESSION VIII: Planning for Sustainable Tourism Development

II.1 Session summary – Where have we come from, where are we now and where are we going?

Session VIII, focused on tourism development, consisted of four presentations, covering the KAZA TFCA brand, the piloting of the KAZA Univisa, and the opportunities for regional tourism development in the TFCA.

The KAZA TFCA is a remarkable tourism destination. The natural assets are significant and include the Victoria Falls, the Zambezi River, the Okavango Delta, and 35 protected areas across the KAZA TFCA, which are home to over half of Africa's elephants, herds of buffalo, many prides of lions, teak forests, and savannah woodlands. Tourists come for the wilderness and vast open spaces, usually on the safari of a lifetime to see the 'Big Five' in their habitats, to view beautiful landscapes and to engage with different people and cultures.

The TFCA's immense tourism potential has not yet been realized. With diverse and unique natural and cultural resources, it could be developed into a premier global tourism destination. New and upgraded airports provide some of the infrastructure required to jumpstart tourism in the TFCA, but there are currently insufficient enabling policies to support this development. The KAZA TFCA offers an incredible range of products, in which the tourism industry is ready to invest, given the right branding, policies, infrastructure and capacities. The following recommendations arose out of the session:

- Implement UNIVISA with recommended changes and with adequate capacity and funding;
- Harmonize immigration policies and fees;
- Develop a KAZA TFCA brand, with an identified and agreed hub; and
- Support capacity building and infrastructure development to support increased tourism traffic and products.



II.2 Tourism in the context of KAZA by Mr David Glynn

Mr David Glynn, Chairman of Africa Albida Tourism (Pvt) Ltd gave a presentation on tourism in the KAZA TFCA. The KAZA TFCA estate has a significant product range across the five PCs, particularly with new and upgraded airports. The KAZA TFCA's natural products include the Victoria Falls, the mighty Zambezi River, the Okavango Delta, and the 35 protected areas across the KAZA TFCA, home to nearly 60% of Africa's elephants, herds of buffalo, lions, teak forests and savannah woodlands. Tourists come for the wilderness and vast open spaces, usually on the 'safari of a lifetime' to see the 'Big Five' in their habitats, to view beautiful landscapes and to engage with different people and cultures.

Tourists arrive mainly from international sources – Europe, North America, Asia, Australasia, Middle East, and Central and South America. Victoria Falls tourist arrivals in 2015 numbered approximately 490,000 of which 320,000 were international arrivals. One of the most critical factors is transportation access, and the real game changer for the region is the Victoria Falls Airport, which can now accept any currently made wide bodied aircraft.

The KAZA TFCA needs a consolidated and well-resourced destination marketing plan along with a clear brand identity. The identification of a single gateway will also help, and Victoria Falls is a strong candidate based on its existing brand and accessibility. The KAZA TFCA also needs to improve ability for tourists to cross borders by improving ease of access and adequately resourcing customs and immigration. He advised that the KAZA UNIVISA be reinstated as a matter of urgency.

Sustainable principles are essential to allow all constituents of the KAZA TFCA to successfully utilise, whilst continuing to preserve, the full KAZA TFCA.

II.3 DEG: we finance opportunities: KAZA – private sector lodges concepts by Ms Valentino Ziesler

Ms Valentino Ziesler, Vice President of Hospitality and Tourism with DEG (KfW), presented on the financing opportunities available and the barriers to enhancing tourism in the KAZA TFCA. DEG is looking at lodges across the KAZA TFCA to find the right partners with experience, integrity, a strong service culture and an ecological ideology. DEG finances investments in line with international environmental and social standards that have positive development impacts on the ground. The overall goal is to attract international investors and put a bankable financing structure in place for sustainable lodges in the five PCs.

A key strategy is to tie lodges into bundles of larger investment vehicles, including city hotels where possible to get the critical mass for the total investment. Technical assistance can also be provided for education in the hospitality sector, energy and water efficiency, organic composting and waste solutions, local farming production, transport and warehousing logistics. While there have been fruitful discussions to date, feedback from potential investors is slow.

II.4 Report on the implementation of the Zambia-Zimbabwe KAZA UNIVISA Project by Mr Tembo Noel Mgugu and Mr Whiteson Chavula

Mr Temba Noel Mgugu, Head of the Visa Section for Zimbabwe Immigration and Mr Whiteson Chavula, Deputy Chief Immigration Officer for Zambia presented on the implementation of the UNIVISA pilot project that took place from 28 November 2014 to 31 December 2015.

Zambia and Zimbabwe co-hosted the World Tourism Organization General Assembly in 2013, where delegates travelled seamlessly across the borders. Using this experience, meetings were held to discuss a UNIVISA, which was then launched in November 2014. The objectives were to: promote tourism by facilitating easier

and more cost effective movement of tourists between the two countries; to stimulate economic and regional integration as well as increased tourist arrivals to the region; to facilitate movement of international tourists in the region to increase market share and revenue of the region in the world; and to improve the value and volume of travellers thereby increasing downstream benefits like employment.

The UNIVISA was used at the following ports of entry: Harare International Airport, Kenneth Kaunda International Airport, Victoria Falls International Airport, Harry Mwanga Nkumbula International Airport, and the Victoria Falls and Kazungula land borders.

A number of challenges were experienced including; insufficient availability of consumables particularly for printers; inadequate training; cumbersome and time consuming report generation; the application did not have all the necessary functions; inability of the equipment to handle heavy traffic and needed to be stored separately every night; no server back up.

Taking into account these challenges, the two countries are negotiating revised arrangements to allow the UNIVISA to resume. A key recommendation is that the UNIVISA system should be integrated with the existing border management system. Major resources are required to institute this, well beyond the budgets of either country.



11.5 Developing and marketing the KAZA TFCA brand by Mr Felix Chaila and Miss Shareen Thude

Mr Felix Chaila, CEO of the Zambia Tourism Agency, presented on the importance of developing and marketing a KAZA TFCA brand. This means shifting from identifying the KAZA TFCA as a conservation programme to a global tourism destination. Branding is critical to communicating the existence of a product or service in a very competitive market. A KAZA TFCA brand would add value to PCs and tourism partners, highlighting the

essence of the region, and communicating that the sum is greater than its parts. Some examples of successful regional branding include the Virunga Mountains and the Caribbean. There is confusion between overlapping mandates of the KAZA TFCA, Boundless Southern Africa, Regional Tourism Organisation of Southern Africa (RETOSA) and SADC, which needs to be sorted out.

National tourism organisations can integrate the KAZA TFCA into marketing activities, provide public relations and media, a platform for shared resources, skills and communication. Policy makers need to harmonize policies, particularly immigration and visas, have standardised tourist crossing protocols, common practices and cross-border products.

Successful branding will require a robust product diversification effort to offer a multi-product experience, thus increasing the length of stay and amount spent. A wider product base also increases the market base. However, there are issues impacting product diversification, with limited product integration and packaging, silos built around member country tourism markets, and poor facilitation of free tourist movement between countries.

To build a KAZA TFCA brand, it is necessary to implement a communications and advocacy strategy, develop a KAZA TFCA brand strategy and associated marketing strategy, diversify products, address the skills shortage through appropriate policy and ensure proper resourcing of the Secretariat.

11.6 Discussion, comments and questions

A number of questions and comments were raised directly to the presenters and during the discussion session as summarized below:

- Creating awareness to politicians about the possibilities presented by the KAZA TFCA as a tourism brand is essential, along with the support that is needed to ensure its sustainability.
- Community-based tourism must happen outside rural centres requiring more investment.
- Linking the hub to additional destinations is critical, and preparing easily accessible 'routes', including through light aircraft.
- Communication between governments and marketing agencies is critical, especially in the context of a policy change, for example the suspension or reopening of the KAZA UNIVISA.
- Branding must benefit all players by enhancing synergies and creating new opportunities.
- The budget and time required to develop an umbrella brand should not be underestimated, especially if it is not only going to serve its marketing purpose, but also be fully owned by all stakeholders.
- The upgraded Victoria Falls Airport will serve as a game changer and the region should prepare for increased volumes of tourists.



12. SESSION IX: Where Have We Come From, Where Are We Now, and Where Are We Going? Summary, Discussion and Recommendations, and Closing Remarks.

Dr Morris Mtsambiwa, Executive Director of the Secretariat, noted that the three days of discussions at the Symposium had included strong participation from political leaders and traditional leaders, from researchers and community members alike. The history of the KAZA TFCA and the work to date in conservation, tourism and communications and community development had been examined to provide context for discussions. Forty-six presentations in seven working sessions, structured around the Master IDP, had provided deep insights into work being done across the KAZA TFCA, and the way forward for fully realizing the KAZA TFCA dream. Additional information from 30 posters exposed Symposium participants to important projects being conducted across the TFCA. Three panel discussions and a keynote address on the role of traditional authorities provided opportunities for rich debate.

He then invited five panellists to offer closing observations: Mr Paul Zyambo, Director of National Parks and Wildlife, Zambia; Mr Alec Dangare of the TFCA Unit in ZIMPARKS, Zimbabwe; Mr Miguel Mario Ndawanapo, National Director for the KAZA TFCA, Ministry of Hotels and Tourism, Angola, Mr Elias Magosi, Permanent Secretary at the Ministry of Environment, Natural Resources, Conservation and Tourism, Botswana and Mr Colgar Sikopo, Director of the Directorate of Wildlife and National Parks, Namibia. Below are some of the observations made:



- The KAZA TFCA is not 70% communities, it is 100% communities – everything that is being done is for the benefit of the people and ecosystems on which they rely.
- The KAZA TFCA requires the engagement of all sectors, including the private sector, particularly with the increasing threat from climate change. This requires selling the idea of the KAZA TFCA to Treasury departments. The KAZA TFCA Stakeholder Engagement Strategy has been developed and now needs to be implemented. The trust between government, communities and other partners must continue to be built.
- The TFCA programme must embrace not only natural resources, but also cultural resources.
- While the KAZA TFCA still relies on donor funding and likely will for some time, the focus should shift to sustainability and the financial sustainability strategy that has been developed needs to be implemented. While funding for law enforcement is largely at the national level, the SADC LEAP strategy represents an opportunity to raise funds for regional approaches and to supplement national needs.
- A huge amount of useful information has been discussed over three days and it is now necessary to act on this information and to publicize successes to date.
- Without specific targets and outcomes, it is hard to assess progress to date and to make the necessary adjustments to ensure success.

Dr Mtsambiwa then made a vote of thanks to a number of people and organizations that had worked to make the Symposium a success:

- The Organizing and Technical Committees, in particular Nidhi Ramsden, Russell Taylor, Shirley Atkinson, Frederick Dipotso, Loraine Bewsher, Professor Nambota, Ingrid Otukile, Colgar Sikopo, Paul Bewsher, Godfrey Mtare, Steve Osofsky and the rest of the team, including PC representatives.
- Funding partners, particularly KfW, PPF, WWF, AHEAD and Ecoexist.
- Victoria Falls Safari Lodge for hosting the event and being so responsive to delegate needs.

Angola, as the KAZA TFCA Coordinating Country, made a vote of thanks to the KAZA Secretariat and to Zimbabwe for hosting. Finally, Mr Joseph Shoko, Chief Environment Officer in Zimbabwe's Ministry of Environment, Water and Climate made remarks, available in Annex 3, formally closing the Symposium.

ANNEX 1 – Participant List

	Title	First name	Last name	Position	Organization		Country	Contact number	Email
1	Dr	Tempe	Adams	Research Coordinator	Elephants Without Borders		Botswana	267 74143315	tadams@elephantswithoutborders.org
2	Mr	Jose	Andre	Provincial Director	Ministry of Hotels and Tourism		Angola	244923717936	jo.kilu24@gmail.com
3	Mr	Custodio	Armando	Institutional Communication	Government of Malanje		Angola	244912620164	c.farmando@hotmail.com
4	Mrs	Shirley	Atkinson	Assistant Director	AHEAD / WCS		USA	+17 75 843 8498	satkinson@wcs.org
5	Mr	Raymond	Bako	Minister's Aid	Ministry of Environment, Water and Climate		Zimbabwe	263 772954629	raymondbako@gmail.com
6	Mr	Michael	Banda	Officer in Charge	Immigration		Zambia	260977944662	bmichaelbanda17@yahoo.com
7	Mr	Tuelo	Bapedi	Student	University of Botswana		Botswana	26771482395	tbapedi@ub.ac.bw
8	Mr	Francisco	Baptista	Owner	Mangais Golf Course		Angola	244923300543	ffaisca@mangais.com
9	Mrs	Helena	Baptista	Manager	Mangais Golf Course		Angola	244924088188	lenafb@gmail.com
10	Mr	Joao Mayembe	Baptista	Liaison Officer	Ministry of Hotels and Tourism		Angola	244998908502	joaomayembe.baptista@gmail.com
11	Honourable	Paulino Domingos	Baptista	Minister	Ministry of Hotels and Tourism		Angola		
12	Mrs	Paulino Domingos	Baptista	Wife to Honourable Minister			Angola		
13	Mr	Sport	Beattie	CEO	Game Rangers International (GRI)		Zambia	260976068183	sport@gamerangersinternational.org
14	Mr	Craig	Beech	Information Systems Manager	Peace Parks Foundation		South Africa	27823758815	cbeech@ppf.org.za
15	Mr	Loraine	Bewsher	Planner	Peace Parks Foundation		Angola	5521244558	ppp@lo.co
16	Mr	Paul	Bewsher	Programme Manager	Peace Parks Foundation		South Africa	27832517890	paul@ppf.org.za
17	Miss	Lisa	Blanken	TFCA Network Advisor	GIZ		Botswana	26772817577	lisa.blanken@giz.de
18	Mr	Manuel	Bollmann	GIZ - CIM Integrated Expert	Fair Trade Tourism		South Africa	27720366619	manuel@fairtrade.travel
19	Mr	Hilton	Britten	Project Manager	Glory Media		Zimbabwe	263 772870212	hilton@earth.co.zw
20	Mr	Chris	Brooks	Deputy Director	SAREP		Botswana	26771371623	cbrooks@SAREPmaun.com
21	Mr	Markus	Burgener	Senior Programme Officer	TRAFFIC		South Africa	27827809938	markus.burgener@traffic.org
22	His Excellency	Achim	Burkart	Ambassador	Embassy of the Federal Republic of Germany		Zambia		
23	Mr	Godfrey	Buzuzi	Personal Assistant	Ministry of Environment, Water and Climate		Zimbabwe	263 773437416	buzuzigodfrey21@gmail.com
24	Mr	Simbarashe	Bwititi	Environmental Officer	Ministry of Environment, Water and Climate		Zimbabwe	263717685885	tubwititi@gmail.com

25	Mr	Jorge	Calado	Director of Gabinet of Media and Institutional Marketing	Ministry of Hotels and Tourism		Angola	244923112715	jorgeluceucalado@hotmail.com
26	Dr	Alexandre	Caron	Researcher	CIRAD		Mozambique	258844640639	alexandre.caron@cirad.fr
27	Mr	John	Carter	Assistant Project Manager	Elephant Connection Research Project		Zambia	260971013562	john@elephantconnection.org
28	Dr	Kerryn	Carter	Project Manager	Elephant Connection Research Project		Zambia	260971013562	kerryn@elephantconnection.org
29	Mrs	Seele	Chabata	District Performance Improvement Coordinator	Office of the District Commissioner		Botswana	26771285116	schabata@gov.bw
30	Mr	Felix S	Chaila	CEO	Zambia Tourism Agency		Zambia	260 977778284	felix.chaila@zambia.travel
31	Dr	Columbas	Chaitezvi	Chief Wildlife Veterinary Officer	Government Veterinary Services		Zimbabwe	263777457484	colchaitezvi@gmail.com
32	Mr	Moses	Chakanga	SADC Technical Advisor	SADC GIZ		Botswana	26772115309	moses.chakanga@giz.de
33	Mr	Whiteson	Chavula	Deputy Chief Immigration Officer	Department of Immigration		Zambia	260979844230	whitesonchavula@gmail.com
34	Mrs	Kudakwashe	Chigodo	TFCA Programme Officer	Zimbabwe Parks and Wildlife Management Authority		Zimbabwe	263773319480	kchigodo@zimparcs.co.zw
35	Mr	David	Chikwanda	Security-Angolan Minister	CIO		Zimbabwe	263 774495245	davidchikwanda@gmail.com
36	Mr	Chandamali	Chimangata	Officer	Immigration		Zambia	260907682961	lbewsher@ppf.org.za
37	Mrs	Sofie	Chimba	Marketing	Zimbabwe Tourism Authority		Zimbabwe	263718972034	solphy@ztazim.co.zw
38	Mr	Antonio	Chipita	Executive Director	ACADIR		Angola	244931379906	antoniochipita2012@gmail.com
39	Mr	Tichaona	Chiweshe	Accountant	KAZA Secretariat		Botswana	26775705946	tichawonac@gmail.com
40	Dr	Eben	Chonguica	Executive Director	OKACOM		Botswana	26771342241	ebenc@okacom.org
41	Miss	Rosa	Cruz	Director	Ministry of Hotels and Tourism		Angola	244923359021	ragcruz20@gmail.com
42	Prof	David	Cumming	Advisor	University of Cape Town / AHEAD		Zimbabwe	2634776497	cumming@icon.co.zw
43	Mr	Manuel	Da Silva	Counsellor	Angola Embassy in Botswana		Botswana	26777139757	kenembila@hotmail.com
44	Mr	Alec	Dangare	National TFCA Coordinator	Zimbabwe Parks and Wildlife Management Authority		Zimbabwe	263772436686	adangare@yahoo.co.uk
45	Ms	Jessica	Dawson	General Manager	Victoria Falls Wildlife Trust		Zimbabwe	263712230845	jessica@vicfallswildlifetrust.org
46	Mr	Richard	Diggle	CBNRM / Business	WWF Namibia		Namibia	264813033210	rwdiggle@wwf.na
47	Mr	Mbiganyi Frederick	Dipotso	Programme Manager	KAZA Secretariat		Botswana	2676251269	fmdipotso@hotmail.com
48	Mr	Antonio	Domingos	Minister Councillor	Angola Embassy to Zambia		Zambia	260973652462	antoniodomingos1952@hotmail.com
49	Miss	Kudzai	Dzinavatonga	Principal Administrative Officer	Ministry of Tourism and Hospitality Industry		Zimbabwe	263716049757	kdzinavatonga@gmail.com
50	Mr	Antonio	Evaristo	President	Businessman		Angola	244923320485	Evaristo.kapunga@hotmail.com

51	Mr	Daniel	Faustino	Deputy Director General	Ministry of Transport		Angola	244923400390	danyfaustino59@gmail.com
52	Mr	Steve	Felton	Communications	WWF Namibia		Namibia	264811276402	sfelton@wwf.na
53	Mr	Joaquim	Fernandes	Interpreter	Vickstrom		Zimbabwe	263773949378	qwimfe@mail.com
54	Dr	Michael	Flyman	Chief Wildlife Officer	Ministry of Environment, Natural Resources, Conservation and Tourism		Botswana	26771349099	mflyman@gov.bw
55	Dr	Chris	Foggin	Veteranarian	Victoria Falls Wildlife Trust		Zimbabwe	263712631588	cfoggin@zol.co.zw
56	Dr	Paul	Funston	Senior Director	Panthera		USA	27 837040215	pfunston@panthera.org
57	Dr	Patience	Gandiwa	International Coordinator - GMTFCA	Peace Parks Foundation		South Africa	263772916988	patience.gandiwa@gmail.com
58	Mr	Joao Diogo	Gaspar	PCA	MCENTER2.SA		Angola	244923356506	jdgglobal28@gmail.com
59	Mr	David	Glynn	Managing Director	Africa Albida		Zimbabwe		dave@africaalbida.co.zw
60	Mr	Philipp	Goeltenboth	Director Africa & South America	WWF Germany		Germany	4915118854997	philipp.goeltenboth@wwf.de
61	Mr	Tawanda	Gotosa	Technical Advisor, TFCAs	SADC Secretariat		Botswana	267 73104936	tgotosa@sadc.int
62	Dr	Rosemary	Groom	Southern African Coordinator	RWCP - Zoological Society of London		Zimbabwe	263776844485	rosemary-rwcp@zsl.org
63	Mr	Christian	Gruen	Head of Cooperation	German Embassy - Windhoek		Namibia	26461273100	wz-l@wind.diplo.de
64	Mr	Gunther	Haase	Technical Forestry Advisor	KfW		Germany	496974313735	guenther.haase@kfw.de
65	Mrs	Britta	Hackenberg	Head of Projects	Namibia Nature Foundation		Namibia	264813328327	bh@nnf.org.na
66	Miss	Lise	Hanssen	Project Coordinator	Kwando Carnivore Project		Namibia	264 811294060	carnivores@iway.na
67	Miss	Zelna	Hengari	Managing Director	Namibia Wildlife Resorts		Namibia	264811278512	zhengari@nwr.com.na
68	Dr	Richard	Hoare	Human Elephant Conflict Working Group Chair	IUCN/SSC African Elephant Specialist Group		Zimbabwe	263771052888	rhwildlife@gmail.com
69	Dr	Frank	Hofmann	Head of Cooperation	German Embassy - Lusaka		Zambia	260972744273	wz-l@lusa.diplo.de
70	Mrs	Catherine	Hove	Tourist Officer	Zimbabwe Parks and Wildlife Management Authority		Zimbabwe	263 773473128	cathrinehove@yahoo.com
71	Mr	Edward	Humphrey	Procurement Advisor	KAZA Secretariat		Botswana	264 81 2834629	edward.rf.humphrey@gmail.com
72	Mr	Elliot	Hungwa	Technician	Vickstrom		Zimbabwe	263772914052	ehungwa@gmail.com
73	Miss	Hilde	Illeka	CBNRM	Ministry of Environment and Tourism		Namibia	264813028883	hilde.illeka@met.gov.na
74	Miss	Naambo Josephine	lipinge	Control Warden	Ministry of Environment and Tourism		Namibia	264814079835	andthose@yahoo.com
75	Mr	Isaias	Iyambo	Activity Guide Manager	Namibia Wildlife Resorts		Namibia	264812624677	iiiyambo@nwr.com.na
76	Mr	Denver	Jaramba	Mission Driver	Namibian Embassy Harare		Zimbabwe	263772764869	djaramba@rocketmail.com
77	Mr	Brian	Jones	Consultant	Environment and Development Trust		Namibia	264811280804	bjones@edt.com.na
78	Mr	Charles	Jonga	Director	CAMPFIRE		Zimbabwe	263772599102	cjonga@yahoo.com

79	Mr	Fernando	Julio	Supporting Staff	Angola Embassy to Zimbabwe		Zimbabwe	263772276424	vtengende@gmail.com
80	Nduna	Fredrick	Kabala	Senior Councillor	Traditional Authority		Namibia	2603447446	None
81	Mr	Bemmett	Kahuure	Deputy Program Manager	Nam North Eastern Parks Program Three		Namibia	264811293459	bk@nnf.org.na
82	Mr	Tom	Kalimukwa	Officer in Charge	Immigration		Zambia	260717528	Kalimukwatom@yahoo.com
83	Miss	Mwendalubi	Kalinda	Fisheries Development Officer	Namibia Nature Foundation		Zambia	260976289726	mwenda@nnf.org.na
84	Mr	Domingos	Kamavo	Inspector-General	Ministry of Hotels and Tourism		Angola	244912502723	ginspmihotur@hotmail.com
85	Mr	Chipango	Kamboyi	Conservation & Wildlife Management Field Officer	WWF Zambia		Zambia	260979908180	ckamboyi@wwfzam.org
86	Mr	John	Kamwi	TBNRM Coordinator	IRDNC		Namibia	264815618922	johnkamwi64@gmail.com
87	Mr	Apollinaris	Kannyinga	Deputy Director	Ministry of Environment and Tourism		Namibia	264811464788	apollinaris.kannyinga@met.gov.na
88	Mr	Brighton	Kaonga	Deputy Officer in Charge	Immigration		Zambia	260979519580	kaongabrighton@yahoo.com
89	Mr	Malvern	Karidozo	Research Officer	Connected Conservation		Zimbabwe	263776029639	mkmalvern@gmail.com
90	Mr	Evans	Kaseke	Programme Manager	Zambezi Watercourse Commision		Zimbabwe	2634253361	evans@zambezicommission.org
91	Mr	Bernard	Kasekete	Interpreter	Vickstrom		Zimbabwe	263772405274	enquiries@vickstrom.co.zw
92	Mr	Evans	Katiyo	System Adminstrator/ Graphic Designer	Zimbabwe Parks and Wildlife Management Authority		Zimbabwe	263785720860	evanskatiyo@gmail.com
93	Mr	Sydney	Kawadza	Reporter	The Herald		Zimbabwe	263772942969	sydney.kawadza@zimpapers.co.zw
94	Mr	Sediegeng	Kgamane	Paramount Chief	Ngwato Chieftdom		Botswana	26771423900	jmlazie@gmail.com
95	Honourable	Tshekedi	Khama	Minister	Ministry of Environment, Natural Resources, Conservation and Tourism		Botswana		
96	Mr	Piet	Kleffmann	Head of Division, Governance and Natural Resources	KfW		Germany	4915259430537	piet.kleffmann@kfw.de
97	Ms	Doris	Kofi	Senior Marketing Manager (Domestic)	Zambia Tourism Agency		Zambia	260211229087	doris.kofi@zambiatourism.org.zm
98	Mr	Eduardo	Kondua	First Secretary	Angola Embassy to Zimbabwe		Zimbabwe	263777276311	didierdchamp@yahoo.com
99	Mr	Eugen Siwombe	Kudumo	Chief	Ukwangali Chieftainship		Namibia	264816025123	eksyoyo@gmail.com
100	Mr	Irvine	Kunene	Director Natural Resources	Ministry of Environment, Water and Climate		Zimbabwe	263712431123	kunene.irvin@gmail.com
101	Mr	Phillip	Kuvawoga	Wildlife Specialist	WWF Zimbabwe		Zimbabwe	263773923279	pkuwawoga@wwf.org.zw
102	Mr	Chris	Kwandu	Vice Chairperson, VAG - Kasaya	Simalaha Community Wildlife Conservancy		Zambia	260977890256	chriskwandu@gmail.com
103	Mr	Mike	La Grange	Consultant	Free Lance Wild Life Consultant		Zimbabwe	263772400850	mhiripiribomber@gmail.com
104	Miss	Kelly	Landen	Programme Manager, Co-Director	Elephants Without Borders		Botswana	26776658212	klanden@elephantswithoutborders.org
105	Mr	Godfil	Langa	Interpreter	Vickstrom		Zimbabwe	263773438657	gr.langa@gmail.com

106	Miss	Kamogelo	Letlotla	District officer development	Office of the District Commissioner		Botswana	26771485286	kmletlotla@gov.bw
107	Dr	Pauline	Lindeque	Manager	AGRA ProVision		Namibia	264811272978	paulinel@agra.com.na
108	Mr	Robin	Lines	PHD Researcher	University of Kent		United Kingdom	447456250447	rl291@kent.ac.uk
109	Mr	Rui	Lisboa	Liaison Officer	KAZA		Angola	244928591108	jjorgerui@hotmail.com
110	Dr	Andrew	Loveridge	Research Fellow	Wildcru		Zimbabwe	26318395	andrew.loveridge@zoo.ox.ac.uk
111	Dr	Niel	Lubbe	Lecturer	North West University		South Africa	27 747003589	niel.lubbe@nwu.ac.za
112	Mr	Sentseka Terry	Macheng	National Anti Poaching Coordinator	Botswana Defence Force		Botswana	26776220612	stmacheng@yahoo.com
113	Mr	Tinaapi Hilary	Madiri	Ecologist	Zimbabwe Parks and Wildlife Management Authority		Zimbabwe	263773289298	hilarymadiri@yahoo.com
114	Chief	Thursus	Madlambudzi	Chief	Chiefs Council		Zimbabwe	2637780512818	lbewsher@ppf.org.za
115	Mr	Elias	Magosi	Permanent Secretary	Ministry of Environment, Natural Resources, Conservation and Tourism		Botswana		
116	Miss	Debra	Magwada	Land Management Specialist	WWF Zimbabwe		Zimbabwe	263775055801	dmagwada@wwf.org.zw
117	Mr	Michael	Makoni	Driver	Angola Embassy to Zimbabwe		Zimbabwe	263771648093	None
118	Mrs	Trish	Mambinge	General Manager	ShearWater		Zimbabwe	263772239464	trish@shearwatervf.com
119	Miss	Petronella	Manikwa	Reservationist	Zimbabwe Parks and Wildlife Management Authority		Zimbabwe	263773411186	manikwap@yahoo.com
120	Dr	Nakedi	Maputla	Southern Africa Representative	African Wildlife Foundation		South Africa	27837255273	nmaputla@awf.org
121	Mr	Nero	Maria	Head of Maritime Safety Department	Ministry of Transport		Angola	244924108673	neromaria1@gmail.com
122	Mr	Lovemore	Mario	Journalist	BTV		Botswana	26773155660	lmario@gov.bw
123	Mr	Fidel	Marume	Principal Administrative Officer	Ministry of Environment, Water and Climate		Zimbabwe	263712236480	ftmarume@gmail.com
124	Mr	Clemence	Masango	Principal Director	Department of Immigration		Zimbabwe	263772800347	cmasango55@icloud.com
125	Mr	Geoffreys	Matipano	Acting Director-General	Zimbabwe Parks and Wildlife Management Authority		Zimbabwe	263772116389	gmatipano@zimparks.co.zw
126	Mrs	Chilala	Mayanda Habasimbi	Principal Tourism Development and Research Officer	Ministry of Tourism and Arts		Zambia	260955202619	habasimbi@gmail.com
127	Mr	Kelvin	Mayoyo	Principle Administrative Officer	Ministry of Rural Development, Promotion & Preservation of National Culture & Heritage		Zimbabwe	263778230448	rla.mayoyo@gmail.com
128	Mr	John	Mayumba	Regional Reporter	New Era Publications Corporation		Namibia	264812171888	jmuyumba@nepc.com.na
129	Mr	Barena B	Mazebedi	Intern	KAZA Secretariat		Botswana	26776268992	barenamazebedi@yahoo.com

130	Mrs	Prisca	Mazengeza	Principal Administrative Officer	Ministry of Tourism and Hospitality Industry	Zimbabwe	263713099240	pmazengeza@gmail.com
131	Dr	Joseph	Mbaiwa	Professor of Tourism	Okavango Research Institute	Botswana	2676861833	jmbaiwa@ori.ub.bw
132	Dr	Graham	McCulloch	Director	Ecoexist	Botswana	26775149403	gpmcculloch1@gmail.com
133	Mr	Bruce	Mead	Deputy Technical Director	Climate Resilient Infrastructure Development Facility	South Africa	27761005710	bruce.mead@cridf.com
134	Mrs	Christine	Mentzel	Senior Programme Officer	IUCN	South Africa	27 744520750	christine.mentzel@iucn.org
135	Mr	Nils	Meyer	Principal Project Manager of KAZA	KfW	Germany	496974312364	nils.meyer@kfw.de
136	Mr	Temba Noel	Mgugu	Head of Visa Section	Immigration	Zimbabwe	263712321210	mugugu13@gmail.com
137	Mr	Stanley	Mkuluchi	Technician	Vickstrom	Zimbabwe	263772752061	mkuluchi@gmail.com
138	Mr	Chilule	Mlazier	Liaison Officer	KAZA	Botswana	26771423900	jmlazier@gmail.com
139	Mrs	Alice	Mmolawa	Chief Public Relations Officer	Ministry of Environment, Natural Resources, Conservation and Tourism	Botswana	2673647923	ammolawa@gov.bw
140	Chief	Gokgathang	Moalosi	Ex officio	Sankoyo Development Trust	Botswana	2677169300	gtmoalosi@gmail.com
141	Mr	Sedia	Modise	Botswana Country Manager	Peace Parks Foundation	Botswana	26771707745	smodise@ppf.org.za
142	Mr	Boat	Modukanele	CBNRM Coordinator	Ministry of Environment, Natural Resources, Conservation and Tourism	Botswana	2673647997	bomodukanele@gov.bw
143	Miss	Tachinya	Molatole	Senior Wildlife Warden	Department of Wildlife and National Parks	Botswana	26771781209	molatoletachinya@gmail.com
144	Mr	Taelo	Moncho	Principle Tourism Officer	Department of Tourism	Botswana	26771980508	temoncho@gov.bw
145	Mr	Felix	Monggae	Deputy Permanent Secretary	Ministry of Environment, Natural Resources, Conservation and Tourism	Botswana		
146	Mr	Phanwell	Moonga	Senior Wildlife Warden	Department of National Parks and Wildlife	Zambia	260977827430	moonga2009@yahoo.co.uk
147	Miss	Kealetile	Moremi	Paramount Chief	Tawana Chiefdom	Botswana	26771423900	jmlazier@gmail.com
148	Mr	Louis	Moroka	Senior Curator	Department of National Museums and Monuments	Botswana		lmoroka@gov.bw
149	Mr	Mabuta Reggie	Morongwe	Board Member	Chobe Enclave Conservation Trust	Botswana	26776779744	malachitesafaris@gmail.com
150	His Worship	Sifiso	Mpofu	Mayor	City of Victoria Falls	Zimbabwe		
151	Mr	George	Msumba	Reporter	Star FM Radio	Zimbabwe	263776122494	gmsumba@gmail.com
152	Mr	Godfrey	Mtare	Liaison Officer	KAZA Secretariat	Zimbabwe	263772943481	tgmtare@yahoo.com
153	Mr	Morris	Mtsambiwa	Executive Director	KAZA Secretariat	Botswana	26773896526	mzmtsambiwa@gmail.com
154	Mr	Sililo	Mubiana	Reporter	Namibia Broadcasting Corporation	Namibia	264812230665	jmubiana@nbc.na
155	Mr	Crispen	Muchindu	Conservation Agriculture Manager	Simalaha Community Wildlife Conservancy	Zambia	260977680334	muchinducrispen@gmail.com

156	Honourable	Oppah	Muchinguri-Kashiri	Minister	Ministry of Environment, Water and Climate		Zimbabwe		
157	Mr	Kelvin	Mudawariwo	Protocol Officer	Zimbabwe Parks and Wildlife Management Authority		Zimbabwe	2630773688735	kelvinm@zimparks.co.zw
158	Mr	Cephas Siangoma	Mudenda	Board Member	Zimbabwe Parks and Wildlife Management Authority		Zimbabwe	263778574119	wacimwaila@gmail.com
159	Mr	Dominic	Muema	Operations Manager	IRDNC		Namibia	264812184032	dmmwema7@gmail.com
160	Mr	Vincent	Mukombero	Regional Immigration Officer	Department of Immigration		Zimbabwe	263712321214	ovcmukombero@yahoo.co.uk
161	His Royal Highness	Munokalya	Mukuni	Senior Chief	Livingstone		Zambia		
162	Mr	Givemore	Mukuya	Acting Regional Manager Western	Zimbabwe Parks and Wildlife Management Authority		Zimbabwe	263712666722	gmukuya@zimparks.co.zw
163	Mr	Alfred	Mulele	Working Group	Sekute Simala Conservancy		Zambia	260977452761	alfmulele@gmail.com
164	Mr	Tawanda	Munambah	Manager, Planning and Investment	Zimbabwe Tourism Authority		Zimbabwe	263773431219	tawanda@ztazim.co.zw
165	Mr	Tichafo	Mundangepfupfu	Board Chairman	Zimbabwe Parks and Wildlife Management Authority		Zimbabwe	263 778031889	M_TICHAFA@hotmail.com
166	Dr	Simon	Munthali	Consultant	Vuna		Malawi	265991148539	muchina.munthali@gmail.com
167	Dr	Patricia	Mupeta-Muyamwa	Community Conservation Programme Manager	The Nature Conservancy		Zambia	260974153551	pmupeta@tnc.org
168	Mr	Lester	Muradzi	Land Use Planner	Agritex		Zimbabwe	263773076869	lmuradzi@yahoo.com
169	Mr	Admire	Muramani	Desk Officer	President's Office		Zimbabwe	263 712789478	amuramani@gmail.com
170	Mr	Michael	Murphree	Acting Director	North West University		South Africa	27724442760	murphreemj@gmail.com
171	Mr	Arthur	Musakwa	Director	Zimbabwe Parks and Wildlife Management Authority		Zimbabwe	263 772420332	amusakwa@zimparks.co.zw
172	Mr	Ignatius	Musona	Socio Economic Specialist	WWF Zimbabwe		Zimbabwe	263772925189	mimusona@wwf.org.zw
173	Mrs	Musawa	Musonda-Hamusonde	Senior Ecologist	National Heritage Conservation Commission		Zambia	260977710923	musmus7703@yahoo.com
174	Mrs	Tarirai	Musonza	Director Commercial Services	Zimbabwe Parks and Wildlife Management Authority		Zimbabwe	263772130079	tmusonza@zimparks.co.zw
175	Mr	Wilson	Mutinhima	Board Member	Zimbabwe Parks and Wildlife Management Authority		Zimbabwe	263783285092	wmutinhima@zimparks.co.zw
176	Mr	Shylock	Muyengwa	Rapporteur	KAZA		Zimbabwe	263779970322	shylock.muyengwa@gmail.com
177	Miss	Caroline	Muzongwe	Policy Analyst	Cabinet Office		Zambia	260976711684	lmunamu@yahoo.com
178	Miss	Lusizi	Mwale	Senior Wildlife Warden	Department of National Parks and Wildlife		Zambia	260977238522	luzy.mwale@gmail.com
179	Mr	Elvis	Mwilima	Liaison Officer	KAZA		Namibia	264811481486	simbaelvis@yahoo.com

180	Mr	Werner	Myburgh	Chief Executive Officer	Peace Parks Foundation		South Africa	27218805100	wmyburgh@ppf.org.za
181	Dr	Robin	Naidoo	Lead Scientist, Wildlife	WWF Namibia		Namibia	12022900874	robin.naidoo@wwfus.org
182	Mr	Collins	Namangolwa	Officer in Charge	Immigration		Zambia	260 977802767	collinsnamangolwa@gmail.com
183	Prof	Andrew	Nambota	TFCA Director	Ministry of Tourism and Arts		Zambia	260977763200	andrewnambota56@gmail.com
184	Mr	Henry	Ndaimani	Lecturer	University of Zimbabwe		Zimbabwe	263773473538	hndaimani@gmail.com
185	Mr	Miguel	Ndawanapo	KAZA Director	Ministry of Hotels and Tourism		Angola	244939378900	ndaunapo40@gmail.com
186	Mr	Sijabuliso	Ndhlovu	Bureau Chief	Zimbabwe Broadcasting Cooperation		Zimbabwe	263773586464	srndhlovu@yahoo.com
187	His Excellency	Jose Agostinho	Neto	Ambassador	Embassy of the Republic of Angola		Botswana		
188	Mr	Joao Antonio	Ngola	Translator	KAZA Secretariat		Botswana	26772332565	ngolajo63@hotmail.com
189	Mr	Fanuel	Nleya	Extension and Interpretation	Zimbabwe Parks and Wildlife Management Authority		Zimbabwe	263 775728270	fanuelnleya82@gmail.com
190	Mr	Mokganedi	Ntana	Tourism Development Manager	Botswana Tourism Organization		Botswana	26771356752	mntana@botswanatourism.co.bw
191	Mrs	Karine	Nuulimba	Programme Director	IRDNC		Namibia	264814456513	karine.nuulimba@gmail.com
192	Mr	Mwambwa	Nyambe	Manager	Simalaha Community Wildlife Conservancy		Zambia	260977143564	mwambwanyambe@gmail.com
193	Dr	Nyambe	Nyambe	Country Director	WWF Zambia		Zambia	260965524708	nnyambe@wwfzam.org
194	Miss	Bella	Nyamukure	Rapporteur	KAZA		Zimbabwe	263 735798189	belnya@yahoo.com
195	Mr	Moses	Nyirenda	Species Specialist	WWF Zambia		Zambia	260 966400567	mnyirenda@wwfzam.org
196	Dr	Loki	Osborn	Director	Connected Conservation		Zimbabwe	27721597933	loki@elephantpepper.org
197	Mr	Orelebile	Otlaadisa	Wildlife Officer	Ministry of Environment, Natural Resources, Conservation and Tourism		Botswana	26773704057	lbewsher@ppf.org.za
198	Miss	Ingrid Mpundu	Otukile	TFCA Coordinator	Ministry of Environment, Natural Resources, Conservation and Tourism		Botswana	26772408852	iotukile@gov.bw, mpundu.chite@gmail.com
199	Dr	Jeremy	Perkins	Lecturer	University of Botswana		Botswana	267 71680224	perkinsjs@mopipi.ub.bw
200	Mr	Biganani	Phusumani	Regional Immigration Officer	Home Affairs and Immigration		Botswana	2676250491	bphusumani@gov.bw
201	Mr	Brad	Poole	Combatting Wildlife Crime Programme Manager	Peace Parks Foundation		South Africa	27769058329	bpoole@ppf.org.za
202	Mrs	Lilian Manga	Porote	Board Member	Chobe Enclave Conservation Trust		Botswana	267 71854958	none
203	Mr	Fannuel. M	Radifalana	Sub-Landboard Secretary	Tawana Land Board		Botswana	26772553945	fradifalana@gov.bw
204	Mrs	Nidhi	Ramsden	Director	Seanama Conservation Consultancy		Botswana	26771378331	nidhigureja@yahoo.com
205	Dr	Gregory	Rasmussen	Director	Painted Dog Research Trust		Zimbabwe	263774665390	greg@painteddogresearch.org
206	Dr	Kerry	Reeves	Deputy Environment Team Leader	USAID		South Africa	27838826799	kreeves@usaid.gov

207	Mr	Bernard	Rego	Administrator	KAZA Secretariat		Botswana	2773538244	bernard.rego@gmail.com
208	Miss	Justine	Revenaz	TBNRM	IRDNC		Namibia	264818609956	justine.revenaz@gmail.com
209	Miss	Doreen	Robinson	Regional Chief, Environment & Energy Team	USAID		South Africa	27834486167	drobinson@usaid.gov
210	Mr	Peter	Rwodzi	Staff Officer Operations	Zimbabwe Republic Police		Zimbabwe	263716800824	zivanayi2003@gmail.com
211	Mr	Maiba	Saisai	Chief Control Warden	Ministry of Environment and Tourism		Namibia	264817450994, 264812741938	maibasaisai@gmail.com
212	Miss	Saima	Sakaria	Second Secretary	Namibian Embassy Harare		Zimbabwe	263 774249665	ssakaria@namibianembassy.co.zw
213	Mr	Knox	Salushando	Camera person	Namibia Broadcasting Corporation		Namibia	26490812789888	ksalushando@nbc.na
214	Mr	Victor	Samanga	Desk Officer	President's Office		Zimbabwe	263 777097132	vsamanga@gmail.com
215	Mr	Dominic	Sandema	Community Leader Representative of the Chief	Simalaha Community Wildlife Conservancy		Zambia	260965070640	belnya@yahoo.com
216	Mr	Bright	Sanzila	Warden for CBNRM	Ministry of Environment and Tourism		Namibia	264814172029	bsanzila@yahoo.com
217	Mr	Brighton	Sayi	Technician	Glory Media		Zimbabwe	263 778088801	brighton@glorymedia.co.zw
218	Dr	Goetz	Schroth	Programme Specialist	UNDP		Angola	244927921113	goetz.schroth@undp.org
219	Mr	Joao Baptista Jimmy	Sebastiao	Director	Provincial Government of Cuando Cabango		Angola	244933104010	jbgsebastiao@hotmail.com
220	Mr	Olekantse	Sennamose	Reporter/ Journalist	Botswana Press Agency		Botswana	26773590603	sennamose@gmail.com
221	Mr	Kabelo	Senyatso	CEO	Birdlife Botswana		Botswana	26774867838	blb@birdlifebotswana.org.bw
222	Mrs	Oarabile	Serumola	Director	Ministry of Environment, Natural Resources, Conservation and Tourism		Botswana	26773333589	oserumola@gov.bw
223	Miss	Aurelie	Shapiro	Remote Sensing Specialist	WWF Germany		Germany	4915118854814	aurelie.shapiro@wwf.de
224	Mr	Christian Ndeyapo	Shimuketa	Chair Person of Ukwangali Traditional Chief's Councils	Ukwangali Traditional Authority		Namibia	264812463261	engemba@gmail.com
225	Mr	Batsirai Donovan	Shoko	Camera person	Zimbabwe Broadcasting Cooperation		Zimbabwe	263772387635	batsifresh@gmail.com
226	Mr	Joseph	Shoko	Chief Environment Officer	Ministry of Environment, Water and Climate		Zimbabwe	263 783458658	jshoko117@gmail.com
227	Dr	Emos	Shumba	Country Director	WWF Zimbabwe		Zimbabwe	263772277993	eshumba@wwf.org.zw
228	Mr	MacFallen	Siame	Information Technology Officer	Immigration		Zambia	260976416499	msiame@zambiaimmigration.gov.zm
229	Senior Chief	Nkatazo	Siansali	Hon Senator Chief	Chiefs Council		Zimbabwe	263772226071	chiefsiansali.n.siatbwa@gmail.com
230	Mr	Michael	Sibalatani	Deputy Project Manager	NAMParks 4 Programme		Namibia	264811410927	michael.sibalatani@gopa.de
231	Mr	King	Sibanda	Technician	Glory Media		Zimbabwe	263 775121453	king@gmail.com
232	Mr	Colgar	Sikopo	Director	Ministry of Environment and Tourism		Namibia	264811223443	colgar.sikopo@met.gov.na
233	Mr	Adriano	Silva	Diplomat	Angola Embassy to Zimbabwe		Zimbabwe	263777276311	didierdchamp@yahoo.com.br
234	Mr	Cebisani	Silwane	Technician	Glory Media		Zimbabwe	263 716351526	cebosilwane@yahoo.com

235	Mr	Chuma	Simukonda	Assistant Director, Research and Veterinary Services	Department of National Parks and Wildlife		Zambia	260972123626	chumasimukonda@gmail.com
236	Mr	Mofat	Simvula	Paramount Chief	Chobe Chief		Botswana	26771423900	jmlazie@gmail.com
237	Mr	Yona	Sinkala	Director	Department of Veterinary Services		Zambia	260979313526	ysinkala@gmail.com
238	Chief	Moffat Maiba	Sinvula	Chief	Kavimba Village, North West District		Botswana		
239	Mr	Liwen	Sitali	Liaison Officer	KAZA		Zambia	260968359722	liwen.lishoomwa@gmail.com
240	Mr	Godfrey	Sitengu	Chief Fisheries Biologist	Ministry of Fisheries and Marine Resources		Namibia	264812910649	gsitengu@gmail.com
241	Miss	Connie	Situmbeko	Tourism Officer	Ministry of Environment and Tourism		Namibia	264812713400	connkys@yahoo.com
242	Miss	Diane	Skinner	Rapporteur	KAZA		Botswana	263777223471	skinner.diane@gmail.com
243	Mr	Nick	Smart	Director	PMTc		Zambia	27832296314	nick.smart@ecorys.com
244	Mr	Monametsi	Sokwe	CEO	Ngamiland Council of NGOs		Botswana	26772304794	sokwe@ncongo.info
245	Dr	Anna	Songhurst	Director	Ecoexist		Botswana	26773149517	anna.songhurst@hotmail.com
246	Mr	Alan	Sparrow	Technical Advisor	Simalaha Community Wildlife Conservancy		Zambia	260976207138	sparrow.alan@gmail.com
247	Miss	Lisa	Steel	Senior Director, Wildlife Conservation	WWF US		Namibia	2026298200	lisa.steel@wwfus.org
248	Dr	Greg	Stuart-Hill	Conservation Director	WWF Namibia		Namibia	264 61239945	gstuart@wwf.na
249	Mr	Stanley	Syachulubwi	Induna	Mukuni Traditonal Authority		Zambia	260 979493442	none
250	Dr	Cyril	Taolo	Deputy Director	Department of Wildlife and National Parks		Botswana	26771744055	ctaolo.gov.bw
251	Mr	Sifelan	Tarwirei	Head of Protocol	Ministry of Foreign Affairs		Zimbabwe	263733203645	sifelan.tar@gmail.com
252	Dr	Russell	Taylor	Transboundary Conservation Advisor	WWF Namibia		Namibia	+264 816916895	rtaylor@wwf.na
253	Mr	Rufino	Tekassala	Secretary to the Ambassador	Angola Embassy in Botswana		Angola	26775009442	finosala@gmail.com
254	Mr	Anthony	Tema	Biologist	Forestry		Botswana	267 71610488	antema@gov.bw
255	Chief	Kumanina Joseph	Tembwe	Chief	Traditional Authority		Namibia	260813013217	None
256	Mr	Victor	Tengende	Chauffeur	Angola Embassy to Zimbabwe		Zimbabwe	263772947585	vtengende@gmail.com
257	Miss	Sikululekile	Thabethe	Deputy Director	Rural Development		Zimbabwe	2630772971397	thabethesiku@gmail.com
258	Mr	Piet	Theron	International Coordinator	GLTFCA		South Africa	27824686488	ptheron@ppf.org.za
259	Dr	Gavin	Thomson	Director	TAD Scientific and AHEAD		South Africa	27129932779	gavin@tadscientific.co.za
260	Miss	Shareen	Thude	Marketing Technical Advisor, KAZA Secretariat	PMTc		Namibia	264811240982	shareen.thude@gmail.com
261	Mr	Denis	Tweddle	Project Coordinator	Namibia Nature Foundation		Namibia	264814673842	d.tweddle@saiab.ac.za

262	Mr	Kenneth	Uiseb	Deputy Director	Ministry of Environment and Tourism		Namibia	264811297292	kenneth.uisieb@met.gov.na
263	Dr	Unesu	Ushewokunze-Obatolu	Principal Director	Department of Livestock and Veterinary Services		Zimbabwe	263772219763	newazvo@hotmail.com
264	Ambassador	Pedro Hendrik	Vaal Neto	Ambassador	Angola Embassy to Zimbabwe		Zimbabwe	263777276311	didierdchamp@yahoo.com.br
265	Prof	Willem	van Riet	Chairman / CEO	Transboundary Conservation Foundation		South Africa	27828264914	prof@transbcafrica.com
266	Mr	Arrie	van Wyk	Project Manager	Peace Parks Foundation		South Africa	27824477036	avanwyk@ppf.org.za
267	Mrs	Lydia	von Krosigk	Project Manager	KfW		Namibia	264811486429	lydia.von-krosigk@kfw.de
268	Mr	Roland	Vorwerk	Marketing Manager	Boundless Southern Africa		South Africa	27824661251	rvorwerk@environment.gov.za
269	Mrs	Caroline	Washaya-Moyo	Public Relations Manager	Zimbabwe Parks and Wildlife Management Authority		Zimbabwe	263772433901	cwashaya@zimparcs.co.zw
270	Mr	Chris	Weaver	Managing Director	WWF Namibia		Namibia	264812597420	cweaver@wwf.na
271	Mr	Reinhard	Woytek	Programme Director	GIZ		Botswana	26775195968	reinhard.woytek@giz.de
272	Mrs	Reamogetse	Yakenge	Chairperson	Tawana Land Board		Botswana	26775112267	reayaks@yahoo.com
273	Dr	Kim	Young	Director - Cheetah Programme	Panthera		Zambia	260974336016	kyoung-overton@panthera.org
274	Miss	Valentina	Zeisler	Vice President - Hospitality and Tourism	DEG		Germany	4491737279902	valentina.zeisler@deginvest.de
275	Mrs	Sophie	Zirebwa	Executive Director	Zimbabwe Tourism Authority		Zimbabwe	263712324047	sophie@ztazim.co.zw
276	Mr	Geofrey	Zulu	Head, Information Technology	Immigration		Zambia	26097828455	geofrey.bwazu5@gmail.com
277	Mr	Paul	Zyambo	Director	National Parks and Wildlife		Zambia	260978290175	paulzya@yahoo.com

ANNEX 2 – Symposium Agenda

STATE OF KAZA SYMPOSIUM 2016

WHERE HAVE WE COME FROM, WHERE ARE WE NOW, AND WHERE ARE WE GOING?

VICTORIA FALLS SAFARI LODGE, VICTORIA FALLS, ZIMBABWE

31 OCT – 2 NOV 2016

PROGRAMME AGENDA

Arrival Day – 30 October 2016		
14:00	Registration	
Day One – 31 October 2016		
TIME	SESSION/ACTIVITY/PRESENTATION TITLE	
07:30	Registration	
	OFFICIAL OPENING CEREMONY	MC: Permanent Secretary, Ministry of Environment, Water & Climate, Zimbabwe
08:25	Seating of delegates	
08:35	Arrival & seating of dignitaries	
08:45	Cultural performances	Zimbabwe
09:00	Welcoming Remarks	Mayor, Victoria Falls
09:05	Remarks	Traditional Leader, Zimbabwe
09:10	Remarks	Hon. Minister of State for Provincial Affairs, Zimbabwe
09:15	Remarks	Hon. Minister of Environment, Water & Climate, Zimbabwe
09:25	Official Opening	Hon. Minister of Hotels & Tourism, Angola
09:35	Remarks	Hon. Minister of Environment, Natural Resources, Conservation & Tourism, Botswana
09:45	Remarks	Hon. Minister of Environment & Tourism, Namibia
09:55	Remarks	Hon. Minister Tourism & Arts, Zambia
10:05	Signing & Launch of the Hosting Agreement	Hon. Minister of Environment, Natural Resources, Conservation & Tourism, Botswana & Executive Director, KAZA Secretariat
10:15	GROUP PHOTO & TEA BREAK	
	SYMPOSIUM OVERVIEW	Chair: Permanent Secretary, Ministry of Hotels & Tourism, Angola
10:45	Overview & Purpose of the Symposium: Setting a Transboundary Context	M. Mtsambiwa, KAZA Secretariat
10:55	The Importance of TFCA's as Vehicles for Regional Integration, Biodiversity Conservation & Poverty Reduction in the SADC Region	T. Gatos, SADC Secretariat
11:05	The KAZA TFCA: Where it all started	S. Modise, First Regional Coordinator of KAZA
11:15	The KAZA TFCA: The Dream, the People & the Resources	A. Nambota, MTA, Zambia & C. Sikopo, MET, Namibia
11:25	The KAZA TFCA: Partnerships & Investments	N. Meyer, KfW & P. Bewsher, PPF
	SESSION I (PLENARY): 10 Years on – Achievements & Challenges	Chair: Permanent Secretary, Ministry of Environment, Natural Resources, Conservation & Tourism, Botswana
11:35	Integrated Natural Resource Management & Land Use Planning	KAZA Conservation Working Group
13:00	LUNCH	
14:00	Tourism Development	KAZA Tourism & Communications Working Group
15:00	Community Development & Alternative Livelihoods	KAZA Community Working Group
16:00	TEA BREAK & POSTER SESSION	
16:30	Panel Discussion – Lessons Learned	Moderator: M. Flyman, DWNP, Botswana
17:30	ADJOURN	
19:00	BUSH DINNER – ALL DELEGATES	

Day Two – 1 November 2016						
	PLENARY SESSION	Chair: Executive Director, KAZA TFCA Secretariat				
08:00	Keynote: The Role of Traditional Leadership in KAZA	Senior Chief Mukuni, Zambia				
SESSION II: Benefits & Ownership – Institutional, Governance & Policy Change in Natural Resource Stewardship in KAZA	Chair: Permanent Secretary, Ministry of Tourism & Arts, Zambia	SESSION III: Maintaining & Restoring Ecosystem Integrity in the Face of Development		Chair: Permanent Secretary, Ministry of Environment, Water & Climate, Zimbabwe		
09:00	Benefits & Ownership – Institutional, Governance & Policy Status of Natural Resource Stewardship in KAZA	P. Mupeta-Muyamwa, TNC, et al.		09:00	Maintaining & Restoring Ecosystem Integrity in the Face of Development	D. Cumming, University of Cape Town
09:15	The Role of Local Landscape Conservation Areas and TBNRM Fora in KAZA TFCA: Giving Communities a Stronger Voice	J. N. lipinge, MET, Namibia & J. Kamwi, IRDNC, Namibia		09:15	Connectivity, Corridors and Wildlife Dispersal Areas	R. Naidoo, WWF-US & P. Bewsher, PPF
09:30	Taking Ownership over Natural Resources: The Case of the Simalaha Community Conservancy in Zambia	Induna Anasambala, Simalaha Community Conservancy & A. Sparrow		09:30	Participatory Land Use Planning in KAZA: the Greater Kafue Ecosystem	C. Simukonda, MTA, Zambia, et al.
09:45	Facilitating Policy Harmonisation & Governance of Shared Water Resources	E. Chonguica, OKACOM Secretariat et al.		09:45	Land Use Planning at the Community – Elephant Interface	A. Songhurst, Ecoexist, Botswana, et al.
10:00	Discussion	10:00		Discussion		
10:30	TEA BREAK & POSTER SESSION					
11:00	Ensuring Greater Benefits to Host Communities: Addressing Leakage from the Tourism Industry	J. Mbaiwa, Okavango Research Institute, Botswana		11:00	Demining: Realising Angola's Dream for KAZA	Angola
11:15	Community Participation in Identification, Securing and Institutionalising Corridors at a Micro level: A case of the Zambezi Region, Namibia	E. Mwilima, MET, Namibia, et al.		11:15	Consumptive Resource Uses & Crop Agriculture in KAZA: Addressing Inter-sectoral Land Use Conflicts at National & Regional Levels	P. Lindeque, CRIDF & B. Mead, AGRO ProVision
11:30	Tourism Joint Venture Models in Communal Areas of KAZA	R. Diggle, WWF-Namibia, et al.		11:30	Monitoring Fire Frequency in the KAZA TFCA using Remotely Sensed Data: A Case Study of Zimbabwean Component	G. Mtare, KAZA TFCA Secretariat & H. Ndaimani, University of Zimbabwe
11:45	Conservation Agriculture Contributing to Food Security in the Context of Biodiversity Conservation: Case Studies from KAZA	N. Nyambe, WWF-Zambia, et al.		11:45	Managing a Transboundary World Heritage Site in the KAZA TFCA: The Case of the Victoria Falls World Heritage Site	M. Hamusonde, National Heritage Conservation Commission, Zambia
12:00	Discussion	12:00		Discussion		
12:30	LUNCH					
SESSION IV: Landscape Level Conservation – Myth or Reality?	Chair: S. Osofsky, AHEAD Programme, Cornell University	SESSION V: Converting Natural Resources from Liabilities to Assets		Chair: Permanent Secretary, Ministry of Environment & Tourism, Namibia		
13:30	Landscape level conservation – Myth or Reality?	P. Theron, IUCN Transboundary Specialist Group & International Coordinator, GLTFCA		13:30	Converting Natural Resources from Liabilities to Assets – A Case of “Rich man, poor man, beggar man, thief”	M. Murphree, North West University, South Africa
13:45	Status of KAZA's Elephants & Implications for Conservation at a Landscape Scale	R.D. Taylor, IUCN SSC AfESG		13:45	Complementary Benefits of Tourism and Hunting to Communal Conservancies in Namibia	C. Weaver, WWF-Namibia, et al.
14:00	Securing Habitat Networks for KAZA's Large Carnivores	P. Funston, Panthera, et al. on behalf of the KAZA Carnivore Conservation Coalition Working Group		14:00	Assessment of the Human Wildlife Conflict Mitigation Measures being Implemented by the KAZA TFCA Partner Countries	F.V. Osborn et al. on behalf of KAZA Secretariat

14:15	Discussion	14:15		Discussion		
14:45	TEA BREAK & POSTER SESSION					
15:30	Phytochorology, Connectivity and Resilience within the KAZA TFCA: The Cautionary Case of the Kalahari System	J. Perkins, University of Botswana & R. Naidoo, WWF-US		15:30	Offsetting the Costs of Living with Wildlife: Payment for Ecosystem Services	G. Stuart-Hill, WWF-Namibia, et al.
15:45	The Changing Landscape of Livestock Disease Control in the KAZA TFCA	Y. Sinkala, Department of Veterinary Services, MFL, Zambia		15:45	Managing Shared Fish Resources in KAZA	D. Tweddle, NNF on behalf of Fisheries Sub-Working Group, KAZA Conservation Working Group
16:00	Cattle and Wildlife: The Case for 'Win-Win' Outcomes for Rural Communities	D. Cumming, University of Cape Town		16:00	Banking on the Future: The HSBC Case Study	I. Musona, WWF-Zimbabwe, et al.
16:15	Official OIE Code Change Creates New Opportunities for Optimizing Livelihoods from Livestock and Wildlife Conservation in the KAZA TFCA.	G. Thomson & M.L. Penrith, TAD Scientific, South Africa		16:15	Reversing the Cost-benefit Imbalance for Communities Sharing Space with Elephants: Building an Elephant Economy	G. McCulloch, Ecoexist, Botswana, et al.
16:30	Discussion	16:30		Discussion		
	PLENARY SESSION	Moderator: N. Nyambe, WWF-Zambia				
18:00	Panel Discussion: Whose "Elephant" is it Anyway? Overcoming Challenges in Policy Harmonisation & Management of Shared Natural Resources					
19:00	ADJOURN FOR BOMA DINNER – ALL DELEGATES					

Day Three – 2 November 2016									
	PLENARY SESSION	Moderator: B. Jones							
08:00	Panel Discussion: KAZA's Communities – From Beneficiaries to Partners								
09:30	TEA BREAK & POSTER SESSION								
SESSION VI: Natural Resource Stewardship, Strong Protected Areas & the Reality of the Poaching Crisis	Chair: P. Bewsher, Peace Parks Foundation	SESSION VII: Understanding Baselines, Measuring Impacts & the Realities of Data Management in the Context of TFCA's	Chair: C. Mentzel, IUCN		SESSION VIII: Planning for Sustainable Tourism Development	Chair: D. Glynn, Africa Albida			
10:00	Natural Resource Stewardship, Strong Protected Areas and the Reality of the Poaching Crisis	R.D. Taylor, WWF-Namibia	10:00		Understanding Baselines, Measuring Impacts & the Realities of Data Management in the Context of TFCA's	C. Mentzel, IUCN, South Africa	10:00	Tourism in the Context of KAZA	D. Glynn, Africa Albida Tourism, Zimbabwe
10:15	Regional Responses to Curb Poaching	D. Kahatano, SADC Secretariat	10:15		The Socio-Economic Baseline Survey for KAZA TFCA	M.F. Dipotso, KAZA Secretariat	10:25	DEG: We Finance Opportunities. KAZA – Private Sector Lodges Concepts	V. Zeisler, DEG Hospitality & Tourism, Germany
10:30	KAZA's Regional Cooperation in Combating Illegal Wildlife Trade and Poaching	R. Lisboa, MITUR, Angola	10:30		Existing and Developing Data Management and Data Capture Tools for KAZA	C. Beech, PPF, et al.			
10:45	Discussion	10:45	Discussion		10:40	Discussion			

11:15	Community Responses to the Poaching Crisis – the Case of the Zambezi Region, Namibia	M. Saisai, MET, Namibia, et al.	11:15		KAZA Land Cover Mapping: Trends, Application & Use	A. C. Shapiro, WWF-Germany, et al.	11:10	Facilitating the Easy Movement of Tourists and the Case of the KAZA Uni-Visa	C. Whiteson & T. Mgugu, Depts. of Immigration, Zambia & Zimbabwe
11:30	Joint Law Enforcement in the Kwando WDA	M. Saisai, MET, Namibia, et al.	11:30		A Practical Tool for Tourism:The KAZA Tourism Grid	A. C. Shapiro, WWF-Germany, et al.	11:30	Developing and Marketing the KAZA Brand	F. Chaila, Zambia Tourism Board & S.Thude, KAZA Secretariat
11:45	Wildlife Trade – An Overview of Key Issues & Dynamics with a Focus on Timber Trade	M. Burgener, TRAFFIC, South Africa	11:45		Collaborating for Conservation: The Case of KAZA Carnivore Conservation Coalition	K.Young, Panthera, et al. on behalf of KAZA Carnivore Conservation Coalition Working Group			
12:00	Discussion	12:00	Discussion		12:00	Discussion			
12:30	LUNCH								
SESSION IX (PLENARY)									
13:30	Where have we come from, where are we now & where are we going? Summary, Discussion and Recommendations	KAZA Secretariat							
15:15	Closing Remarks	Host Country							
15:30	TEA BREAK								
16:00	Excursions to various project sites								

ANNEX 3 – Speech Transcripts

Welcoming remarks, by His Worship, the Mayor of Victoria Falls: KAZA Symposium, 31 October 2016

Good morning ladies and gentlemen.

It is with great privilege that I stand before you all this morning to welcome you to Victoria Falls and in particular to the KAZA Symposium. Welcome to Victoria Falls, home to one of the seven natural wonders of the world, I hope you travelled well and are enjoying your stay in this beautiful town. We are honoured to host this event in our town, an occasion whose discussions and dialogue will positively impact on our tourist town and the wildlife living here.

This conference is a special occasion and platform not just for Victoria Falls and Zimbabwe but also for our continent as a whole because it is in these areas that wildlife calls home therefore it is our task to ensure that wildlife is conserved. Kavango Zambezi Transfrontier Conservation Area (KAZA TFCA) is the largest transfrontier conservation area in the world. The KAZA MOU was signed in December 2006 here in Victoria Falls. This year marks its 10th year in existence hence we need to celebrate that and the achievements it has made which have been significant as the Transfrontier Conservation Areas (TFCAs) have won recognition and admiration in conservation and tourism fraternities because of their diligence and dedication to the work they do. A general increasing trend on international arrivals to KAZA TFCA has been witnessed for a period spanning more than 2 decades (since 1995) and this is largely due to the 3 World Heritage Sites such as our spectacular Victoria Falls, Okavango Delta and Tsodilo Hills.

TFCAs enable wildlife to seasonally move and make better use of diverse habitats crossing borders into other countries.

Ladies and gentlemen, there has been significant progress with regards to certain issues, whereas in other instances there is need for remedial action. Various landscapes presents a major challenge as adjacent often has conflicting and incompatible uses. The most common threats to livelihood assets in KAZA TFCA are human wildlife conflict, human health, animal health, floods, droughts as well as variable rainfall.

I believe this symposium provides us with the platform to engage, collaborate and network with KAZA stakeholders from all five PCs namely Angola, Botswana, Namibia, Zambia and Zimbabwe.

In conclusion, I want to urge you to come up with initiatives and innovations that would create coexistence between humans and wildlife.

Thank you.

Welcome remarks by the Minister of Environment, Water and Climate, Honourable O.C.Z. Muchinguri-Kashiri, State of the KAZA TFCA Report Symposium, 31 October 2016

Director of Ceremonies

Minister of State for Provincial Affairs, Matabeleland North Province, Zimbabwe, Honourable Cain Mathema (MP)

Minister of Hotels and Tourism, Angola, Honourable Paulino Batista

Minister of Environment, Natural Resources Conservation and Tourism, Botswana, Honourable Tshekedi Khama

His Worship, the Mayor of Victoria Falls Town, Councillor Mpofu

Permanent Secretaries of the KAZA TFCA Member States
Representative of President of the Chiefs' Council Zimbabwe, Chief Shana
Traditional Leaders from the KAZA TFCA PCs
Representatives of Cooperating Partners
Representatives of the Business Community
Members of the academia
Representatives of the Media
Ladies and Gentlemen

Honourable Ministers, esteemed delegates, ladies and gentlemen from all the KAZA TFCA PCs, I would like to welcome you all to the Symposium, to Victoria Falls town and holiday resort. I invite participants to take some time to explore the Victoria Falls and Mosi-oa-Tunya from both sides of the Zambezi River, partake in a truly majestic experience sampling the breath taking Transboundary World Heritage site which is one of KAZA TFCA's jewels.

It gives me great pleasure and honour to be part of this auspicious gathering at which we are taking stock of our collective achievements and shared challenges in the planning, development and management of KAZA TFCA over the past 10 years.

Ladies and gentlemen, as we take stock of what the initiative was meant to deliver, we should do so objectively through noting our successes, and also acknowledging our shortcomings.

These experiences should guide us to chart a clear roadmap on how the KAZA TFCA programme should be realigned in order to address the practical issues confronting our stakeholders, especially our local communities.

This review should keep in mind that the KAZA TFCA vision, which is "to be a world-class Transfrontier conservation area and tourism destination in the Okavango and Zambezi River basin regions of Angola, Botswana, Namibia, Zambia and Zimbabwe" as well as the mission which is "to sustainably manage the KAZA TFCA ecosystem, its heritage and cultural resources based on the best conservation and tourism models for the socio-economic well-being of the communities and other stakeholders in and around the eco-region through harmonisation of policies, strategies and practices."

The Symposium is a first of its kind in the SADCTFCA Programme in that stakeholders from across the board, in the five KAZA TFCA PCs, have come together to celebrate the initiative, 10 years after the memorandum of understanding (MOU) was signed by Ministers on 7 December 2006 and five Heads of State signed the KAZA TFCA Treaty on 17 August 2011.

Ultimately, the Symposium will also serve to facilitate the collection inputs to be used in formulating the State of KAZA TFCA Report. It is, therefore, critical that the presentations which will be made throughout this three-day event, be as objective in terms of capturing the issues involved and as representative as the situation permits, to reflect the diversity of approaches across the five PCs and be as relevant to the KAZA TFCA Landscape setting in addressing our various needs. It is critical to interrogate our challenges and come up with proposals and recommendations, which address the socio-economic development needs of the KAZA TFCA.

The regional TFCA programme offers the SADC Member States and TFCA PCs an opportunity to enhance transboundary collaboration in Natural Resources and Cultural Heritage Conservation, leveraging on business opportunities in joint management and protection of migratory species with emphasis on large mammals such as the elephant, buffalo, rhino and lion. This Symposium will be a platform for sharing experiences on how sound TFCA programme planning an implementation and development has promoted rural development in those historically marginalised community areas where social capital and talent spanning across international borders can be harnessed to convert key biological and environmental resources into invaluable assets.

The role of rural communities in the KAZA TFCA Programme is a key factor in the management of natural resources, especially considering the vast base of natural assets and rich cultural resources that local communities preside over and present in their areas. Our wildlife heritage must always play a fundamental role in overall development of our communities and poverty alleviation. The survival of our wildlife resources will obviously depend on their relationship with the people and our desire is to see wildlife conservation paying for itself in a sustainable manner.

The TFCA Programme is a vehicle through which local community participation in the regional conservation effort can be enhanced at a landscape management level. The SADC TFCA Network had a strong community representation at CITES CoP17 from various CBNRM models and TFCAS in the region. SADC's successful collective effort and CITES' adoption of our proposal to establish a Rural Communities Committee to spearhead our philosophy of sustainable utilisation of natural resources was a milestone achievement at CITES CoP17.

The KAZA TFCA Symposium is key in addressing the plundering of our shared natural resources, trafficking of animal trophies and plant products to other parts of the globe and the relevant players are expected to make science-based recommendations on the best practices to adopt.

Living with wildlife poses hardships for many rural communities in Africa. In many areas within southern Africa, and Zimbabwe in particular, wildlife kills human beings and livestock every year leading to serious conflicts with local communities. In Zimbabwe, from January 2016 to dates, a total of 19 people were killed and 24 people were injured by wildlife. In addition, 81 cattle, 11 donkeys and 105 goats were also killed by predators.

TFCAs have emerged as a living laboratory in which HWC as a problem is being converted into an opportunity to create assets and capital to generate business and facilitate benefit sharing. The KAZA TFCA Symposium is also expected to help in articulating this important role towards addressing the limited opportunities around socio-economic development and livelihood strategies to promote growth of rural economies.

The KAZA TFCA programme is also a vehicle to accelerate the attainment of the broader SADC vision of regional integration and assisting in implementing provisions of a number of key SADC Protocols, including tourism, intra-regional and inter-regional trade to promote sustainable economic development. The Symposium should create a platform to assess progress through pilots such as the KAZA UNIVISA initiative.

The TFCA Programme also helps SADC member States and TFCA PCs to address challenges under the United Nations Sustainable Development Goals such as reduction of extreme poverty, contribution towards the ensuring of food security as well as supporting the building of peace and establishment of justice and strengthening of institutions.

Distinguished delegates, the Symposium is a suitable tool to evaluate how far we have gone and how well we have fared in implementing the KAZA Treaty.

In conclusion, ladies and gentlemen, the Symposium is expected to highlight gaps, reveal any weaknesses to allow us to formulate more informed ways of addressing issues, identifying and adapting best practices for improvement in planning and executing projects which contribute to the KAZA TFCA Programme. Above all, the Symposium should help the PCs in prioritising projects which form the foundation of the implementation phase of the Master Integrated Development Plan which was approved by the KAZA TFCA Ministers at our meeting in Kasane, Botswana, in June 2015.

I thank you all.

Speech of His Excellency, Minister of Hotels and Tourism of Angola, Dr Paulino Domingos Baptista, KAZA Symposium, 31 October 2016

Honourables,
Minister of Environment, Water and Climate of the Republic of Zimbabwe;
Minister of Environment, Wildlife and Tourism of the Republic of Botswana;
Minister of Environment and Tourism of the Republic of Namibia;
Minister of Tourism and Arts of the Republic of Zambia;
Members of the diplomatic corps present;
Honourable representatives of traditional authorities;
Honourable representatives of our cooperation partners;
Dear Guests;
Ladies and Gentlemen.

I would like first of all to greet the government and brotherly people of the Republic of Zimbabwe and express my deep gratitude for the warm welcome and hospitality we have been getting since our arrival in the tourist town of Victoria Falls.

In fact, here in Zimbabwe we feel at home, because we have a long relation of friendship and cooperation, since the time of colonial war when we closed ranks for liberation of our people from oppressive regimes. We were together in difficult times and we must stay together in times of peace to promote the common welfare of our people.

That why focused on the spirit of regional integration and cooperation and aware of the great faunal and tourism potential of the region, the Heads of State of the five member countries of SADC, Angola, Botswana, Namibia, Zambia and Zimbabwe decided to create the KAZA TFCA representing the world's largest conservation area.

The greatness of KAZA TFCA lies not only in its size, but also for housing in its vast territory a huge variety of fauna and flora, and to highlight here the largest population of elephants in the world. Therefore, the KAZA is widely considered the sanctuary of elephants in the world. No less important are also the world famous tourism attractions as the Victoria Falls and the Okavango Delta, consider World Heritage sites.

The creation of the KAZA TFCA was not an easy task. It was necessary to reconcile the will and view of five member countries with different realities on socio-economic and legal systems. However, the spirit of unity, brotherhood and the search for the common welfare of our region has spoken louder. So it was with an unrestrained joy and sense of accomplishment, that the Ministry of Environment, Tourism and Natural Resources of Angola, Botswana, Namibia, Zambia and Zimbabwe signed, coincidentally here in Victoria Falls, on 7 December 2006, the MOU for the KAZA TFCA.

The MOU represents an important milestone of this regional initiative and created a solid basis for signing the KAZA Treaty by the Heads of State of the five countries on 18 August 2011, in Luanda, during a SADC regional meeting. In this time the vision of the Heads of State regarding KAZA has been successfully shared: "Establishing a Transfrontier Conservation Area and world-class tourist destination in the region of the river basins of the Okavango and Zambezi in the context of sustainable development."

Excellencies, having had 10 years of this regional initiative, it seems to be the opportune time for the reporting on the state of KAZA, which aims to highlight the major gains achieved, challenges and the way forward for the full realization of the Treaty's objectives and the vision of the KAZA TFCA.

It seems fair to me first to highlight the political commitment of honourable Heads of State of the five member countries related to KAZA, in the front line to create the TFCA, have never spared any efforts

to support the implementation of this programme. Our presence here to celebrate the 10 years of KAZA becomes only possible because of the unquestionable support of these honourable Heads of State and I ask those present to share their appreciation.

Ten years of KAZA were characterized by great achievements. Here we can highlight the following:

- creation of the Regional Secretariat, based in Kasane, Botswana;
- signature of the hosting agreement with Botswana;
- ratification of the Treaty and deposit of instruments of ratification;
- development of strategies for the safety and conservation of wildlife;
- implementation of the annual operational plans of national components;
- projecting aerial survey of elephants and research on large carnivores; and
- development of the KAZA Master Integrated Development Plan.

Despite progress in the implementation of KAZA, we are also aware that not everything was done according to plan and we have faced several constraints, such as:

- delay in implementing the KAZA UNIVISA, that delays the development of tourism;
- lack of community involvement and private sector participation in the KAZA programmes;
- still insignificant number of implemented cross-border projects;
- lack of information sharing and joint operations to combat poaching.

Despite the difficulties and constraints faced, we believe that the balance is positive. Under the aegis of KAZA were executed several programmes and projects whose impact is already visible within the region. KAZA has become a worldwide reference and a clear example of regional integration and cooperation. It has also been an example for other cross-border conservation areas within SADC. We must therefore continue on the same path of unity and cooperation, involving for this purpose all relevant actors, thus allowing the full achievement of the KAZA objectives.

I take this opportunity to express our gratitude to our cooperation partners with particular emphasis on the Kiwi and the PPF for the permanent technical and financial support they provide to KAZA. Thanks to your support it has been possible to implement the various projects of regional and national character. We expect to continue benefitting from your support especially at this stage where our attention is focused on cross-border projects and wildlife dispersal corridors.

Finally, I also want to express my appreciation to the KAZA officials, traditional authorities and all other actors who contribute directly or indirectly to make the KAZA TFCA a great pride for the region.

Welcome honourable delegates of member states. Welcome KAZA and thank you for your attention.

Opening remarks, Honourable Minister of Environment, Natural Resources, Conservation and Tourism, Tshekedi Khama, KAZA Symposium, 31 October 2016

[All protocols observed]

I have been asked to speak on various issues, one of which is the management of natural resources, illegal wildlife trade and poaching. I am particularly passionate about these subjects, so you will excuse me if my choice of words deliver exactly the purpose of these comments. One thing we have to realize is that when we talk about wildlife, we as humans should not create artificial borders through ecosystems and expect animals to respect that. Not only are we challenged with that, we are challenged with things such as climate change. Wildlife should not be the sacrificial lamb of this dynamic between these humans, livestock and wildlife. We must remember that climate change is none other than what humans have caused. We are challenged to find solutions because of greed, and culture, or unsustainable habits. Those decisions lie with us to change.

Ladies and gentlemen, one of the things we have undertaken in Botswana is human-wildlife coexistence. It is a challenge, and sometimes when you are talking to communities about learning to live with wildlife, it is difficult for them to understand. Let me explain to you why it is worthy of that approach. If we don't have communities on side we will not control poaching, greed or corruption. These three things cost our countries a huge amount of money. We can pretend that they don't exist in our countries. If they were not there, we would not be here at this conference. When we are going to be successful with looking after the species that we have, it is because we have the communities on board. We are working tirelessly to engage our communities in Botswana, through our CBNRM programme, whereby communities derive an income from tourism.

Botswana hosts between 170,000 – 210,000 elephants, the highest in any country in Africa. You could say we are victims of our own success and this is why KAZA has to work. For KAZA to work, a BREXIT situation should not be an option for any of us. For Botswana, most of our resources for anti-poaching have come within the country, but it is also championed by our President who is an avid conservationist and is aware of the value of natural resources. He provides leadership, commitment and guidance. We have nothing better to offer you than the examples we have learnt. We talk about conservation and preservation equally.

In developing the economy, and sharing amongst us all, to have a leader that is able to create that balance is a mammoth task. We recognize those efforts by our leadership. The good news is that we are being successful. We have intensified our borehole drilling programme in the country to feed and give water to the species that we have.

Illegal wildlife trade is something we have not combatted in our respective countries. The truth of the matter is poaching in Africa is done by Africans. Are we going to allow ourselves to be exploited by those who don't live on this continent? We have come from that many years ago and the onus is on us to make sure that doesn't happen again. We lose our natural resources to people who are not even on this continent, and yet we sit here and we hold conferences to discuss what we are going to do next. The time for talking has come to an end, it is time to call for action. Africa should never be as it was in the past, anybody else's chessboard where we are moved around at the will of people not on this continent. If we don't take control of our natural resources on this continent, we will have a huge deficit in these resources that we cannot replace.

In conclusion, I have not come here today to say all the right things that sound good. I have come here to interact with people who have a similar concern as I do, and as a country as we do. I had the opportunity to go to CITES, and what I walked away with from CITES, Africa is going to continue to be somebody else's chessboard. We need to take control of our resources, destiny, and future. We might be hamstrung by resources, but we do have genuine friends who we can go to. For us to go and seek assistance, means that we have to be credible in that request, in the way in which we deliver, need to be sincere in what we are saying.

Ladies and gentlemen, Honourable Ministers, today is the 10 year KAZA anniversary, beginning of the natural resource for our children's children. We have, in Botswana, incorporated natural resources, minerals, livelihoods into special planning – calls for us to be collective and inform each other so that we are assured of a good level of livelihood going forward, so our natural resources remain in balance. One aspect is what it takes to destabilize that equation. Corruption and greed are critical to overcome. That is what the international world is judging us by. My country is available to share with you the lessons we have learnt in how we preserve and conserve our natural resources. We have made difficult decisions in banning our hunting, but it has been the right decision.

Thank you very much, and please let's make the right decision and do the right things.

Remarks by Colgar Sikopo, Director of Wildlife and National Parks, on behalf of Hon. Pohamba Shifeta, MP, Minister of Environment and Tourism, KAZA Symposium, 31 October 2016

Director of Ceremony
 Hon. Minister of State for Provisional Affairs, Zimbabwe
 Hon. Ministers responsible for Environment, Natural Resources, Hotels and Tourism, for the KAZA TFCA
 Your Worship the Mayor of Victoria Falls
 The Executive Secretary of SADC
 Your Excellencies Ambassadors and High Commissioners
 Distinguished Traditional Leaders
 Officials from the KAZA TFCA PCs
 KAZA TFCA Secretariat
 Distinguished Development Partners
 Representatives from NGOs and the Private Sector
 Members of the Media
 Ladies and gentlemen

I am to share with you briefly on issues of community participation and livelihood development. It is important to underline the fact that KAZA TFCA programmes are for the communities who are also represented here by traditional leaders from all five-PCs while the five ministers who are to ensure that community inspirations are met represent governments.

Community Based Natural Resource Management programme has proven again and again to be an important instrument for our respective Governments and countries to meet the goals with respect to conservation and sustainable development.

CBNRM is based on the understanding that if natural resources have sufficient value to rural communities, and allow for rights of use, benefit and management, then our environmental policies will create appropriate incentives for people to use natural resources in sustainable way. Through innovative legislation, rights have been devolved to rural communities, with particular regard to wildlife, water and forest resources.

It is our responsibility as PCs to ensure that the KAZA TFCA is developed as a sustainable conservation and tourism development programme from which our PCs and rural communities can derive equitable social and economic benefits while observing the principles of accountability, equitability, transparency and mutual respect, as stipulated in the KAZA TFCA Treaty.

The KAZA TFCA fosters trans-national collaboration and cooperation among PCs and rural communities in implementing ecosystems and cultural resource management. Harmonizing natural resources management approaches and tourism development across our international boundaries will enhance the ecosystem integrity and natural ecological processes.

It is therefore imperative that any programme to promote the conservation of biodiversity must have a positive impact on the standard of living of these rural communities and involves them. It is on the basis of the potential presented by the vast wildlife, tourism, and cultural resources in the region that our five PCs of Angola, Botswana, Namibia, Zambia and Zimbabwe believe we can derive equitable returns and significant socio-economic benefits provided we harmonize our conservation policies and practices and use our shared natural resources prudently.

We believe, natural resources are the main drivers of rural economic growth and development when their full potential is unlocked through modern, market-based conservation approaches. Natural resources form the basis of rural economies, because people in rural areas depend on natural resource use for their survival, be it wildlife management and tourism, plant use, fisheries, or a combination of these and other activities.

The sustainable use of soils and water, wild animals and plants is thus at the heart of community participation and livelihood development, because the wise, integrated use of these resources enables rural people to diversify their livelihoods and improve their socio-economic status while ensuring biodiversity conservation. Therefore, money invested in KAZA have a direct impact on the rural communities. We thank the development partners for their continued support to KAZA TFCA.

Through the active use of wildlife and other valuable resources, rural communities are able to gain new benefits from biodiversity, which lay largely untapped in the past. Uses such as tourism, conservation hunting, sport, fishing, craft production and the harvesting of indigenous plant products for niche markets have diversified rural economies. Community participation and management can further unlock the potential value of a wide range of natural resources to reduce poverty and create employment and wealth, while ensuring that resources are used sustainably.

The CBNRM programme started with a focus on wildlife, not because game is more important resource than plants, fish or other natural assets, but because wildlife had drastically declined in the past years in some countries, and because wildlife could produce tangible and competitive economic returns on investments. Its rehabilitation not only served a conservation objective, but presents many opportunities for rapidly unlocking potential benefits from biodiversity.

The KAZA TFCA is blessed with an abundance of unique plants and animals, wetland areas, beautiful natural landscapes and a diverse culture of people, which when combined has the potential to help conservation and ultimately carry significant economic rewards for the local community and our respective countries at large. Among others, KAZA TFCA is a host to the Victoria Falls one of the Seven Wonders of the World and the Okavango delta the Ramsar site. With these diverse resources, I have no doubt in my mind that through Community Based Natural Resource Management approach KAZA TFCA programmes will be successful.

As PCs we create collaborative activities and platforms, and exchange information and CBNRM practices, to learn from each other. Sound practice is needed for the sustainable use of our natural resources on economically beneficial basis. Planning, managing, monitoring and evaluation are thus core and key aspects of community participation in natural resource management.

Let me also remind you that the community participation and related programmes such as conservancies or game management areas, do not replace livestock or crops with wildlife and tourism. With this programme, wildlife and tourism simply become additional forms of land use alongside existing uses such as crops, livestock and other schemes.

Let me also acknowledge that despite all the successes of CBNRM, as KAZA TFCA, we recognize that living with wildlife often carries a cost. Increased wildlife populations and expanded ranges into communal land areas result in more frequent conflicts between people and animals, particularly elephants and predators, in many areas of the KAZA TFCA. This has resulted in livestock and crop losses across the country, and in some instances, loss of human lives.

However, innovative mechanisms are being put in place to reduce the level and impact of human wildlife conflict, to ensure that the benefits of conservation management far outweigh the costs, and to build on the significant successes already achieved.

As KAZA TFCA PCs, we should continue to commit ourselves to manage human wildlife conflict in a way that recognizes the rights and development needs of rural communities, recognises the need to promote biodiversity conservation, promotes self reliance and ensures that decision making is quick, efficient and based on the best available information.

We are to develop mechanisms and strategies as KAZA TFCA so that local communities participate and get

meaningful and tangible benefit from this TFCA.

I thank you all.

Opening remarks, for the Honourable Minister of Tourism and Arts of the Republic of Zambia, Mr Charles Banda on regional tourism development in the KAZA TFCA area, KAZA Symposium, 31 October 2016

Hon. Minister of Hotels and Tourism, Angola;
 Hon. Minister of Environment, Wildlife and Tourism, Botswana;
 Hon. Minister of Environment and Tourism, Namibia;
 Hon. Minister of Environment, Water and Climate, Zimbabwe;
 Hon. Minister of State for Provincial Affairs, Zimbabwe;
 Your Excellencies Ambassadors and High Commissioners here present;
 The Mayor of Victoria Falls Town;
 The Royal Highnesses, the Traditional Leaders In The KAZA TFCA;
 Technocrats in various economic and social sectors;
 The Community Representatives;
 Civil Society;
 The Cooperating Partners;
 The Media Houses Present;
 Distinguished Invited Guests;
 Ladies and Gentlemen

It is with great pleasure that I present remarks on regional tourism development in the Kavango Zambezi Transfrontier Conservation Area (KAZA TFCA); the child that was born in 2006 and now has turned 10 years. It remains with us to continue nurturing this child so that she grows into a responsible person who will bring joy and happiness to the KAZA family, the region and the world at large.

Ladies and gentlemen, tourism is well accepted as an important contributor to the economy and sustainable development at local, national and regional levels. Tourism is often advocated as a means for diversifying economic conditions in rural and regional areas by providing alternative sources of employment and income generation especially during periods of fluctuations and downturns in traditional industries such as agriculture, mining, forestry as well as depressed commodity prices and drought conditions. Furthermore, tourism can enhance regional development through public and private sector investment in new infrastructure and facilities.

Regional tourism development in the KAZA TFCA entails undertaking coordinated efforts toward tourism development, policy harmonisation, cross border tourism product development, tourism product packaging, marketing and KAZA TFCA branding, improvement of accessibility to the area and infrastructure development. PCs therefore, need to work together in order to develop the KAZA TFCA tourism sector.

Ladies and gentlemen, we fully realize that KAZA TFCA is an important vehicle which is expected to play a major role in spear-heading the region's economic development through tourism, particularly in the creation of jobs for the youth and the rural poor.

In order for tourism to positively contribute to the regional economy, tourism development requisites development such as infrastructure development should not be over-looked. Tourism development is highly dependent on infrastructure such as electricity, railways, roads, seaports, airports, irrigation, telecommunication, urban and rural water supply and sanitation, all of which already suffer from a substantial deficit from the past in terms of capacities as well as efficiencies in the delivery of critical infrastructure services.

The realisation by the PCs that tourism is a major contributor to economic growth, can only be achieved if

this infrastructure deficit can be overcome and adequate investment takes place to support higher growth and an improved quality of life for both urban and rural communities.

Invited guests, ladies and gentlemen, the potential for tourism development at a destination is determined by the existence of tourism requisites and other related infrastructure which influence tourist decisions to visit specific areas. It is important that coordinated planning and development that arise from the considerable overlap that exists among the resource requirements for agriculture, mining, manufacturing and those of tourism. The systematic development of tourism infrastructure is required for any location to function as a tourism destination.

The upgrading the airports in the KAZA landscape at Kasane in Botswana, Livingstone in Zambia and Victoria Falls in Zimbabwe to modern international levels to even accommodate the airbus is a step in the right direction for regional tourism.

Ladies and gentlemen, integrating KAZA TFCA tourism initiatives with the PCs' existing programmes and activities is paramount to keep the sector at national level balanced. Allow me to give an example using the Zambian situation. In an effort to develop the tourism sector, the government of the republic of Zambia came up with two main development circuits dubbed northern and southern tourism development circuits. Within these circuits, transfrontier programmes are an integral part in sustainably developing the circuits.

The development of national road infrastructure by the Zambian government and the law enforcement infrastructure with the support of cooperating partners demonstrates the prioritisation of tourism in the KAZA landscape. Furthermore, the launch of the KAZA UNIVISA pilot project between Zambia and Zimbabwe by the honourable ministers of home affairs and tourism from both Zambia and Zimbabwe at the Victoria Falls Bridge on 28th November 2014, is major milestone towards regional tourism development not only for the KAZA PCs but also for SADC member states and the region at large. I, therefore, implore all the KAZA PCs to embrace the roll out of the KAZA UNIVISA programme!!

Research findings on regional tourism development demonstrate that, regional destinations that have a strong level of support from their state or territory governments, well-established regional and/or local tourism organisations, supportive local governments, and local leaders that foster and implement a shared vision for sustainable tourism across government, businesses and community stakeholders are well-placed to innovate, compete and implement sustainable tourism best practice into the future.

Moreover, planning and implementing best practice for sustainable regional tourism destinations can contribute to regional economic development, conservation of natural and socio-cultural environments, community well-being, and exceptional visitor experiences.

Ladies and gentlemen, in support of the KAZA TFCA vision to establish a world-class TFCA and tourism destination, the tourism potential of the area should be unlocked in a sustainable manner. I would like to, therefore, conclude my remarks by bringing out best practices that have worked elsewhere in regional tourism development and advise that, if we are geared to develop a sustainable and responsive tourism sector for economic development in the TFCA, then we need to consider the following as a way forward:

1. Undertake sustainable destination planning and management which would entail pursuant of strategies and practices that facilitate balanced, sustainable, administrative and management of destination;
2. Undertake sustainable destination development which will pursue types, styles and levels of tourism that contribute to the social, cultural, political and environmental sustainability of places to live, work and visit; and
3. Undertake sustainable destination marketing that would promote tourism within and outside destinations to attract and influence appropriate visitors.

Invited guests, ladies and gentlemen, I will be failing in my duties if I end my remarks without thanking our cooperating partners for their unwavering support to the development of the KAZA TFCA and to the heads of state and leadership of the PCs for making the project a success. Ten years of learning lessons, ten years of beautiful neighbourliness and ten years of understanding what integration means in the regional development agenda.

It is my sincere hope that during this symposium, we will look at how tourism has performed, how we should promote further growth and how we should overcome apparent hurdles to tourism growth in KAZA TFCA.

I thank you!

Overview and purpose of the Symposium: Setting a Transboundary Context, Morris Mtsambiwa, KAZA Secretariat, KAZA Symposium, 31 October 2016

The KAZA TFCA landscape, by its mere size at about 520,000 square kilometres is one of the African landscapes that still hosts large herds of herbivores and many carnivores/predators, a sign of a landscape that remains remarkably intact. Across this vast landscape, rich diverse cultures have thrived for thousands of years. The two characteristics, of abundant wildlife and rich cultural heritage are recognized globally by the inscription of the three World Heritage sites within KAZA TFCA to include this iconic Victoria Falls locally known as Mosi-oa-Tunya, the smoke that thunders, and the seventh wonder of the world between Zambia and Zimbabwe; the Okavango Delta, which at 15,000 sq. km is the world's largest inland delta and Ramsar site in Botswana and the Tsodilo Hills representing the cradle of Sani Culture also in Botswana.

All of these attributes make the KAZA TFCA a rare and special place, a vibrant home to 2.5 million people and an ideal destination for millions of visitors from around the globe wishing to experience abundant wildlife and diverse cultures. It is an extraordinary landscape worthy of long-term stewardship for present and future generations as envisioned by the Heads of State and Governments of the five PCs, Angola, Botswana, Namibia, Zambia and Zimbabwe when on 18th August 2011 they signed a Treaty to establish this transboundary park. Prior to the signing of the Treaty, on the 7th December 2006, in this very town of Victoria Falls, the five governments had signed a Memorandum of Understanding to facilitate the negotiations to establish the KAZA TFCA. Through this MOU the PCs committed themselves to engage stakeholders in all stages or phases of planning, development and management of the KAZA TFCA so as to obtain the necessary support and social acceptance for the transfrontier conservation area, whose Vision is:

- To establish a world-class transfrontier conservation area and tourism destination in the Okavango and Zambezi River Basin regions of Angola, Botswana, Namibia, Zambia and Zimbabwe within the context of sustainable development.
- To achieve that world class status the KAKA TFCA mission is therefore:
- To sustainably manage the Kavango Zambezi ecosystem, its heritage and cultural resources based on best conservation and tourism models for the socio-economic wellbeing of the communities and other stakeholders in and around the echo-region through the harmonization of policies, strategies and practices.

To date, the KAZA PCs have exhibited great leadership and initiative in driving this complex and highly ambitious conservation and development programme. Indeed a sign of their commitment and determination to make this venture a success for the benefit of present and future generation in recognition of the fact that they need to treat the earth well as it was not given to them by their parents but loaned to them by their children.

The challenge going forward will therefore be to maintain this great leadership to continue to effectively develop and manage existing as well as potential relations with a diversity of stakeholders to realize the objectives of the KAZA TFCA.

We are therefore gathered here to celebrate this great leadership that has allowed the development of the KAZA TFCA in the last ten years following the signing of the MOU. As we will experience in the next few days, stakeholder after stakeholder, from villagers to community based organizations to public sector to private sector to cooperating partners to academia will share with us how they have worked with other stakeholders to develop the KAZA TFCA in the past decade.

The common currency in addressing issues spreading across a region as large and diverse as the KAZA TFCA is collaboration i.e., working across human-drawn artificial boundaries with people and organizations that have diverse interests and shared values for the well-being of the landscape they call home. An example of Leadership among people and organizations in the region willing to work together was exhibited by the recent meeting of Traditional Chiefs from four PCs who met in Livingstone, Zambia in September 2016. These leaders represent the key stakeholder that is, the most affected and with the highest impact or the greatest potential to make or break the KAZA initiative. Their total buy in is therefore very critical to the success of the KAZA TFCA since they will continue to be there long after all have left.

While there is no single model for collaboration on a large-scale successful models seem to share these key elements:

- Catalyst, in this case the need to jointly manage shared resources for sustainability;
- Leadership among people and organizations in the region willing to work together;
- Representations of affected interests i.e. stakeholder participation;
- Regional fit between the scale of the challenge and people's interest in engaging;
- Governance to provide decision-making and other support;
- Learning processes, both scientific and public;
- Strategic vision, expressing shared goals and aspirations;
- Implementation plan to move from vision to action;
- Outcomes, including agreements, policies and accomplishments; and
- Adaptation in response to monitoring and ongoing evaluation.

These key elements have been experienced in the KAZA TFCA in the last ten years since the signing of a Memorandum of Understanding on 7th December 2006 by Ministers responsible for the Environment and Tourism in this very town at Victoria Falls Hotel overlooking Mosi-oa-Tunya. Successes represent cases where these key elements have been or are in the process of being achieved and challenges represent cases where achievement has not yet been attained, calling for sustained efforts to finding lasting solutions to those challenges.

Thus, the three-day State of the KAZA TFCA Symposium ahead of us will tell the story of this shared landscape and highlight some of the challenges and opportunities facing its residents today and tomorrow. The call is to ride on the successes while learning from previous mistakes in overcoming outstanding challenges.

Specifically we can highlight the following areas as successes bearing in mind that wildlife which knows no boundaries constitute the catalyst for our desire to work together to jointly manage shared resources:

- a. Governance structure/arrangements to provide decision-making and other support to the day-to day KAZA development and management process have been put in place. Today we have a Ministerial Committee providing strategic leadership supported by a Committee of Senior Officials and a Joint Management Committee with a Secretariat provides a facilitating and coordination role working tirelessly with other stakeholders to plan and develop the KAZA TFCA. Working Groups are also in place to address specific issues such as conservation and security, tourism development and legal matters
- b. National Integrated Development Plans for each component of the KAZA TFCA were drawn up and

the Master Integrated Development Plan focusing on regional or cross border processes was approved in June 2016 and this provides the framework for the next stages in the planning and development of the KAZA TFCA. Identified within the MIDP are the major development needs to include, natural resource management, tourism development, infrastructure development, integrated land use planning, livelihoods enhancement and transfrontier political cooperation. These activities will be undertaken with full participation of stakeholders in six areas identified as cross border Wildlife Dispersal Areas to include the following: Kwando River, Zambezi Chobe, the Hwange-Kazuma-Chobe, the Hwange-Makgadikgadi-Nxai Pan, Zambezi-Mosi-oa-Tunya and the Khaudum-Ngamiland WDAs.

Other documents were also produced to guide relevant activities such as:

- KAZA TFCA Strategic Action Plan 2011-2016
- Stakeholder Engagement Strategy 2011
- KAZA TFCA Financial Sustainability 2013-2018
- KAZA TFCA Livelihoods Baseline Survey Report 2014
- KAZA TFCA Policy Harmonization Proposal
- Human Wildlife Mitigation Studies
- Communication and Advocacy

Again as we continue with our symposium we shall observe that there was intensive stakeholder participation in the preparation and production of these documents.

c. Provision of some of the infrastructure needs of the conservation agencies in the PCs to enhance capacity for management of the Parks estate including procurement of equipment such as vehicles, and boats to improve on deployment of staff during law enforcement activities. Examples like the building of a state of the art HQ at Sioma Ngwezi National Park in Zambia or the twelve staff houses at Pandamatenga as well as critical studies to provide infrastructure on how best to mitigate climate change are some of the infrastructural challenges addressed during the past ten years.

d. In terms of tourism development the development of a univisa to facilitate easy movement of tourists within the KAZA landscape is progressing following the successful completion of a pilot phase with Zambia and Zimbabwe. These two countries while continuing to address some of the challenges encountered during the pilot phase have gone ahead to invite the other PCs to join the univisa regime.

All these activities were made possible by the support received from our International Cooperating Partners chiefly the Government of the Republic of Germany through KfW, World Wildlife Fund (WWF), Peace Parks Foundation (PPF), and Climate Resilient Infrastructure Development Facility (CRIDF). We are grateful of the continued support we receive from our cooperation partners.

As alluded earlier on future development of the KAZA TFCA will be guided by the Master Integrated Management Development Plan focusing on activities related to natural resource management, tourism development, infrastructure development, integrated land use planning, livelihoods enhancement and transfrontier political cooperation in six wildlife dispersal areas. To demonstrate what needs to be done I will conclude my remarks using the example of Kwando Wildlife Dispersal Area in a short power point presentation.

The role of traditional authorities in TFCA Development by His Royal Highness Senior Chief Mukuni, KAZA Symposium, 1 November 2016

Hon. Minister of Hotels and Tourism, Angola
 Hon. Minister of Environment, Wildlife and Tourism, Botswana
 Hon. Minister of Environment and Tourism, Namibia
 Hon. Minister of Tourism and Arts, Zambia

Hon. Minister of Environment, Water and Climate, Zimbabwe
 Hon. Minister of State for Provincial Affairs, Zimbabwe
 Your Excellencies, Ambassadors and High Commissioners
 The cooperating partners
 The Mayor of Victoria Falls Town
 The Royal Highnesses, the Traditional leaders in the KAZA TFCA
 Technocrats in various economic and social sectors
 The community representatives
 Civil society
 The media houses here present
 Distinguished invited guests
 Ladies and gentlemen

First and foremost, allow me to express my profound gratitude for the honour bestowed on me to deliver a keynote speech at this joyous and historic occasion of the 2016 State of KAZA Symposium in this tourism town of Victoria Falls, Zimbabwe.

Secondly, allow me to express my sincere gratitude to the organisers of the Symposium as well as to the government and peoples of Zimbabwe for the excellent hospitality accorded to us. To you all, I say thank you very much indeed.

My appreciation also goes to the family of the five KAZA PCs and to all would be and current cooperating partners in the development KAZA TFCA without whom this dream would not be realised.

The involvement of Traditional Authorities vis-à-vis their communities in the KAZA TFCA has signalled a new era in wildlife management in this part of the world. It has brought a new dispensation to the conservation world namely the approach of an all-inclusive thorough consultative process of stakeholders. I am aware that each one of us community leaders here present today was engaged and involved, in one way or another in the national planning processes of the KAZA TFCA. For this I wish to commend the governments of five PCs for choosing to involve us as traditional authorities in the day-to-day management of our natural resources.

Distinguished guests, this is the first time that we have been invited as a collective grouping of traditional authorities, not confined to the sovereign boundaries of our individual countries, to come and discuss common challenges facing the communities that we represent. For this I salute you.

These challenges are numerous but include poverty, limited livelihood options, climate change, HWC, lack of employment and investment opportunities as well as limited control over our resources.

Ladies and gentlemen, a love for Africa's natural and cultural resources is the basis from which to develop a vibrant and flourishing economy, one that is based on wildlife, birdlife and untouched Africa. This God-Given gift is what we will be giving to the next generation, our children. We are merely looking after this gift for future generations.

As a people whose traditional culture and way of life revolves around sustainable use of natural resources, we simply have no choice but to safeguard it literally every single day.

Ladies and gentlemen, we as traditional authorities in the KAZA TFCA landscape, have long been advocating for a traditional leaders forum, a platform, where we, the Traditional Authorities of the KAZA TFCA, can discuss challenges, provide insight and solutions, as well as guide development that affects the communities whom we represent, in an excellent manner to align government programmes with the needs and expectation of men, women and children on the ground.

Distinguished guests, it is our sincere hope that this is but the beginning of a long working relationship. We wish to advise our governments, the KAZA Secretariat and structures that we, as Traditional Authorities will play an active role in crafting the solutions, implanting the programmes and monitoring the impact thereof.

As traditional authorities, we have advisors that fulfil key portfolios such as natural resource management, community development and the attraction of investment for tourism and infrastructure development. As such the indunas who advise us, need to be actively involved in the planning and implementation processes of KAZA TFCA.

Distinguished guests, may I conclude by stating that the challenges faced by the KAZA TFCA, often are the same challenges that we have faced over the past few centuries. The solutions exist, and we can assist. By bringing back the ability for the communities to manage their own wildlife resources and by bringing support from the KAZA TFCA PC governments for communities to once again be the custodians of their wildlife, the future of conservation has been placed in good hands.

Ladies and gentlemen, time for rhetoric is long gone!! Time for considering traditional authorities and local communities as mere beneficiaries is long gone! It is now time for us to be regarded as equal partners in conservation and development.

Our voice needs to be heard, and through this collective voice, it should be heard by our governments, as well as donors and investors.

Let our voice be clear! Let our voice resonate our ideas! Let our voice be heard! God press KAZA TFCA and its partners. Thank you.

Closing Remarks on the State of KAZA Symposium 2016, Joseph Shoko, Ministry of Environment, Water and Climate, Zimbabwe, KAZA Symposium, 2 November 2016

Traditional leadership who graced this Symposium, senior government officers here present, His Royal Highness, the Mayor of Victoria Falls, SADC Secretariat and the KAZA Secretariat, our conservation partners who are here with us today, esteemed delegates, all protocols observed.

Good afternoon to you all. I feel honoured and privileged to stand before such a diverse group of distinguished guests who have demonstrated the highest level of commitment and determination to ensure we attain the objectives of this Symposium which were to:

Celebrate KAZA's 10 years of existence and showcase its achievements;

- Demonstrate progress towards attainment of the objectives of KAZA as listed in the Treaty and its impact thus far;
- Highlight what is working well and why, and possibilities of replicating these successes;
- Highlight what is not working well and why, and possible remedial actions;
- Harness recommendations for future direction; and
- Provide a platform for engagement and collaboration for KAZA stakeholders.

I hope you all feel that we achieve all the Symposium objectives and even much more.

The KAZA TFCA represents a bold commitment on the part of the five countries, it is an ambitious, challenging and exciting initiative.

Some of the key messages from the Symposium include but are not limited to: increasing community engagement and scaling up benefits, strengthening transboundary collaboration in all facets of TFCA development, stakeholder participation and fostering strategic partnerships and understanding complexity and multidisciplinary nature of TFCA management.

It is refreshing to note that we now have a general appreciation of where we have come from as KAZA TFCA. Our successes are anchored on the political support we get from the governments of the five PCs. We need to build on that foundation already laid down for us and the strategic direction crystallized in our Integrated Development Plans and several SADC protocols including the Protocol on Wildlife Conservation and Law Enforcement which inspired TFCA initiative / Peace Parks, being a vehicle (although not a panacea) for regional integration and sustainable development that is compatible with our conservation agenda.

Ladies and gentlemen, it was clear in the various deliberations during this Symposium that the most important issue is walking the talk with implementation, implementation, implementation, and this is certainly where we are, the implementation phase. The emerging focus on WDAs and replicating successful initiatives whilst learning from our failures will make the KAZA dream a reality if we all play our part diligently.

It is good dear colleagues that the Symposium gave us a platform to reflect on our past and present which should become our springboard to take us forward to our desired future and that is where we are going, the impact phase. We therefore need to accelerate the momentum on implementation and ensuring more tangible benefits accrue to our local communities. It came out clearly in our discussion forums that we are managing very complex socio-ecological systems which need continuous adaptive management in the face of climate change and poverty.

Let me take this opportunity to thank our organizing team, international cooperating partners and stakeholders who assisted with funding this Symposium. Specially to mention KfW, GiZ, WWF, PPF, Ecoexist and support from the AHEAD programme. For those of you who are staying behind for the commodity-based trade workshop, we wish you a pleasant stay and those of you who are leaving to various destinations, we wish you safe travel and best wishes in all your endeavours. More importantly, those of you who do not want to leave Zimbabwe – we understand the temptation is very strong, you are also welcome to stay as long as you want exploring our world of wonders.

As the host country, we hope you have enjoyed our hospitality in the resort town of Victoria Falls and we invite you to explore our diverse and fascinating tourism products at your disposal.

On behalf of the Government of Zimbabwe and indeed on my own behalf, I thank you all for making this Symposium a success. May the shared vision we have for KAZA TFCA bind us together forever. God Bless You.

ANNEX 4 – Questions and Reflections

On the final day of the Symposium, participants were asked to submit questions and reflections arising from the discussions at the Symposium.

Questions

- What measures have you taken to move away from the donor funding oriented mentality?
- Are our solutions to current challenges temporary or enduring?
- Have we done a thorough stakeholder analysis? This will enhance management and sustainability of unity of effort.
- Did you use the SADC guidelines to evaluate KAZA's 10-year journey in relation to Key Performance Areas? It could be worthwhile to share the outcomes using such tools or approach for other TFCAs to learn from KAZA.
- Is there an opportunity to channel more KAZA TFCA resources towards the TBNRM Fora?

- Where is the grassroots support for local level work from big international NGOs?
- How are partner states embracing their obligations as per the signed treaty and master plan?
- What strategies is KAZA employing to address emerging trends of land degradation due to elephant population?
- How does Botswana control the ecological capacity of elephant?
- Can “KAZA” handle competing views between community development and conservation?
- Can KAZA make compromises on conservation for communities?
- Now what are we going to do with all this wonderful information?
- Is there funding in KAZA to support law enforcement in KAZA areas?
- How do we get the KAZA governments to empower their communities as partners with meaningful roles?
- How will we engage and truly partner with communities in meaningful (not token) ways? (not just be allocating a couple of community representatives in committees – needs to be at the local level working through existing initiatives)
- When will we have all other sectors on board in KAZA?
- What plans does KAZA have to ensure that the institutional arrangements in place really undergo realignment to prioritise community empowerment to be improved on the ground?
- What method is KAZA going to use to engage the community on a regular basis?
- Is there a clear roadmap to the long-term self-contained resourcing of KAZA towards achieving its mandate?
- What is the contribution of TFCAs to the economy?
- KAZA introduced the UNIVISA for tourists – why can't they adopt the passes to our community in the KAZA area like the one between Zambia and Namibia at Katima border?
- Is policy harmonization in KAZA feasible given the more inward-looking approaches to wildlife management in some member states?
- Are there any funds specifically for projects identified by stakeholders within KAZA area and peri-KAZA area?
- Why is it that natural resource crimes are trivialized rather than being taken seriously? There are usually delays in processing and often controversial especially where no proof is substantiated.
- Why do we not see more KAZA / PPF supported projects on the ground?
- How much have the operational budgets of KAZA's protected area authorities changed over the past 10 years (adjusted for inflation)?
- How can we improve the issue of government workers who need allowances when attending meetings with other stakeholders?
- Why does the 'elephant in the room' – population growth and lack of population control – continue to be ignored? At the TFCA level, this will rapidly wipe out any conservation gains, including community benefits.
- What is being done directly at the wildlife/community interface to separate conflict of animals to the community?
- Do we as KAZA TFCA PCs understand and appreciate the communities' capability to be pioneers of their own destiny?
- How can we grow more together in terms of approaches of project implementation, spatial planning and policy harmonization?
- Why is there no communication and engagement strategy for KAZA?
- Is there genuine commitment by the 5 PCs to own and achieve the intents and purposes for KAZA?
- To what extent are techniques in community involvement standardized for use by all players?

- Are all players equally skilled in techniques for community involvement?
- What is missing to integrate communities into the decision-making process?

Reflections

- Community involvement and beneficiation is key for the success of conservation and harmonic living. The question of who owns the animals should have a clear common answer across the KAZA TFCA region.
- Community-based tourism cannot stand on its own, if a tourism business wants to become successful. Joint ventures are one ownership model. But inclusion of communities needs to go further than ownership or even be made possible without it. Not all can, but some community members need to benefit from professional tourism carriers. The tools needed for this are robust business development support, including enterprise development training and continuous business policies for in house training and carrier development.
- The KAZA 2016 Symposium was excellent. All you need is to expedite the implementation of policies, mechanisms, and the like. Spell out in the policies who owns what in the partnership.
- It is the community stupid!
- KAZA requires cross-border interaction for traditional leaders.
- Capacity-building in partnerships required to be built with local people.
- We appreciate the KAZA movement towards community involvement.
- Importance of community involvement in decision-making and action!
- A great information sharing forum – very well done!
- Communities should be involved in planning and implementation of KAZA activities.
- Need for a body of community science / initiatives equivalent to conservation science initiatives. Community work should not always be linked with conservation.
- Awesome forum for learning as a student of community development I have learnt a lot.
- The future of KAZA TFCA will be determined by our ability to keep our rivers flowing. The balance between developmental needs and ecological integrity will be the greatest challenge.
- Energy and sense of unified purpose is high and KAZA has achieved the creation of a unified platform/s for conservation in the region (even though meaningful community engagement not yet a reality)
- While each business-community relationship is unique, by virtue of either nature and network structure, there should be an overarching systematic approach in KAZA, what the minimal quality of these relationships should start from (company policy, planning, etc.) There are already successful standards and tools available, both in KAZA (Botswana Ecotourism, EcoAwards Namibia) as well as in the wider SADC region. Their experience and input has yet to be included in the tourism working group.
- My primary concern is the fragile state of ecological connectivity in KAZA. If we fail to secure corridors / WDAs very soon, the entire KAZA enterprise is merely a marketing endeavour.
- Identify key intensive protection zones within the WDAs and some large natural parks and implement effective law enforcement in each.
- It's amazing that we have held yet another conservation and development conference with no real mention of any efforts to deal with population control / growth. Whilst there is such a focus on wildlife needing to benefit communities, there should be a reciprocal commitment by communities to try and help wildlife by controlling population growth!
- I find it somewhat dangerous (not to mention arrogant) precedent that the *raison d'être* for wildlife is its benefit to communities. Wildlife will never provide sufficient benefits to keep all communities happy. Why should wild animals have to justify their reasons for existence on how much they contribute to humans? Community benefit is important and benefits from wildlife SHOULD devolve to communities

but the way we are going we run the risk that if wildlife and Protected Areas don't provide sufficient benefits, they should not be maintained . . . This links with my questions – why is it seen as the proviso of wildlife and or the responsibilities of conservationists to provide communities with schools / boreholes / clinics / etc.? That is a basic government responsibility (without corruption there is enough money to do it) and it should not be seen as a make or break for the future survival of wildlife and conservation efforts.

- So far KAZA is on track – what they now need to do is to engage the community in the region practically.
- It seems to me that there is an urgent need to review the structures of KAZA to take stock of the gaps. It seems there is a need to examine opportunities for collaboration and partnerships in KAZA's external environment which can enhance access to skills and financial resources which KAZA needs to achieve its mandate.
- Implementation shortfalls, talking shop from major benefactors.
- KAZA TFCA has made huge strides in programme implementation but information management, sharing and general awareness campaigns should be invested for more positive impact on our communities.
- Role out Anna Songhurst's project in the Zambezi Region and pay for signs to demarcate wildlife corridors with the KAZA emblem.
- Role out KAZA supported fixed or mobile bomas in key corridors for large carnivores and place a sign recognizing all donors and KAZA at each kraal.
- Advocating for change in legislation in KAZA PA to accommodate TFCAs.
- As a veterinarian, I find the continuing lack of coordination, consultation, sample transfer, etc. highlight frustrating. In addition, the Victoria Falls Wildlife Trust laboratory submitted a project proposal re: regionalizing (to TFCA level) the laboratory. This was at the request of the KAZA Secretariat, but after a one year time lapse we have had no acknowledgement or response.
- KAZA programme has really done a good job in bringing the 5 nations together is the first in attempting to strongly empower the traditional authorities by encouraging strong or active participation and involvement in the conservation issue.
- Would love to see the member states benefiting equally for KAZA to achieve its vision or purpose.
- KAZA is an incredible opportunity, but if we don't take advantage of it now we will lose this opportunity forever.
- Suggestion: organize a KAZA Symposium just for communities, traditional authorities, community-based organizations and private sector to come up with their IDP and action plan.
- KAZA TFCA should desist from using the wrong players in the field of play as the team will definitely lose. Traditional leaders should not be left to be spectators but should form the core of the drive.
- KAZA TFCA should avoid to follow wrong player to see to it that traditional should strongly be in forefront to understand measures of KAZA.
- All KAZA PCs should give 100% of revenue generated from hunting to communities.
- Communities' involvement in planning and implementation of KAZA activities.
- Promote conservation hunting.
- High priorities needed for conservation of freshwater fish.
- KAZA treaty needs to be unpacked for public knowledge.
- Lots of gaps identified in the presentations which might threaten future generations. There is need to have concrete framework for an implementation plan to curb these challenges.
- Community partnerships can only be effective if the communities are involved at every stage of the programme / project cycle.
- Way forward on policy harmonization remains unclear despite being highlighted as very important in all discussions. Ref Symposium Objectives 4 & 5.

- Review and understanding of Treaty by all stakeholders.
- In anything that you do we generate waste and waste generation has become integral to our lifestyle. What is important is to look at waste as an economic good so that strategies that we employ to manage it will enhance our livelihood. Let us all adopt the principal of reduce, reuse and recycle so that we green KAZA industries.
- Maintaining the integrity of the ecosystem in the face of new development calls for waste management and pollution control to be a major and important component of KAZA TFCA – this will ensure sustainability of the ecosystem for us and generations to come. I would like to see more of pollution monitoring issues discussed.
- Communities rise! Let's enable people on the ground to be an integral part of KAZA.
- The suggestion that says Chiefs should make their special committees in their villages.
- KAZA can help traditional chiefs to do their working together with the community.
- KAZA without community participation is a non-starter.
- Supposing I see an elephant in Zimbabwe – how do I know which country it is from? KAZA has to come up with mechanisms so as to trace the movements of these giants.
- Tourism industry in KAZA region must have rates for local communities to promote participation, ownership and purpose for sustainable use of natural resource management
- I am happy we have appreciated the value of community involvement, the challenge now is to do the right thing the right way.
- Transparency in Cooperation.
- I would appreciate it most if KAZA can have a committing agreement with all Heads of State which will commit all states to carry out the KAZA mandate. Otherwise this will be an endless with no impact on sustainable development and conservation.
- The community know their God-given good, therefore KAZA needs to assist, collect the common problem of all five countries.
- After ten years, we thank the Secretariat, communities and all players. We wish to see an emphasis on community engagement and consultation in all that concerns them. The elephant ban will affect the communities mostly
- CAMPFIRE has the percentages right with regards to community benefit but has a top-down approach to administration. With Chiefs being bystanders, we need trusts handled by Chiefs.
- The water situation needs attention. We cannot run away from pumped water solutions because of the dry conditions and thus we need solutions for water infrastructure for communities and wildlife.
- Communities in Zimbabwe and wildlife in Zimbabwe are waiting to unlock the potential of KAZA projects and interventions.
- Disagree with statement that KAZA is 70% communal land – it is 100% - as cannot manage [??] places as islands.
- Need clear goals and articulated targets in order to be able to judge progress.
- At centre of link – TRUST in KAZA and in the process. Need to be part of decision-making.

Annex 5 - Presentation Abstracts

SESSION II: Benefits and Ownership – Institutional, Governance and Policy Change in Natural Resource Stewardship in KAZA

Benefits and Ownership – Institutional, Governance and Policy Status of Natural Resource Stewardship in KAZA

Patricia Mupeta-Muyamwa¹, Joseph Mbaiwa², Karine Nuulimba³, Shylock Munengwa⁴ and Simon Anstey⁵

The Nature Conservancy (TNC), Zambia¹; Okavango Research Institute (ORI), Botswana²; Integrated Rural Development and Nature Conservation (IRDNC), Namibia^{3, 4 and 5}

Email: karine.nuulimba@gmail.com

Community-Based Natural Resource Management (CBNRM) is evolving in multiple ways in the five Kavango Zambezi Transfrontier Conservation Area (KAZA TFCA) member states. Within and between countries, communities are working in diverse ways using varying policy and legislation to secure land tenure and rights over natural resources, ranging from loosely defined rights over natural resources and limited land autonomy to leaseholds and private land tenure. Different models of local-level institutional development and representation have emerged, each of which reinforces the link between natural resource governance and strong community organisations. Between, and within, countries, new institutional frameworks for CBNRM are being tested and several decades of experience have prompted community-based organisations, some of which have evolved into complex 'common-property businesses' to develop management structures that improve financial accountability and governance. In each country, affected communities benefit to varying degrees, ranging from none or minimal revenue that barely pays for the costs of conserving nature, to generating impressive revenue from tourism, hunting and other sectors. The extent to which CBNRM income reaches households is equally divergent. The presentation will provide an overview of each KAZA country's progress towards (1) increasing community rights over land and resources, (2) building institutions that are accountable to its members, and (3) deriving appropriate benefits from CBNRM. The relevance of these factors to the KAZA TFCA will be explored along with the opportunities that KAZA presents for the promotion of CBNRM.

The Role of Local Landscape Conservation Areas and TBNRM Fora in KAZA TFCA: Giving Communities a Stronger Voice

Josephine N. Ipinge¹ and John Kamwi²

Ministry of Environment and Tourism, Namibia¹; IRDNC, Namibia²

Email: andthose@yahoo.com

The presentation focuses on the involvement of local people in TFCAs. Their participation is essential as key players in natural resources management through CBNRM and Transboundary Natural Resources Management (TBNRM). A comprehensive approach on community engagement in TFCA have not been developed in the Southern Africa, hence decisions on the programs and products to enhance community livelihood may lack solid deliverables as their voice are heard through other parties. Notwithstanding the deliberate efforts by Governments to involve the rural community in the management of the trans have been made particularly at KAZA TFCA within each member state, however, formalized mechanisms will greatly yield better outcomes considering that community livelihood enhancement is crucial in the development of TFCA. A structured and coordinated way to involve local community will assist member states to properly and effectively engage them. Hence, this presentation unpack the extent to which local communities organized at landscape level are currently involved within the Namibian KAZA Component and cross-border cooperation in the entire KAZA TFCA. It will further elaborate lesson learnt, best practices in establishing Landscape Conservation

Areas (LCA) and TBNRM and plans future for further evolution of LCA and TBNRM. Currently, there is one Landscape Conservation area established in the Namibia KAZA Component and four TBNRM forums established involving three KAZA partner countries and one emerging TBNRM. These Landscape Fora fall under the Kwando River and Zambezi-Chobe Floodplain Wildlife Dispersal Areas (WDA) and if further strengthening can contribute significantly, NRM and their sustainability will be enhanced where key elements are considered.

Taking Ownership over Natural Resources: The Case of the Simalaha Community Conservancy in Zambia

Induna Anasambala¹ and Alan Sparrow²

Barotse Royal Establishment (Mwandi Kuta) Member of the Working Group of the Simalaha Community Conservancy, Zambia¹; Technical Advisor to the Simalaha Community Conservancy, Zambia²

E-mail: sibesoyeta@yahoo.com

Within living memory, the Simalaha Floodplains on both sides of the Kasaya/Machile Rivers in western Zambia had abundant wildlife. People lived in harmony with wildlife. Forest fires were not common as the traditional leadership was closely involved with the management of natural resources with the full support of rural communities. The chiefdoms of Senior Chief Inyambo Yeta and Chief Sekute established the Simalaha Community Conservancy, in consultation with key stakeholders from their chiefdoms, with the assistance of agencies such as the Zambia Wildlife Authority, and facilitated by Peace Parks Foundation (PPF). Now legally established, the Conservancy houses a wildlife sanctuary, which has been stocked with nearly 1,000 animals of various species. Over 500 farmers have been trained in conservation agriculture, which has produced the remarkable result that not one animal has been poached in four years. Having reintroduced wildlife and enhanced food security, the two chiefdoms are now preparing to seek private sector investment in the wildlife sector and to begin to take rural farming to a business level. Notable elements of this case study that have contributed to success include the strong leadership of the traditional authorities; a convincing sense of ownership over natural resources and wildlife by the host populations; support from both the wildlife and agricultural sectors of government; and technical and financial support of organisations such as PPF.

Facilitating Policy Harmonisation and Governance of Shared Water Resources: The Cubango-Okavango River Basin/CORB Case Study

Chonguica Ebenizario¹, Sekgowa Motsumi¹ and Chris Brooks²,

OKACOM, Botswana¹; Southern African Regional Environment Program (SAREP), Botswana²

Email: ebenc@okacom.org; sekgowa@okacom.org; cbrooks@sarepmaun.com

Facilitating Policy Harmonisation and Governance of Shared Water Resources is critical in the context of transboundary approaches to natural resources management in the Southern Africa region. This can take various forms such as TFCA and/or Transboundary River Basin Organisations (TRBO), with the ambition of promoting regional integration. These initiatives are guided by Southern African Development Community (SADC) protocols for optimising use and management of natural resources. Regional protocols are supported by international conventions that have been adhered to and ratified by the majority of the SADC Member States. Adding to these is the challenge of having those instruments properly domesticated within the country specific policies and regulatory frameworks. The effective implementation of regional protocols and international conventions are, however, confronted by challenges associated with their complexity, and practical factors linked to the difficulties with the harmonisation of policies across member states with different institutional and organisational cultures. For the particular case of the Cubango-Okavango River Basin (CORB), these challenges are further exacerbated by the prevailing water scarcity and the advents of climate change. The current paradigm of managing river basins within the confines of their topographic catchment might need to be interrogated due to much broader socio-economic and political factors beyond

the basin and prevailing poverty levels needing to be addressed urgently. Added to the above, the difficulties in establishing required financial sustainability models to support the initiatives, impose another level of barriers. This paper intends to discuss how some of the outlined challenges are being confronted in the CORB.

Ensuring Greater Benefits to Host Communities: Addressing Leakage from the Tourism Industry **Joseph E. Mbaiwa**

ORI, University of Botswana, Botswana
Email: JMbaiwa@ori.ub.bw

Tourism in Southern Africa including the KAZA region has been on the increase in the last decades. Since the 1990s, wildlife-based tourism in the KAZA has been on the increase and has stimulated the development of a variety of tourism infrastructure and facilities, such as hotels, lodges and camps, airport and airstrips and roads in tourism destination sites. This paper therefore draws from the concept of sustainable tourism to analyse what KAZA countries can do to ensure greater benefits to host communities. The paper will also address tourism leakages from the tourism industry of the region. Using both primary and secondary data source, the paper argues that international tourists, foreign safari companies and investors dominate the tourism industry in the KAZA region. The foreign domination and ownership of tourism facilities has led to the repatriation of tourism revenue, domination of management positions by expatriates, lower salaries for citizen workers, and a general failure by tourism to significantly contribute to rural poverty alleviation in the KAZA region. Poverty rates in the KAZA region are significantly high even though these are areas rich in flora and fauna and receive significant numbers of international tourists. Tourism has a minimal economic impact on rural development mainly because it has weak linkages with the domestic economy, particularly agriculture. Because of its nature, tourism in the KAZA cannot be described as being sustainable from a socio-economic perspective. To address this challenge, a tourism industry that promotes a more inclusive and beneficial tourism development is required. There is also need to adopt policies and strategies that will ensure that substantial amounts of tourism revenue are retained in the KAZA region. These strategies should also ensure that tourism has strong linkages with the rest of the economy particularly agriculture, manufacturing and transportation sectors in the KAZA area. This approach is likely to make a significant contribution to sustainability in tourism as locals and citizens of the region begin to benefit from tourism around their local environment.

Community Participation in Identification, Securing and Institutionalising Corridors at a Micro level: A case of the Zambezi Region, Namibia

Brian Jones¹, Dominic Muema² and Elvis S. Mwilima³

Independent Consultant, Namibia¹; IRDNC, Namibia²; KAZA TFCA, Namibia³
Email: simbaelvis@yahoo.com

The Namibian Zambezi region of the KAZA TFCA provides a vital linkage between Angola, Botswana and Zambia. Due to human and wildlife population growth in this area, competition for resources is increasing. Settlements in corridors and road infrastructure attract linear settlement patterns and fences are a barrier to wildlife movement. Corridors provide seasonal migratory routes and interconnectivity among the many protected areas within the landscape increases area available for wildlife and therefore reduce congestion. They expand the wildlife based economy into agriculture marginal areas, through conservation enterprises and other livelihood opportunities. Conservancies in Namibia are given conditional rights through policy and legislation for utilisation of wildlife. Conservancies develop management plans with a zonation schedule that guides activities within their prescribed boundaries. Community meetings were held with two conservancies to identify priority corridors, a field assessment and Global Positioning System (GPS) mapping of corridors was conducted. Challenges to maintenance of corridors and means of addressing them were identified. Awareness was given to the traditional authorities on the importance of their role in maintaining corridors. There is a need to explore opportunities for livestock management, conservation agriculture and fish reserves

in corridors. Development of payment for ecosystem services packages and leasehold for corridors are vital. Registration of customary land rights on commonage for grazing and wildlife needs to be informed. This exercise shall be rolled out to all other conservancies. It is further recommended that KAZA TFCA lobbies for enabling legislation for wildlife corridors within the partner countries for it to realise its objective.

Tourism Joint Venture Models in Communal Areas of KAZA

Richard W. Diggle¹, Rueben Mafati², Charles Jonga³, Mokganedi Ntana⁴, Mwape Sichilongo⁵

World Wide Fund for Nature (WWF)-Namibia, Namibia¹; IRDNC, Namibia²; Communal Areas Management Programme for Indigenous Resources (CAMPFIRE), Zimbabwe³; Botswana Tourism Organisation, Botswana⁴; WWF-Zambia, Zambia⁵
Email: rwdiggle@wwf.na

The 15 minute presentation considers different joint venture tourism lodge models in communal areas and how they can contribute toward the KAZA fifth objective of being able to “sustainably use natural and cultural heritage resources to improve the livelihood of local communities and thus contribute towards poverty reduction”. We looked at the various legal structures and contractual arrangement of joint venture tourism lodges in the different partner countries of KAZA. We also offered some thoughts and reflections of what is required if tourism is to contribute to both the wellbeing of the environment and the betterment of local communities.

Conservation Agriculture Contributing to Food Security in the Context of Biodiversity Conservation: Case Studies from KAZA

Nyambe Nyambe¹, Crispin Muchindu², Britta Hackenberg³ and Graham McCulloch⁴

WWF Zambia Country Office, Zambia¹; Simalaha Community Conservancy, Zambia²; Namibia Nature Foundation, Namibia³; The Ecoexist Project, Botswana⁴
Email: nnyambe@wwfzam.org

Food insecurity is a major challenge for communities in the KAZA TFCA landscape. Contributing factors to food insecurity include poor rainfall and soil fertility, unsustainable farming methods, crop raiding by some wildlife species and effects of climate change. Four case studies from Botswana, Namibia and Zambia illustrate the impact of Conservation Agriculture (CA) on food and nutrition security – particularly in terms of improved yields and crop diversification, including cultivation of drought tolerant crops. But successes go beyond food and nutrition security: farmers have also been empowered with skills to grow seeds, improving access to locally adapted seed. Conservation benefits are demonstrated at the interface of CA and land use planning, promoting successfully human-wildlife co-existence, reducing ‘slash and burn’ practices and encroachment into wildlife habitats. CA allows farmers to harvest earlier and avoid heightened periods of human-wildlife conflicts later in the crop season. This contributes to food security through immediate benefits at household level and helps alleviate the farmers’ concerns and expectations of long-term benefits from wildlife management. Developing small businesses along CA value chains contributes to diversifying livelihoods. Institutional support to farmers’ groups to form a critical mass enables them to better access bigger markets for the longer term sustainability beyond any given project. This in turn helps build and reinforce much needed social capital among local communities.

SESSION III: Maintaining and Restoring Ecosystem Integrity in the Face of Development

Maintaining and Restoring Ecosystem Integrity in the Face of Development

David H. M. Cumming

Percy Fitzpatrick Institute, Biological Sciences, University of Cape Town, South Africa; Tropical Resource Ecology Programme, Biological Sciences, University of Zimbabwe, Zimbabwe, and AHEAD (Animal & Human Health for the

KAZA covers an area of some 520,000km², includes parts of five countries and 2.7 million people living mostly in communal areas that cover about 60-70% of the TFCA. Primary ecological objectives are focused on protection of internationally shared ecosystems, increasing the area available for wildlife and plant populations, and the re-establishment of transboundary seasonal wildlife dispersal routes. Socioeconomic objectives are mainly concerned with increasing economic opportunities for local communities who bear the opportunity cost of living with wildlife. A central question is, “Can KAZA both develop and restore/maintain ecosystem integrity?” Answers will depend on what society at large means by development and by ecosystem integrity and how it manages its prime natural resources and the ecosystem services they provide. Primary natural resources include extensive wetlands, a rich diversity of plants, animals, and ecosystems, and major deposits of minerals to be mined in the near future. Present and likely development trajectories for KAZA are outlined and examples of their potential impacts on ecosystem integrity explored. Human populations will inevitably increase. Agricultural development is presently constrained by poor soils and climate but climate change will force changes in ecosystems, farming practices, and natural resource management across the region. Going forward I argue that it will be necessary (i) to manage KAZA within the framework of a complex adaptive Social-ecological Systems (SES) approach, (ii) to explicitly promote resiliency and transformative capacity of the SES at appropriate scales and, perhaps most importantly, (iii) develop scale-sensitive natural resource governance institutions that facilitate and promote the maintenance and restoration of ecosystem integrity and human livelihoods across the KAZA landscape.

Connectivity, Corridors and Wildlife Dispersal Areas

Robin Naidoo¹ and Paul Bewsher²

WWF, Namibia/USA¹; Peace Parks Foundation, South Africa²

Email: robin.aidoo@wwfus.org

Corridors in conservation have a long theoretical and practical history, but there have been relatively few evaluations of corridors in real conservation landscapes using modern connectivity science methods. Yet such evaluations are important if proposed or existing corridors are to avoid the same fate as poorly-functioning “paper parks”. Within the KAZA TFCA, resistance surface modeling and circuit theory were used to evaluate a number of corridors, developed at both regional and local scales, that aim to improve connectivity for large wildlife in the central part of the TFCA. Hourly Global Positioning System (GPS) data from 16 collared elephants was combined with environmental data at used versus available movement paths to develop a hierarchical Bayesian path selection function model. The resulting resistance surface across the study area was input into a circuit theory model to assess how well connectivity levels were captured by both classes of corridors relative to several alternative scenarios. The majority of regional-scale corridors, i.e. WDA pathways, performed relatively well at capturing elevated levels of connectivity relative to non-corridor comparisons. Six of the nine WDA pathways were rated as better than average in terms of how they captured electrical current levels (a proxy for connectivity). In contrast, only 1 of 12 blocks of local corridors captured significantly higher levels of connectivity than adjacent, non-corridor areas. These results have practical implications for the design and implementation of wildlife connectivity between core conservation areas, via the identified wildlife dispersal areas, as well as general conservation efforts described in the Master Integrated Development Plan for the world’s largest transfrontier conservation landscape.

Land Use Planning at the Community-Elephant Interface

Anna Songhurst¹, Graham McCulloch¹, Amanda Stronza¹, Fannuel Radifalana², Gabofhete Radithladi², R Yakenge², Mr Mauano², Chris Brooks³, Kent Burger⁴

Ecoexist Project, Botswana¹; Tawana Land Board, Botswana²; SAREP, Botswana³; GIMS, Botswana⁴

Email: anna.songhurst@hotmail.com

Finding ways for people and elephants to coexist requires affording both parties access to critical resources and space. Appropriate land use planning is necessary to develop acceptable and practical solutions for conflicts that arise from sharing space and resources. We combined data collected through long-term research on and monitoring of elephant movement, combined with local knowledge and experience from key community and government stakeholders. The result is an evidence-based, participatory land use plan that mitigates future conflicts between people and elephants in the eastern panhandle of the Okavango Delta. A GIS-based modelling process called the Land Use Conflict Identification Strategy (LUCIS) was used, which incorporates stakeholder preference into traditional land use suitability classification methods. Thirteen critical elephant corridors with development free buffer zones were identified and incorporated into a land use plan by the land authority. In addition, zones with good soils were demarcated for future arable development and village expansion. This land use planning approach is part of a holistic strategy of the Ecoexist Project, an initiative aimed at finding ways for people and elephants to coexist. The conservation success of transboundary wildlife corridors and wildlife dispersal areas depends on protecting local movement corridors through human-dominated landscapes and addressing conflicts that occur between people and wildlife.

Consumptive Resource Uses and Crop Agriculture in KAZA: Addressing Inter-sectoral Land Use Conflicts at National and Regional Levels

Pauline Lindeque¹ and Bruce N. Mead²

Climate Resilient Infrastructure Development Facility (CRIDF), South Africa¹; AGRA ProVision, Namibia²

Email: Paulinel@agra.com.na

At 520,000km², the KAZA area is globally the largest and most complex transfrontier conservation area, with 71% of the land under some form of wildlife management (consisting of 20 National Parks, 85 Forest Reserves, 22 conservancies, 11 sanctuaries, 103 wildlife management areas and 11 game management areas). The majority of the estimated 2.7 million people living within KAZA are scattered across the remaining 29% of the land, most deriving their livelihoods from the immediate environment, through the (often unsustainable) consumptive use of natural resources and/or through subsistence agriculture. Only a small proportion of the residents are employed or participating in the formal economy, thus this mosaic of land uses presents a challenge, with adjacent areas often having conflicting and incompatible uses, driven by divergent social and/or economic needs. This has created opposing forces competing for the same land and resources.

What is needed is to develop a business-based “destination and land-use” model for KAZA that ensures that resident communities can benefit from economic developments that *preserve the natural and cultural heritage resources of the area and safeguard the natural environment and ecosystems in which these resources occur* (KAZA Treaty). With tourism as potentially the greatest economic driver, one option is to support and encourage local “tourism supply and service support nodes” which not only provide job opportunities but also social benefits (health, schooling, and housing). These development hubs could provide people with secure livelihoods, away from the areas of conflict and susceptibility to climate change, resulting in a more harmonised landscape within which both wildlife and people can thrive.

Monitoring Fire Frequency in the KAZA TFCA using Remotely Sensed Data: A Case Study of Zimbabwean Component

Godfrey Mtare¹ and H. Ndaimani²

KAZA TFCA Secretariat, Zimbabwe¹; University of Zimbabwe, Zimbabwe²

Email: tgmtare@yahoo.com

Understanding the impact of veld fires on ecosystems is central in wildlife management since uncontrolled fires have known impacts on wildlife assemblages. Fire affects all aspects of the ecology of a landscape – individual plants, plant communities, animals and their habitats, nutrients, water catchments and down-stream hydrology.

This understanding is particularly important in transfrontier conservation areas where uncoordinated effort at fire management and monitoring in partner countries might have negative feedback. In this study, we sought to understand the dynamics of veld fire frequency in the KAZA TFCA. We mapped fire scars on the Zimbabwean component of KAZA TFCA for the period from 2010-2015 using MODIS fire products freely acquired on the internet. Monitoring based on remotely sensed data allows for analysis at high spatial scales; thus it is relevant in large landscapes like TFCAs that span several countries. Results indicate that protected areas have the highest fire frequency when compared to communal areas. In particular, the highest fire frequency was observed in the Matetsi Safari Area, Sebungwe and Matusadonha National Parks. Our results suggest that protected areas experience the highest fire frequency; thus most effort at reducing incidences of veld fires should be directed towards the protected areas.

Managing a Transboundary World Heritage Site in the KAZA TFCA: The Case of the Victoria Falls World Heritage Site
Musawa M. Hamusonde

National Heritage Conservation Commission, Zambia
 Email: musmus7703@yahoo.com

Managing transboundary sites does not come without its share of challenges, more so World Heritage Sites. Bordering Zambia and Zimbabwe, the Mosi-Oa-Tunya/Victoria Falls World Heritage Property (MVFWHP) is the only transboundary World Heritage Property (WHP) in the KAZA TFCA region. The two States Parties have therefore been collaborating and complimenting efforts in managing this internationally acclaimed property so as to meet institutional, national and regional objectives and agreements such as the KAZA TFCA. Co-management of transboundary properties does not always end as success stories. Likewise, challenges in managing the MVFWHP range from failure to harmonise policies and legislation to inadequate capacity, among others. In line with the KAZA TFCA objectives, the two States Parties have however been working together in enhancing capacity building strategies, research and monitoring, and infrastructure and tourism development through the implementation of a Joint Integrated Management Plan and the recent production of a Sustainable Tourism Strategy for the Victoria Falls as a destination. This paper will highlight in detail how the joint nomination began and co-management activities done so far to meet KAZA TFCA objectives. The status quo of the property will also be highlighted in comparison to a decade ago, before the treaty. It will also bring out the challenges encountered, mitigation strategies and planned projects for the sustainability of this partner states relationship.

SESSION IV: Landscape Level Conservation – Myth or Reality?

Landscape Level Conservation – Myth or Reality?
Piet Theron

Great Limpopo Transfrontier Conservation Area, IUCN Transboundary Specialist Group, South Africa
 Email: ptheron@ppf.org.za

A major, dynamic and exciting conservation initiative – the establishment of TFCAs – is currently being implemented across the southern African region. 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 upliftment, and the promotion of peace and stability in the region. Furthermore, the establishment of TFCAs is an exemplary process of partnerships between governments, Non-governmental Organisations (NGO), communities and the private sector. While the main players are the relevant governments and implementing agencies, donors and non-governmental organisations also greatly contribute towards creating transfrontier parks. It is evident that the development of transboundary conservation areas in the region could potentially play a significant role from both a conservation and socio-

economic development perspective. However, does current evidence suggest that the sum is bigger than the parts? In other words, do these initiatives support long-term co-operative conservation of biodiversity, ecosystems services, and natural and cultural values across boundaries? Do they enhance the benefits of conservation and promoting benefit sharing across boundaries among stakeholders? And do TFCAs ensure better environmental protection across ecosystems and international boundaries? This presentation explores the modalities of TFCA implementation and identifies key factors critical to the success of these regional conservation based development initiatives.

Status of KAZA's Elephants: Implications for Conservation at a Landscape Scale
Russell D. Taylor

IUCN SSC African Elephant Specialist Group
 Email: RD Taylor rtaylor@wwf.na

Southern Africa continues to hold by far the largest number of elephants on the continent, with nearly 75% of these elephants occurring as part of a single population in the KAZA TFCA, some 520,000km² in extent. Of this number 86% occur in Botswana (60%) and Zimbabwe (26%). Elephants in SE Angola and SW Zambia have suffered major declines due to poaching. In the Kavango and Zambezi Regions of Namibia elephant populations are growing, despite an increase in poaching. A relatively stable population in Botswana is no less threatened and Zimbabwe's Sebungwe elephant population has collapsed by 75%. Habitat loss and encroachment is also be linked to these declines. Where human density begins to approach or surpass 15 persons/km², there is increased human-elephant conflict after which elephants begin to disappear and maintaining connectivity for elephant movement through corridors is essential. Larger scale movement of elephants across borders requires that systematic, coordinated and simultaneous surveys using comparable standardised methods are undertaken to avoid the possibility of double counting or of missing animals entirely. A KAZA-wide elephant conservation and management strategy and policy framework that incorporates the needs and aspirations of individual partner countries as articulated in national elephant management plans is now needed. Given that the KAZA TFCA transboundary elephant population is the largest in Africa, it remains of the highest priority to develop such plans and implement simultaneous and coordinated surveys of the entire population as part of such planning.

Securing Habitat Networks for KAZA's Large Carnivores

Paul Funston¹, Matt Becker², Peter Blinston³, Rosemary Groom⁴, Lise Hanssen⁵, Jane Horgan⁶, Andy Loveridge⁷, Greg Rasmussen⁸, Esther van der Meer⁹, Leanne van der Weyde⁶ and Kim Young¹

Panthera, USA¹; Zambian Carnivore Programme, Zambia²; Painted Dog Conservation, Zimbabwe³; Range Wide Conservation Program for Cheetah and African Wild Dogs, Zimbabwe⁴; Kwando Carnivore Project, Namibia⁵; Cheetah Conservation Botswana, Botswana⁶; Recanati-Kaplan Centre, United Kingdom⁷; Painted Dog Research Trust, Zimbabwe⁸; Cheetah Conservation Project Zimbabwe, Zimbabwe⁹
 Email: pfunston@panthera.org

KAZA is a massive transboundary conservation and development landscape supporting about 18% of Africa's remaining lions, and encompassing a large proportion of the range of Africa's threatened cheetahs and endangered African wild dogs. However, its vast size and number of protected areas do not necessarily secure carnivores across this landscape. For example, protected areas in KAZA could support about two to three thousand more lions. Predominant threats to large carnivores include bush-meat poaching, human encroachment into protected areas, conversion of lands blocking movement pathways and retribution killing at the human wildlife interface. These combine to suppress populations and limit connectivity among them. In a perfect world we would secure all of KAZA's protected areas and connectivity pathways to form a continuous wilderness sanctuary that benefits ecosystems and provides human development opportunities. However the sheer size of KAZA, coupled with limited conservation capacity and growing human populations, forces us to prioritise among sites. The KAZA Carnivore Conservation Coalition is a collaborative body of government

and non-government practitioners who are dedicated to working together to identify and secure these sites to form a geographically identifiable KAZA large carnivore habitat network. Through expert opinion, five priority focal areas encompassing habitats and associated connectivity pathways have been identified (note these largely overlap KAZA WDA). A working group has been assigned to each focal area to achieve a suite of outcome focused projects that secure respective habitats and pathways. Project sites will consolidate to form a geographically defined KAZA large carnivore habitat network which we present as a strategic approach for conserving large carnivores across KAZA.

Phytochorology, Connectivity and Resilience within the KAZA TFCA: The Cautionary Case of the Kalahari System

Jeremy Perkins¹ and Robin Naidoo²

Department of Environmental Science, University of Botswana, Botswana¹; WWF, Namibia/USA²

Email: perkinsjs@mopipi.ub.bw

Wildlife corridors are an increasingly critical component of the KAZA TFCA with many maps suggesting strong linkages between the five KAZA TFCA countries at the landscape or regional level. Unfortunately, the reality is far less encouraging. Linkages between conservation landscapes are proving difficult to implement within respective KAZA TFCA countries, let alone across their international boundaries, where the customary veterinary disease control concerns are complemented by border security and regulation fears. While the precise combination of threats and concerns varies for each corridor the reality is an increasing narrowing and foreclosure of linkage opportunities. Three priority corridors were identified by Cumming (2008) as those linking: (a) Chobe National Park (NP) – Babwata NP – Liutana – Sioma-Ngwezi, (b) Chobe NP – Zambezi NP – Matetsi-Hwange NP complex, (c) Caprivi-Zambezi NP – Kafue NP. Land use/land cover changes through livestock-keeping and arable cultivation associated with human settlement, as well as agricultural subsidies, have affected all three corridors to the extent that their navigation is far from straightforward. This paper points to the lessons that urgently need to be learnt from the fragmentation of the Kalahari ecosystem in Botswana, where the pursuit of the European Union beef subsidy by Policy makers led to a loss of resilience and effective collapse of the Kalahari as a major wild animal system. The tendency for land use classifications and fences to follow the key phytochorological boundaries of southern Africa, rather than allow wild ungulate movements across them appears as a fatal flaw in land use planning and effective wildlife conservation at both the respective national and KAZA TFCA scale. Wildlife corridors across ecotonal boundaries both within and between the KAZA TFCA countries quite simply cannot be substituted for socio-politically expedient wildlife corridors that bear little or no relevance to the ecological realities that shape wildlife movements and the likely future adaptability of the KAZA TFCAs flora and fauna to climate change.

The Changing Landscape of Livestock Disease Control in the KAZA TFCA

Yona Sinkala

Department of Veterinary Services, Ministry of Fisheries and Livestock, Lusaka, Zambia

Email: ysinkala@me.com

The KAZA TFCA countries have been experiencing low livestock productivity as well as trade restrictions attributed to transboundary animal diseases and other diseases that affect the socio wellbeing of the human populace. Notable among these diseases is foot and mouth disease, contagious bovine pleura pneumonia, trypanosomiasis, East Coast Fever (ECF), Corridor Disease, Anthrax, Black Quarter (BQ), Brucellosis, Rabies, African Swine Fever (ASF), Peste des Petits Ruminants (PPR), Newcastle Disease (NCD) and Epizootic Ulcerative Syndrome. Despite their presence little is known about their epidemiology in the KAZA where these diseases affect communities wholly dependent on livestock/wildlife production. For example, it has been shown that the patterns of occurrence of some diseases like FMD vary in space and time (relative risk) as well as in the causative serotypes and topotypes. The varying in space and time is also true for many other diseases like PPR, ASF and NCD. Sharing of resources between cattle and wildlife, cross border movement,

agro-ecological zone, transhumant husbandry practice, rainfall and proximity to buffalo migratory routes are significant drivers of the disease occurrence that have been identified. These elements may be considered in targeted risk surveillance, movement control, risk assessments and other disease prevention strategies at national and regional levels. In case of FMD for example better understanding of circulating FMD virus strains in buffalo, carrier status in cattle within ecosystems and the role of livestock value chains in perpetuation of FMD outbreaks is recommended. This is important for elucidating FMD outbreaks, for example the recent SAT 3 outbreak in western Zambia. The changing landscape within KAZA as a result of changing climatic, environmental and socioeconomic factors is leading to a resultant increase in disease pressure and burden requiring fit for purpose risk assessment, management and communication strategies.

Cattle and Wildlife: The Case for 'Win-Win' Outcomes for Rural Communities

David H. M. Cumming

Percy Fitzpatrick Institute, Biological Sciences, University of Cape Town, South Africa; Tropical Resource Ecology Programme, Biological Sciences, University of Zimbabwe, Zimbabwe, and AHEAD Regional Technical Consultant

Email: cumming@icon.co.zw

The prevailing paradigm governing rangeland management is to separate wildlife and livestock to avoid competition for grazing and minimise disease transmission. The result has been that 80% of southern Africa has been subjected to grazing by one or two species of livestock. Domestic animals only recently replaced guilds of 15-20 large herbivores that had evolved over millions of years in African savannas. The replacement of Multispecies Systems (MSS) with single species systems has resulted in the transformation of vast areas of southern Africa's savannas and grasslands. Fencing, to contain domestic livestock in paddocks or compartments and wild herbivores in protected areas, has contributed to ecosystem fragmentation and degradation on a grand scale. The case for combining and managing livestock and wildlife in MSS on open rangelands in the KAZA TFCA is compelling, both ecologically and economically, particularly in semi-arid and arid regions. Ecological advantages include: (i) greater use of the available range of plant material by a range in body size and physiology of grazers, mixed feeders and browsers; (ii) increased ability of diverse large herbivore guilds to exploit and maintain spatial and temporal heterogeneity of rangelands, and (iii) the ability of some wild herbivores to migrate to exploit seasonal variations in food resources and so maintain higher numbers than sedentary species. Economic advantages include: (i) the potential to decouple wealth creation from primary and secondary production by developing nature-based tourism; (ii) greater resilience of MSS to impacts of variable weather on financial returns, and (iii) enhancing prospects for truly sustainable harvesting of wild meat for improved household nutrition. Constraints to adopting MSS include governance measures that prevent rural households from realising the full benefits from wildlife, and resolution of disease management, potential export markets for beef, and related commodity-based trade issues.

Official OIE Code Change Creates New Opportunities for Optimising Livelihoods from Livestock and Wildlife Conservation in the KAZA TFCA

Gavin Thomson^{1,2} and Mary-Louise Penrith^{1,2}

TAD Scientific¹; Department of Veterinary Tropical Disease, University of Pretoria, South Africa²

Email: gavin@tadscientific.co.za

Regional momentum has been growing to modify international sanitary standards and recommendations on management of transboundary animal diseases and trade standards that conflict with the principles of wildlife conservation. This effort, involving a wide range of stakeholders and institutions, resulted in a set of proposals being submitted to the OIE (World Organisation for Animal Health) by the Food, Agriculture and Natural Resources (FANR) Directorate of the SADC Secretariat for consideration in 2014/5. The immediate concern was risk management standards for FMD because those have greatest impact on (a) market access for beef from the region and (b) transfrontier conservation areas like KAZA through the effects of cordon fences on seasonally important wildlife movements. Although not all of FANR's proposals were accepted, favorable changes to the FMD chapter were ratified at the OIE World Assembly of Delegates in May 2015. The most

significant relate to Article (8.8.22) dealing with export of beef from zones not recognised as free from FMD. It is likely that a further positive change to 'compartmentalisation' (Article 8.8.4) will eventuate in May 2017. These changes provide new prospects for beef production compatible with wildlife conservation, i.e. a 'win-win' for diversified land use and sustainable livelihoods in KAZA.

SESSION V: Converting Natural Resources from Liabilities to Assets

Converting Natural Resources from Liabilities to Assets – a case of “Rich man, poor man, beggar man, thief.”

Michael J. Murphree

African Centre for Disaster Studies, North West University, South Africa

Email: murphreemj@gmail.com

The origin of the title of this presentation is a 15th century children's nursery rhyme, the line used for this presentation coming from AA Milne's 1927 book *Now We Are Six*. One may ask what significance does a children's nursery rhyme have with a presentation on changing natural resources from liabilities to assets in the KAZA TFCA? Well as a rhyme not much at all but when you look at this particular line in the title, it almost visually explodes with the key issues that confront natural resource management and the issues encapsulated in the broad based trans-boundary conservation objectives of KAZA. This presentation will examine who is the rich man and who is the poor man. Why, in an area so abundant with natural capital, are people so desperately poor economically and what needs to be done to change this. The presentation will examine who is the beggar man? Is it the community? Is it the state? Is it the donor dependent conservation NGOs? Finally, the presentation will ask, who really is the thief? Is it the man who takes an impala to feed his family? Is it the state that claims the right of gatekeeper to natural resources? Is it the private sector that makes profit while indigenous people struggle to survive? Perhaps it is the NGOs in distant lands that wish to see Africa as their own “Garden of Eden”? Converting the liability to asset is a must, not an option, it is ultimately the future for all.

Complementary Benefits of Tourism and Hunting to Communal Conservancies in Namibia

Robin Naidoo¹, L. Chris Weaver², Richard Diggle², Greenwell Matongo², Greg Stuart-Hill², and Chris Thouless³

WWF-US, United States¹; WWF-Namibia, Namibia²; Save the Elephants, Kenya³

Email: cweaver@wwf.na

Tourism and hunting both generate significant revenues for communities and private operators in Africa, but few studies have quantitatively examined the trade-offs and synergies that may result from these two activities. This paper evaluates financial and in-kind benefit streams from tourism and hunting on 77 communal conservancies in Namibia from 1998 to 2013, where community-based wildlife conservation has been promoted as a land-use that complements traditional subsistence agriculture. Across all conservancies, total benefits from hunting and tourism have grown at roughly the same rate, although conservancies typically start generating benefits from hunting within 3 years of formation as opposed to after 6 years for tourism. Disaggregation of data reveals the main benefits from hunting are income for conservancy management and meat to the community at large, while the majority of tourism benefits are salaried jobs at lodges. A simulated ban on trophy hunting significantly reduced the number of conservancies that were able to cover their operating costs, whereas eliminating income from tourism did not have as severe an effect. Given that the benefits generated from hunting and tourism typically begin at different times (earlier versus later, respectively) and flow to different segments of local communities, these two activities together can provide the greatest incentives for conservation. Notably, a singular focus on either hunting or tourism would likely reduce the value of wildlife as a competitive land-use option, and have serious negative implications for the viability of community-based conservation efforts in Namibia, and possibly in other parts of Africa.

Assessment of the Human Wildlife Conflict Mitigation Measures being Implemented by the KAZA TFCA Partner Countries

Malvern Karidozo¹, Ferrell V. Osborn² and Michael la Grange³

Connected Conservation, Zimbabwe¹; Connected Conservation, South Africa², African Wildlife Management and Conservation, Zimbabwe³

Email: loki.osborn@gmail.com

Managing Human Wildlife Conflict (HWC) is arguably one of the most pressing conservation issues across the KAZA TFCA where a significant number of people live in areas that abut wildlife range. Conflict between people and wildlife threatens the goals and objectives underpinning the KAZA TFCA as people and wildlife compete for several resources, often with negative impacts on both people and wildlife. Managers and communities attempting to reduce crop and livestock damage by wildlife encounter a range of complex technical and social issues. We assessed the current conflict status, identified and mapped conflict hotspots, explored the drivers of this conflict and reviewed the mitigation methods in use across the five partner countries. The review also included the partner countries' HWC policies and an extensive dissection of Namibia's self-reliance scheme for potential uptake across the KAZA TFCA. We noted an increasing trend in reported conflict incidences and a likelihood of more conflict reports in the future. We assessed the effectiveness, efficiency and sustainability of HWC mitigation measures for adoption within the KAZA TFCA by the partner countries. We suggest partner countries focus HWC efforts in and around the WDA that KAZA has identified. We recommend the implementation of a number of short and long-term conflict mitigation measures that are both species specific as well as focussing increased resources on techniques for improving people's livelihoods. We suggest an implementation framework that is holistic in nature and the standardisation and harmonisation of policies that are in place to manage HWC.

Offsetting the Costs of Living with Wildlife: Payment for Ecosystem Services

Greg Stuart-Hill and Richard Diggle

WWF, Namibia

Email: gstuart@wwf.na

Wildlife is promoted in Namibia as a land-use that complements and in some instances can even outperform other livelihood practices. Local communities, through Conservancies, have been incentivised to live with wild animals through receiving certain ownership rights and importantly, also meaningful benefits. This has resulted in remarkable recoveries of most species in the Namibian portions of the KAZA landscape. Despite these conservation gains certain charismatic species (e.g. elephant, hippo, lions, and other large predators) continue to struggle to 'pay their way' and their future on communal land remains tenuous. This is primarily because the average community member often gets little other benefit than an occasional supply of meat from trophy hunting. In the eyes of a typical community member, the costs of living with these conflict causing species far outweigh the benefits they provided. The current wildlife-based enterprises (i.e. trophy hunting and tourism), even if both are present within a given Conservancy, seldom generate sufficient returns to be the “game changer” necessary to secure the future of these problematic species. A particular concern confronting communities is the prevailing external efforts to close down trophy hunting. Such an action, if successful, would seriously undermine the primary benefits (cash and meat) that currently provide some level of tolerance for these species. If these species are to survive outside and adjacent to national parks, then it is critical that additional sources of value addition be unlocked. This presentation describes preliminary attempts in Namibia to pilot Payment for Ecosystem Services (PES) schemes that are specifically designed to unlock an additional untapped source of revenue. The objective being to not only to offset the costs of living with wildlife, but to provide a positive stimulus for communities to actively tolerate and protect these important iconic species.

Managing Shared Fish Resources in KAZA**Denis Tweddle***NNF/EU Community Conservation Fisheries in KAZA Project, Country*

Email: D.Tweddle@saiab.ac.za

Inland fisheries resources in KAZA countries are vital for food security for the communities living adjacent to the rivers and floodplains in the region. The fisheries are, however, under severe threat. Stocks of the important fisheries species in the Upper Zambezi floodplains have declined by over 90% since 2009 and other fisheries are in similar critical condition. Declines have been documented for the Kafue River floodplains and Kavango River and are reported also for some Lake Kariba fish stocks. No fish stocks in KAZA are healthy. As many of the fisheries are transboundary with rivers demarcating national borders, KAZA has a major role to play under its mandate to coordinate management of natural resources across the KAZA landscape. Evidence for declines in fish stocks in the KAZA area are presented here. Cooperative transboundary fisheries management is essential if the factors causing the declines are to be addressed to allow fisheries recovery. This means that the fisheries departments in the five KAZA countries need to work together and collaborate with all NGOs and other organisations active in fisheries projects and programmes. The goal is to ensure that common goals are agreed and achieved through the newly-approved KAZA Fisheries Working Sub-Group that will function as part of the KAZA Conservation Working Group.

Banking on the Future: The HSBC Case Study for 2016**Ignatius M. Musona¹**, Debra Magwada² and Phillip Kuvawoga³*WWF Zimbabwe*

Email: mimusona@wwf.org.zw

The Government of Zimbabwe is implementing a US\$5.64 million Global Environmental Fund (GEF) and World Bank funded Hwange Sanyati Biological Corridor (HSBC) project. WWF is the executing agency while the government of Zimbabwe implements through four partners: Zimbabwe Parks and Wildlife Management Authority, CAMPFIRE Association, Environmental Management Agency, and Forest Commission. This HSBC project falls within the KAZA landscape covering 5.7 million hectares in North West Zimbabwe. The corridor transects different land use types including protected areas, state land, private farms and communal lands that are home to rich biodiversity and important to people. The HSBC project focuses on three key components namely: protected area management and community livelihoods; improved forest and land management; and corridor sustainability. The HSBC goal and objectives resonates well with the KAZA goal of managing the eco-regional ecosystem, while ensuring the socio-economic wellbeing of the communities and the promotion of better policies, strategies and practices. The project adopted an integrated landscape/ecosystems approach in the specific geographic area of the HSBC within Zimbabwe and thus has developed a multi-focal area project that combines several GEF strategic focal area objectives. The project is cross-cutting and consistent with the GEF Biodiversity, Climate Change, Land Degradation, Sustainable Forest Management/REDD and more importantly putting people/humans at the centre. Preliminary results so far are on the positive side and scaling up to achieve impact at scale will follow. All focal areas are contributing to increased capacity to sustainably manage land, forest and biodiversity and enhancing public awareness on the values of these resources.

Reversing the Cost-benefit Imbalance for Communities Sharing Space with Elephants: Building an Elephant Economy**Graham McCulloch**, Anna Songhurst, Amanda Stronza*Ecoexist Project, Botswana*

Email: gpmcculloch1@gmail.com

Reconciling the costs of living with wildlife and the benefits coming back to people who share space with wildlife is a challenge throughout the region. CBNRM policies were established to help find a balance. The CBNRM policies were designed to build local capacity in wildlife management while also promoting private sector partnerships with communities to derive economic benefits from wildlife. However, CBNRM success in Botswana has been lacking. Of particular concern is the lack of tangible benefits at a household level, even in those few areas where substantial income is derived from Joint Venture Partnerships. Rural communities surrounding the Okavango Delta, are some of the poorest in the country, even though the wildlife safari industry is thriving. Elephants are abundant in the area and should represent opportunities to residents of the Okavango. Instead they bring mostly danger, stress, and damage. For these reasons, many people in the Okavango have negative perceptions of elephants. These perceptions exacerbate Human-elephant Conflict (HEC), making illegal killing more likely. In collaboration with local, regional, and international stakeholders, the Ecoexist team is developing an “elephant economy,” designed to reverse the imbalance between cost and benefits for people sharing space with elephants. The initiative is gaining support and facilitating a local economy, in which people gain direct and sustainable benefits as a result of living with elephants, through non-consumptive use. Activities include: i) facilitating private sector support for “Life with Elephants” products, including a community-based tour and series of art, craft, and performance village competitions, helping brand the area as a place “where people live with elephants”; ii) improving farmer resilience to the effects of elephant crop raiding through diversified agricultural techniques and marketing products from these farms as “elephant aware products”; iii) developing and marketing elephant-themed crafts. The elephant economy is part of a holistic strategy to reduce HEC within the Khaudom and Kwando WDAs within KAZA.

SESSION VI: Natural Resource Stewardship, Strong Protected Areas and the Reality of the Poaching Crisis**Natural Resource Stewardship, Strong Protected Areas and the Reality of the Poaching Crisis**
Russell D. Taylor*WWF in Namibia, Namibia*

Email: rtaylor@wwf.na

The nature and challenge of the poaching crisis and associated illicit wildlife trafficking across Africa is such that unless the current scale of illegal wildlife trade is halted, many populations and even species of wildlife, will cease to exist and no longer able to contribute to community wellbeing and national economies. Broad based approaches that include improved judicial processes, reduced illegal wildlife activity, effective field protection and strong community stewardship of natural resources are all measures urgently needed. They require underpinning by strong governance institutions, incentives and the successful application of norms and laws, traditional or modern, regulating access to, and use of wildlife resources. Poor local communities and individuals can be incentivized to engage in poaching and illegal wildlife trade, associating low risk with high reward. However, communities can be powerful and positive drivers of change but the incentives for such change are invariably insufficient or entirely absent. In many instances, international and national wildlife policies have led to wildlife having little or no economic value to the people who live with it, making it no longer competitive with other land uses such as livestock and agriculture. This removal of economic value not only leads to habitat loss, but also removes a major incentive for local people to protect wildlife from illegal harvesting, or to sustainably manage it. Thus efforts need to understand and address the drivers, incentives and motivations of local communities and others in combatting poaching and illegal wildlife trade. Whilst diverse, they are underpinned by poverty at the site level, poor governance and corruption at the national level and demand internationally.

Regional Responses to Curb Poaching: SADC Law Enforcement and Anti-poaching Strategy (LEAP)**Deborah Kahatano¹** and Moses Chakanga²

SADC Secretariat¹; GIZ Transboundary Use and Protection of Natural Resources Programme, Botswana²

Email: dkahatano@sadc.int

Responding to increased levels of illegal killing and trade in wildlife and wildlife products, SADC Ministers responsible for Environment and Natural Resources, mandated the Secretariat to facilitate the development of a regional Anti-Poaching Strategy, in collaboration with Member States. Consequently, the SADC Law Enforcement and Anti-Poaching Strategy (LEAP) was developed and approved in 2015. The main objective of the strategy is to significantly reduce the levels of poaching and illegal trade in wild species of fauna and flora and enhance law enforcement capacity in the SADC Region by 2021. It identifies priority areas for action including improvement and strengthening of field protection; enhancement of legislation and judicial processes; minimisation of wildlife crime and illegal trade; integration of people and nature; sustainable trade and use of natural resources; and establishment of the regional Wildlife Crime Prevention and Coordination Unit. The strategy derives its mandate from the SADC Protocol on Wildlife Conservation and Law Enforcement. LEAP provides a framework for concerted action and cross-border collaboration by SADC Member States and International Cooperating Partners (ICP) in addressing wildlife related law enforcement and anti-poaching issues such as enforcing the law more effectively, minimising wildlife crime and illegal trade, ensuring sustainable trade and use of natural resources and reducing the root causes and enablers of wildlife crime. The comprehensive approach of the strategy will facilitate a coordinated approach in tackling wildlife crime in the region via economies of scale and enhance regional integration. SADC Member States are urged to implement LEAP as a matter of urgency.

KAZA's Regional Cooperation in Combating Illegal Wildlife Trade and Poaching

Ruii Lisboa

Ministry of Hotels and Tourism, Angola (KAZA TFCA coordinating country)

Email: jjorgerui@hotmail.com

Illegal trade in wildlife and wildlife products remain one of the greatest threats to biodiversity and nature based tourism growth worldwide. In southern Africa, whilst conservation areas such as in the KAZA TFCA are well endowed with wildlife resources, the increase in wildlife crime continues to pose a threat to conservation and sustainable development. Across the KAZA partner countries, there are different strategies and approaches that are employed in combatting wildlife crime. In order to increase the success in combatting wildlife crime, there is a need to jointly address these challenges through common approaches and well capacitated authorities. KAZA partner countries have established regional cooperation structures such as Joint Permanent Commissions (JPC) which deal with wildlife crime amongst other security issues. However there is a need to improve the operations and capacity of these commissions. The participation of a larger range of law enforcement agencies at a regional level is impacted by many factors, which range from the lack of equipment, to capacity of the law enforcement to successfully investigate, apprehend and successfully prosecute perpetrators. KAZA has held a number of regional cooperation forums of law enforcement and the goal of these workshops was to identify resource and capacity needs, and finally develop a KAZA TFCA Law Enforcement and Anti-Poaching Strategy. Through these workshops a number of training needs for law enforcement personnel and the judiciaries were identified. Partner countries further identified the need for the development of standard operating procedures at national and regional level in wildlife investigations, intelligence, and cross border operations, which will facilitate transboundary operations regarding wildlife crimes, thus increasing the success of, investigations, apprehension, prosecution, and deterrence of wildlife crime in the KAZA landscape.

Joint Law Enforcement in the Kwando Wildlife Dispersal Area, Zambezi Region, Namibia

Morgan Saisai¹, Dominic Muema² and Elvis Simba Mwilima³

Ministry of Environment and Tourism, Namibia¹; IRDNC, Namibia²; KAZA TFCA, Namibia³

Email: maibasaisai@gmail.com

Transnational poaching is currently one of the major challenges to the conservation of wildlife. The Kwando WDA is a significant WDA identified in the KAZA TFCA that provides a vital linkage between Angola, Botswana, Namibia and Zambia. The area comprises national parks, game management areas, community trusts, concessions, conservancies, community forests and state forest as protected areas shared among the partner countries. This WDA covers a vast area and hence is a challenge for effective and efficient joint patrols. The Namibian component has functional collaborative management units called complexes. Planning, implementation and monitoring of conservation activities are done collaboratively. Community participation is vital in the operations since they live with the poachers. However, there is need to capacitate such communities to be vigilant law enforcers. The above activities are shared with neighbouring countries through community transboundary forums. Anti-poaching activities, law enforcement, fire management, and livestock movement are but some of the activities that are carried out jointly. Relevant equipment is necessary to allow for swift and efficient action. Strategic anti-poaching camps, roadblocks and hotspot joint patrols are essential in curbing the scourge. We have wildlife crime programmes geared towards increasing anti-poaching effort, increasing risk and reducing rewards for poachers and a CBNRM programme which builds ownership, generates benefits and investments; increasing motivation and capacity for community wildlife stewards. Governments should increase security and prosecutions, stop illegal trade, encourage community policing and grow the wildlife base.

Wildlife Trade – an Overview of Key Issues and Dynamics with a Focus on Timber Trade

Markus Burgener

TRAFFIC, South Africa

Email: markus.burgener@traffic.org

The illegal and/or unsustainable trade in wildlife products in the southern African region poses one of the key threats to a number of plant and animal species. This scenario requires urgent attention given the important role wildlife trade plays in meeting the livelihood and food security needs of millions of people, as well as being an important contributor to State revenue. Much of this trade is driven by demand from Asia, Europe and North America but there is also a market on the African continent for a range of wildlife products. This presentation will consider the associated challenges and possible solutions primarily through an overview of a recent timber trade study in Namibia, Angola and Zambia. A comprehensive assessment of the current status of the timber trade in these three countries was undertaken with a focus on the three main timber species – *Pterocarpus angolensis*, *Baikiaea plurijuga* and *Guibourtia coleosperma*. Trade routes between Namibia, Angola and Zambia were identified. It was found that most of the timber is being extracted in Angola and Zambia and transported through Namibia to South Africa and China. Much of the accompanying documentation was incomplete or questionable and in many instances, officials were unaware of regulatory provisions on timber trade and lacked the capacity and tools to identify timber to a species level. The study highlighted the extent of the cross-border trade and the urgent need for regional collaboration and capacity building.

SESSION VII: Understanding Baselines, Measuring Impacts and the Realities of Data Management in the Context of TFCAs

Understanding Baselines, Measuring Impacts and the Realities of Data Management in the Context of TFCAs

Christine Mentzel

International Union for the Conservation of Nature, South Africa

Email: christine.mentzel@iucn.org

This presentation will set the scene for the session to discuss some of the challenges and successes of measuring the impacts of TFCAs, including the development of relevant indicators as well as the sourcing and

collection of the appropriate data for those indicators. We will recap the outcomes of a side session at the February 2016 TFCA Network workshop in Kruger National Park about data sharing and data standards – a crucial element for TFCAs in particular, as data is collected from different authorities and different countries, which may not be using the same standards. Further, some data needed for monitoring may be sensitive and therefore require specific data sharing conditions. The crucial element in achieving impacts in TFCA development is evidence-based information, which feeds into every step of the management cycle for TFCAs. Further, the presentation will review efforts over the past 10 years within the TFCA network and in particular in KAZA in developing a monitoring framework. KAZA now has a monitoring framework that was presented at the Network workshop in February, and which aims to pitch indicators at the appropriate level and take into account costs for data collection and a brief overview of these are presented here. The other session contributions illustrate data collected on some of these indicators as well as some advances in overcoming challenges in monitoring TFCAs and highlight collaborations on developing standards as well as sharing data.

The Socio-Economic Baseline Survey for KAZA TFCA

Mbiganyi F. Dipotso

KAZA TFCA Secretariat

Email: fmdipotso@hotmail.com

Sustainable rural development for communities living in and along KAZA TFCA is one of the key outcomes of KAZA. A baseline survey to reflect the living conditions of the communities living in and along the KAZA TFCA was undertaken in November 2014 to determine baselines for monitoring and evaluation of the impact of the KAZA programmes. A total of 1565 household interviews and 76 community interviews were undertaken using a livelihood framework tool. The tool used attributes such as: human assets, natural assets, physical assets, financial assets and social capital to measure the socio-economic status of households in selected communities. Human assets were found to be deficient in almost all countries. There is prevalence of low level of education in many of the communities which reduces skills available within the community to engage in livelihoods strategies diversification. Low financial assets are prevalent throughout KAZA TFCA. Agriculture and livestock keeping are regarded as not very profitable for livelihoods, and yields are low due to poor agricultural methods, droughts and Human Wildlife Conflict. Natural resources provide a variety of livelihood means to many of the communities in KAZA. Physical assets such as basic infrastructure is generally lacking throughout KAZA. Traditional authorities in KAZA still play an important role in the KAZA and can therefore provide a gateway to implementation of conservation and community development strategies. The result of the socio-economic baseline survey shows that deliberate measures/activities need to be put in place to address the challenges that are faced by the communities. A Livelihood Survey Handbook and a Socio-Economic Monitoring Handbook have been developed and should be used to assess the impacts of the TFCA programmes and projects on the communities' livelihoods.

Existing and Developing Data Management and Data Capture Tools for KAZA

Craig Beech, Marina Faber, Brennan Walsh, Kingsley Payne, Denton Joachim, Arlene Herbst and Nico Grundling

Peace Parks Foundation, South Africa

Email: cbeech@ppf.org.za

Technology systems that are available for conservation are often developed and deployed with a sporadic and fragmented approach, resulting in a lack of standards and leaving no integration opportunities between technologies or into relevant operational management models. In response to these challenges PPF continues to work towards developing innovative conservation management eco-systems. Since late 2000, the use of Geographical Information Systems (GIS) has been used in all matters relating to the business of facilitating

TFCAs. As a SMART partner, PPF also look to implement the use of Spatial Monitoring and Reporting Tool (SMART) for increased efficacy and strategic law enforcement monitoring. PPF have implemented a prototype mobile device based tool for field data collection to report incidences from the field in such land-use conflicting areas. Furthermore, as the world moved towards Business Intelligence (BI) models, so too PPF have, over the past few years, driven processes strongly toward analysing data and presenting actionable information to implementation partners through the harmonization of spatial mapping and BI tools. The adoption of a *landscape scale conservation* approach has brought to the fore the complexity of sustainable livelihoods for communities living in and around protected areas, as well as that of maintained biodiversity and the ambitious task of preserving and in some cases securing wildlife ecological linkages. In response to these challenges, work towards leveraging the opportunities provided by the explosion in mobile technology to assist in standardising and implementing technologies with networks and devices, so as to develop innovative conservation management eco-systems.

KAZA Land Cover Mapping: Trends, Application and Use

Aurélié C. Shapiro¹, Craig Beech², Russell Taylor³, Michael Schultz⁴, Brit Reichelt-Zolho¹, Mark Thompson⁵.

World Wide Fund for Nature (WWF), Germany¹; Peace Parks Foundation, South Africa²; WWF, Namibia³; Wageningen University, Netherlands⁴; GeoTerra Image (GTI), South Africa⁵.

Email: Aurelie.shapiro@wwf.de

The monitoring and evaluation activities of KAZA include determining where and how the TFCA is meeting its conservation targets, which include the conservation of important wildlife corridors and natural habitat areas. To achieve this, complete and accurate wall-to-wall land cover mapping is required, a data set which needs to be consistently updated to reflect changes and trends over time.

In 2013, WWF, PPF and GTI collaborated to produce a KAZA-wide baseline land cover map based on Landsat satellite imagery collected in 2005, when the TFCA was officially established. Consisting of more than 20 land cover classes, this dataset has identified the major types of natural vegetation, agricultural areas and human land uses throughout the entire extent of KAZA. The dataset was further analysed to evaluate a so-called “human impact” indicator, which can be compared across all landscapes. To evaluate the changes over time and most importantly, separate anthropogenic changes from natural or seasonal trends, a big data cloud-based processing platform is being developed to analyse the entire time series of available Landsat imagery collected since 2000. The method involves calibrating baseline trends, accounting for natural seasonality and changes, and looking for the major anomalies, or “breaks” related to permanent impacts or human-induced changes such as deforestation, conversion to agriculture or settlements. The result enables a detailed multi-year assessment of land cover and use trends over time. The processing platform is powered by open source software, using freely available data, producing open source results available to anyone. Future processing will be implemented by the KAZA GIS/RS working group to support all KAZA activities.

A Practical Tool for Tourism: The KAZA Tourism Grid

Russell Taylor¹, Clive Poultnery², Katharina Dierkes¹, Craig Beech³, **Aurélié Shapiro**⁴, Fred Dipotso⁵ and Richard Diggle¹

WWF-Namibia, Namibia¹; River End Consultants, South Africa², PPF, South Africa³; WWF-Germany, Germany⁴; KAZA Secretariat, Botswana⁵

Email: rtaylor@wwf.na

The KAZA vision is underpinned by nature based tourism as a mechanism for rural development and regional sustainable economic growth, to provide opportunities, facilities and infrastructure that will transform the KAZA into a premier tourist destination in Africa, facilitate tourism, share experiences and pool resources and expertise in tourism management; and improve the livelihoods of local communities within and around the KAZA TFCA. In support of this effort, WWF and a contracted tourism specialist have contributed

substantially to the development of a KAZA tourism strategy over the past three years, including the compilation of tourism profiles, tourism route assessments and their development, a transboundary tourism barrier study and the production of KAZA promotional material and signage. The results of these initiatives are compiled into a practical tool known as the Tourism Grid, an online interactive web map and database that displays tourism-related information in a simple, online map interface. This substantial database includes more than 600 entries detailing tourism facilities, each with related ancillary information including country name, location, the name of the facility, accommodation statistics, services, activities, ratings and awards. This information hosted on WWF's Global Observation and Biodiversity Information Portal (GLOBIL) online mapping portal and being further developed by WWF in conjunction with PPF for compiling additional KAZA information online. The information in the Tourism Grid is derived from collaboration with other tourism studies, including those of DEG, CRIDE, the Master Integrated Development Plan and our own fieldwork. This interface will provide the most comprehensive and integrated understanding of KAZA-wide tourism possibilities, including tourism routes, products, services and activities, along with decision support tools to assess the tourism infrastructure and plan future expansion and potential.

Collaborating for Conservation: The Case of KAZA Carnivore Conservation Coalition **Kim Young¹**, Mbiganyi F. Dipotso², Paul Funston¹, Rosemary Groom³ and Russell Taylor⁴

Panthera, USA¹; KAZA Secretariat, Botswana²; Range Wide Conservation Program for Cheetah and African Wild Dogs, Zimbabwe³; WWF-Namibia, Namibia⁴,
Email: kyoung-overton@panthera.org

At 520,000km², KAZA is massive and the largest conservation and development landscape in Africa. Given the drastically reduced historic ranges of lion, cheetah and leopard (92%, 86% and 73% respectively), KAZA offers one of the few remaining opportunities to conserve these species at scale. Indeed, KAZA encompasses approximately 25% of remaining lion and cheetah range, hosts almost 20% of Africa's lion population, 25% of the African wild dog population and approximately 50% of the wild cheetah population. However, realising KAZA's potential for large carnivores is challenging. Spanning five partner countries, encompassing 36 protected areas and home to 2 ½ million people, landscape scale conservation in KAZA requires programmes that straddle protected area boundaries, international borders and land-use and land-tenure complexities, and must benefit human communities. The KAZA Carnivore Conservation Coalition (KCCC) showcases a collaborative effort to overcome these challenges. Comprising over 50 government and non-government practitioners from several sectors, the KCCC has strategically prioritised five focal areas for large carnivores across KAZA and through focal working groups has developed integrated outcome-focused cross boundary, cross border and cross sector programme plans to secure these sites and pathways as a viable large carnivore habitat network. Our collaboration strongly fosters the sharing of resources and expertise and our strategic approach provides a regional context for local programmes to contribute to KAZA-wide objectives. We demonstrate that the KCCC provides an effective vehicle to realise KAZA-wide goals for large carnivores which could otherwise not be achieved by a series of independent, non-connected, and site specific programmes and organisations.

SESSION VIII: Planning for Sustainable Tourism Development

Tourism in the Context of KAZA **Dave Glynn**

Africa Albida Tourism, Zimbabwe
Email: dave@africaalbida.co.zw

KAZA has five significant products, namely Victoria Falls, the Zambezi River, the Okavango Delta, last great elephant population and the KAZA estate itself. Key attributes that attach themselves to these products

are Wilderness, the Big Five, especially Lion, African Sunsets and its People. The key to these products and attributes is access. Factors affecting tourism flows and growth are outlined, and include capacity, airlines, destination marketing and branding. Sustainability is examined from the perspective of the tourist, the tourism industry, conservation and governments. In summary, KAZA has five magnificent and underexposed tourism assets; The tourist boards the plane for his African Safari substantially to see lion and elephant; KAZA boasts the largest consolidated conservation area with the most pristine and most diverse wildlife estate on the planet and with the last great lion and elephant range, and hosts nearly 60% of the world's remaining population of savannah elephant; KAZA has been handed the key to access with the new Victoria Falls airport and the upgraded Livingstone and Kasane airports; the people of KAZA, the tourism industry, the five governments of KAZA and NGO's carry the responsibility of finding the keys to making use of these magnificent and rare assets whilst preserving them all for generations to come.

DEG: We Finance Opportunities. KAZA – Private Sector Lodges Concepts **Valentina Zeisler**

DEG, Hospitality and Tourism
Email: valentina.zeisler@deginvest.de

DEG linked up as an accredited partner of the KAZA TFCA in 2014 and has supported the TFCA with funds from the German Ministry of Economic Cooperation and Development (BMZ) with the aim of *improving livelihoods by financing private sector initiatives*. As part of this partnership, external consultants were commissioned to prepare investment portfolios, bundling them in sizable parcels with a clear focus on experienced equity partners that have an existing investment portfolio in the hospitality industry and a holistic approach based on a service culture, ecological and social ideologies and community based tourism. Investments that are in line with international environmental and social standards and demonstrate positive developmental impacts at the ground level are then financed.

Development effects of this investment approach include direct and indirect job creation; involvement of local communities; hands-on education concepts; food and beverage training; energy and water efficiency; organic composting/ waste solutions; local farming productions; and transport and warehousing logistics.

Developing and Marketing the KAZA Brand **Felix Chaila¹**, Shareen Thude²

Zambia Tourism Board, Zambia¹; KAZA Secretariat Marketing Advisor, Namibia²
Email: felix.chaila@zambia.travel

The key tourism aims of KAZA are to promote the free and easy movement of tourists across borders, and to develop it into a world-class tourism destination. Yet, 10 years after the signing of the KAZA Treaty by partner countries, the general perception is that KAZA's key focus is on conservation and the environment. KAZA is competing for visitors' attention with every other region (and country) in Africa, and the world. Unless KAZA stands out as an aspirational conservation brand, it will remain a regionally-understood initiative with little impact on the consciousness of those it most needs to influence: potential international visitors. It is therefore imperative to develop a clear and distinctive brand for KAZA, serving as the overarching brand of the five partner countries, whilst also adding value and enhancing its members' components. The five KAZA partner countries are all members of SADC, as well as the two prominent regional tourism bodies, RETOSA (Regional Tourism Organisation of Southern Africa) and Boundless Southern Africa. The mandates of these bodies overlap, and even compete with KAZA. Of paramount importance are the alignment and review of these institutions and their brands, to avoid conflict and compromise of brand effectiveness, whilst at the same time seeking ways to optimise resource utilisation. For the KAZA brand to be developed and implemented effectively, it is crucial to harmonise policies and practices prevailing in the tourism sectors of partner countries.

Annex 6 - Poster Abstracts

Taking the Elephant out of the Room and Putting it into a Corridor: Can Urban Corridors Work?

Tempe S. F. Adams^{1,2,3}, Michael J. Chase³, Tracey L. Rogers² and Keith Leggett¹

Fowlers Gap Arid Zone Research Station, Centre of Ecosystem Science, School of Biological Earth and Environmental Sciences, University of New South Wales, Australia¹; Evolution & Ecology Research Centre, School of Biological Earth and Environmental Sciences, University of New South Wales, Australia²; Elephants Without Borders, Kasane, Botswana³
Email: tadams@elephantswithoutborders.org

Large trans-frontier wildlife corridors can be successful conservation tools by connecting protected areas and reducing the impact of habitat fragmentation for mobile species. Recently, urban wildlife corridors that pass through urban communities have been proposed as a potential mitigation tool in allowing elephants to pass through towns conflict-free. However, because urban corridors are typically narrow and very close to human development, wildlife (particularly large mammals) may be less likely to use them. Remote-sensor camera traps, combined with GPS-collared animals, identified the movement patterns of African elephants through these narrow, urban corridors in urban settlements of Kasane and Kazungula. Corridors were monitored in three types of human-dominated land use zones that represent varying levels of human activities: agricultural, industrial and open-space recreational land. This study revealed that elephants use narrow urban corridors within each land designation, and by using a model selection approach we identified that season, time of day, land designation and rainfall are important factors in determining elephants' presence in the corridors. Furthermore, elephants moved more slowly (0.50-0.55 km/hour) through the narrow corridors compared to their movement patterns through the broader, wide-ranging corridors. The results illustrate that urban wildlife corridors have proven to be useful tools in enabling elephants to pass through urban areas.

Assessment of the Link Between Botswana's Rural Development Policy Framework and the CBNRM Programme: A Case of Chobe Enclave

Tuelo Bapedi¹, Lapologang Magole² and Olekae Thakadu¹

Okavango Research Institute, University of Botswana, Botswana¹; Faculty of Engineering, University of Botswana, Botswana²
Email: tbapedi@ub.ac.bw

Community Based Natural Resource Management (CBNRM) programme was adopted and implemented in southern Africa as a tool for conservation and rural development. However, while the programme is hailed for its significant contribution towards biodiversity conservation, mainly in the KAZA region; it has yielded modest contribution towards social empowerment and sustained community development. The main questions addressed in this paper are; why has CBNRM implementation failed to facilitate social empowerment and create functional institutions?, what role, if any, are relevant transboundary NR programmes such as KAZA playing to facilitate empowerment of communities through CBNRM? Data collection methods included secondary data sources to understand the assigned role and support CBNRM receives from the broader rural development policy framework of Botswana and documents specific to KAZA. Subsequently PRA workshop and key informant interviews will be conducted to find out community perspective on their empowerment and livelihoods improvements related to CBNRM. The preliminary data from documents was analysed using thematic approach. These themes will be reinforced from data from PRA workshop. Findings reveal a weak link between CBNRM policy and the legislation framework for rural development in Botswana thereby limiting support to CBNRM action and its community empowering potential. The weak link further limits the extent to which the KAZA transboundary NR programme can support the CECT to empower the

Chobe enclave communities as it provides the context and limits of its intervention in rural development. The paper recommends a strategy for sustainable community development which is based on a strong link between CBNRM and main rural development policies in terms of the provisions, budgeting and institutional interactions. While the intervention strategy is yet to be fully developed it is recommended that CBNRM initiatives be adopted as the operational strategy for broader rural development policy of Botswana thereby be anchored and resourced in all regional development initiatives including TFCA programmes such as KAZA. It is also proposed that community empowerment be a deliberate objective of the interventions.

Keywords: community empowerment; rural development; transboundary NR programmes, good governance, KAZA

Fair Trade Holidays: Increasing Livelihood Benefits for Communities Through Tourism in KAZA

Manuel Bollmann¹, Hazel Milne² and Richard Malesu³

Fair Trade Tourism, South Africa¹; Eco Awards Namibia, Namibia²; Botswana Tourism Organisation, Botswana³
Email: manuel@fairtrade.travel

Fair Trade Tourism is a Pretoria-based non-profit organisation working both directly and through partnerships across SADC. We coach and certify tourism businesses to become more sustainable. Businesses that adhere to the mandatory criteria of the Fair Trade Tourism and its partner standards must observe strict criteria in their interaction with community resources and cultural heritage. Certified tourism businesses have to actively support initiatives for local community development of infrastructure and social aspects including, among others, education, training, health and sanitation. Their activities must not jeopardise the provision of basic services to neighbouring communities or adversely affect local access to livelihoods. Businesses also have to provide opportunities for guests to purchase local products and services. Information about and interpretation of the natural surroundings, local culture, and cultural heritage is provided to tourists, as well as explaining appropriate behaviour while visiting living cultures, and cultural heritage sites. This is done through a code of conduct developed and implemented with the collaboration and consent of the affected community. Further, certified businesses not only exhibit the highest level of environmental standards of any conventional global certification scheme, but must also adhere to all laws pertaining to business practices and HR of the countries they are based in and international best practice. Through our Mutual Recognition Agreements with the certification systems in Botswana and Namibia, tour operators can now include 26 tourism establishments based in KAZA under the Fair Trade Holiday brand, with more to be added over the next coming months and years.

Conflict and Coexistence in the Okavango Panhandle: Ongoing Research on Human-Elephant Conflict by Ecoexist Project Fellows, Botswana

Erin Buchholtz^{1,2}, Graham McCulloch^{1,2,3}, Anna Songhurst^{1,2,3}, Amanda Stronza^{1,2}, Lee Fitzgerald¹, Tim Coulson³, Ogaufi Maripe^{1,2}, Albertinah Mogotsi^{2,4}, Rocio Pozo^{1,3}, Lauren Redmore^{1,2}, Moses Masake^{1,2}, Susanne Vogel^{1,3} and Patricia Mokotedi^{1,2}

Ecoexist Project, Botswana¹; Texas A&M University, USA²; Oxford University, UK³; Botswana University of Agriculture and Natural resources⁴
Email: ebuchholtz@tamu.edu

Conservationists acknowledge human-elephant conflict (HEC) is a major conservation challenge and has been identified as an essential component to the success of regional wildlife management strategies like the Kavango Zambezi Transfrontier Conservation Area (KAZA TFCA). The Okavango Panhandle of Botswana is a central part of the Khadum and Kwando Wildlife Dispersal Areas (WDAs) within the TFCA. People and elephants here compete for space and resources and negative interactions often occur when and where they interact. In order to find solutions and inform management decisions to reduce such conflicts it is key

to understand the social, ecological, economic, and political drivers of HEC. A team of researchers with the NGO Ecoexist is working from a variety of disciplines to gain a greater understanding of this complex issue from elephant behaviour and movements through to community benefits and diversifying cropping strategies. Ongoing assessment of the movement of 40 GPS-collared elephants has shown their movement across more than 47,000 km² in Botswana, Namibia and Angola, with distinct seasonal patterns, notable cross-boundary movements and implications for HEC. We have found that the amount of agricultural land allocated is the main driver of reported crop raids, and not human or elephant population size. Mitigation and cropping techniques are being tested in novel ways with varying results. Applied research such as this, which emphasizes connections and the many dimensions of HEC, is crucial for informing policy and finding solutions to HEC throughout the region.

KAZA TFCA Wildlife Disease Diagnostic Laboratory

Christopher Foggin and Jessica Dawson

Victoria Falls Wildlife Trust, Zimbabwe
Email: cfoggin@zol.co.zw

The KAZA TFCA, which encompasses five countries, 1.5 million people and their livestock, is host to a number of wildlife of different species. In 2011 the Victoria Falls Wildlife Trust opened a wildlife disease diagnostic laboratory to be able to assess zoonotic and transboundary disease prevalence within the KAZA TFCA. The laboratory has been able to provide diagnoses of a number of important diseases, including tuberculosis, anthrax, foot and mouth disease, brucellosis, mycoplasmosis, theileriosis, canine distemper and malicious poisoning with cyanide. Brucellosis rates in KAZA are significantly lower in cattle (3.2%) than in other TFCA's in Zimbabwe (GL-TFCA and Mapungubwe 7-26%), presenting a lower risk of transmission to humans. VFWT have found sero-positive mycobacterium complex in captive elephant with implications to humans in frequent contact to have annual screening. Recently *Mycobacterium mungi* in the banded mongoose population around Victoria Falls has also been confirmed and the implications for humans and wildlife at this interface needs future investigation. PCR technology has assisted in diagnosing some of these diseases including anthrax in wildlife species in KAZA. The gross and histopathological services can provide a rapid diagnosis of wildlife mortality. This assists the wildlife and veterinary authorities in controlling these diseases. The laboratory plans to expand its facilities and testing, especially with PCR technology to be able extend its services to more of KAZA's communities, wildlife authorities and wildlife producers on disease surveillance, diagnosis and prevention.

Improving Livelihoods Through Community Animal Health and Welfare Centre

Christopher Foggin¹, Jessica Dawson¹ and Melanie Hood²

Victoria Falls Wildlife Trust, Zimbabwe¹; Veterinarians for Animal Welfare Zimbabwe, Zimbabwe²
Email: cfoggin@zol.co.zw

For many subsistence villagers, animal health is important, yet they lack either access, or do not have means, to be able to improve the health of their domestic animals. This is further compounded in communities adjacent to wildlife areas, where there is an interface with wildlife, which facilitates transmission of diseases between wildlife, domestic animals and sometimes humans. In July 2016 the Victoria Falls Wildlife Trust together with Veterinarians for Animal Welfare of Zimbabwe opened a Community Animal Health and Welfare Centre in the Victoria Falls area of KAZA. The newly established Centre is based in the rural area and works to identify disease problems, provide low-cost veterinary treatment, host vaccination campaigns, sterilize dogs and cats, as well as re-home stray animals. In surveys conducted at vaccination campaigns beginning in 2012, data shows the average lifespan of a dog living in the adjacent rural areas is 3 years. Rabies vaccination campaigns have been conducted for three consecutive years, with increasing numbers of dogs being vaccinated each year. In

time we hope to be able to show an increase in the lifespan and health of rural animals, and target a 75% vaccination rate against rabies amongst dogs. The goal of this Centre is to improve animal health and lifespans, with the aim of improving livelihoods of communities living at the wildlife interface.

Using Cheetah as a Flagship to Drive Landscape Scale Conservation in KAZA

Rosemary J Groom

Range Wide Conservation Program for Cheetah and African Wild Dogs, Southern Africa
Email: rosemary-rwcp@zsl.org

The vision of the 2016 IUCN Southern African Conservation Strategy for Cheetah and African Wild Dog is "To secure viable cheetah and wild dog populations across a range of ecosystems that successfully coexist with, and are valued by, the people of southern Africa". To help meet this vision, the Range Wide Conservation Program for Cheetah and African Wild Dogs (RWCP) has instigated a Cheetah Landscape Project, with the KAZA TFCA selected as the landscape of choice in southern Africa.

In 2013 the RWCP was involved in the development of a conservation strategy and action plan for African wild dogs in KAZA. A natural progression from this species-specific action plan was to develop an output focussed action plan for conserving the entire large carnivore guild of the KAZA TFCA, which was initiated in October 2015 with the establishment of the KAZA Carnivore Conservation Coalition (KCCC). It is through the KCCC that the RWCP's Cheetah Landscape Project will be driven. This long term project will entail helping to secure viable cheetah populations at significant scale and across international boundaries within KAZA, and will be implemented through significant collaboration with a wide suite of stakeholders. Mechanisms by which the RWCP will drive the cheetah landscape project will include: raising funds to support current on-the-ground programs; facilitating linkages and collaborations between stakeholders; developing, implementing, supporting and strengthening initiatives for communities to derive benefits from cheetah; promoting conservation education and advocating for policy changes where necessary.

Cameras, Trackers and Trends – Monitoring Zambezi Carnivores

Lise Hanssen¹ and Paul Funston²

Kwando Carnivore Project, Namibia¹; Panthera, USA²
Email: carnivores@iway.na

Monitoring of large carnivores is an essential part of conservation activities, with population size, distribution and trend being good indicators of ecosystem health, success of conservation efforts and degree of connectedness amongst populations. Namibia's Zambezi Region lies right in the heart of KAZA linking protected areas in neighbouring countries that combined are vital for the persistence of resident carnivore populations and for the socio-economic benefit they can convey to people in adjoining communities. Large carnivores occur in resident populations both within protected and communal/conservancy land within the Zambezi Region. A long-term monitoring program is maintained by the Kwando Carnivore Project in partnership with organizations such as Namibia's MET, Panthera, WWF and others. Populations are monitored through species appropriate techniques including collating information on known individuals/groups, spatially explicit camera trap surveys for readily identifiable species, and spoor indices for large areas with low density large carnivore populations. The latter is reliant on the tracking skills of the Khwe San communities residing in Bwabwata's multiple use area. Of the large carnivores, lions and cheetahs occur at the lowest densities, with lions having increased from largely extirpated levels in some areas. Leopards, wild dogs and spotted hyaenas occur at roughly similar overall population numbers, with spotted hyaenas seemingly recovering in areas where they were persecuted in the past. These surveys create a baseline against which to evaluate existing conservation

actions and the measure impact of new interventions going forward.

Lessons from 20 Years of Human-Elephant Conflict (HEC) Mitigation in Africa Are Especially Applicable to KAZA

Richard Hoare

IUCN African Elephant Specialist Group, HEC Working Group, Zimbabwe
Email: rhwildlife@gmail.com

The mitigation categories employed during 20 years of HEC mitigation efforts are: (i) rural communities using traditional deterrent methods; wildlife authorities (ii) disturbing and chasing, (iii) killing or (iv) translocating 'problem elephants'; (v) fencing options - sometimes supplemented with extra olfactory (chilli extract) and auditory (bee sound) deterrents; (vi) compensation and insurance schemes; (vii) wildlife utilization/benefit programmes which must incorporate land-use planning, changes and zonation; based on (viii) systemic data collection and contextual research.

Shorter term measures applied against elephants and used within the conflict zone (i - v) are far less successful than longer-term measures working with people, which also rely on official policy and administration situated beyond the conflict zone (vi - viii).

HEC shows complex spatial dynamics but relatively few problem animals are responsible, often displaying particular individual behaviors. The human perception of conflict is more of a mitigation problem than the problem animals themselves. Thus one should (a) not kill problem animals as a routine but stop them reaching their 'targets' and (b) prioritize mitigation measures that work consultatively with people over those 'fighting against' animals occupying the landscape.

There is no panacea for HEC and it cannot be eliminated; therefore aim to reduce it to 'tolerable levels' that do exist within communities. Always combine mitigation measures at different scales and employ longer-term HWC mitigation measures that produce the strongest synergy. Politically two approaches are vital to tackle HEC: local participation (best done within a CBNRM programme) and vertical and horizontal integration in government administration.

KAZA TFCA – A Potential Hot Spot for Foot and Mouth Disease Surveillance, Control and Research

Ferran Jori^{1,2,3}, Eric Etter^{1,2,4}, **Alex Caron**^{1,2,5}, Vladimir Grosbois², Eve Miguel^{1,2} and Laure Guerrini^{1,2}

Research Platform Production and Conservation in Partnership, University of Zimbabwe, Harare¹; Integrated Animal Risk Management Research Unit, CIRAD, Campus International de Baillarguet, Montpellier, France²; Department of Animal Science and Production, Botswana College of Agriculture³; Department of Production Animals Studies, Faculty of Veterinary Science, Onderstepoort, University of Pretoria, South Africa⁴; Faculdade de Medicina Veterinaria, Universidade Eduardo Mondlane, Maputo, Mozambique⁵
Email: ferran.jori@cirad.fr

Interactions between livestock and wildlife at the edge of protected areas are well known to facilitate the circulation of pathogens between both animal populations. Foot and Mouth Disease (FMD) occurrence in the SADC region has increased alarmingly in the last decade, and a large proportion of FMD outbreaks have occurred as a result of those interactions, affecting animal production, trade and food security among rural communities. However, the KAZA TFCA, currently a high risk area for FMD emergence, could become a privileged platform for transboundary cooperation on FMD surveillance, control and research. The multinational nature of the KAZA TFCA, could be explored a) to enhance surveillance and exchange of

information (cf. harmonizing data collection, surveillance and monitoring methods to improve information exchange), b) building capacity on basic and advanced epidemiology, risk assessment, and the implementation and evaluation of surveillance systems, c) monitoring and assessing animal movements and the risk of FMD emergence at different specific locations through common harmonized protocols, d) developing pilot projects for the implementation of non-geographic approaches (commodity based trade) in order to engage rural communities on FMD management. These developments could be achieved with the support of international and regional animal health organizations (SADC-FANR, FAO, OIE) and the technical assistance of active and recognized research and development agencies and reference FMD laboratories. This platform should help to improve the market access of livestock products for rural communities and ensure safe trade of commodities within the SADC region.

Addressing Human Wildlife Conflict Through Climate Change Adaptation in Mutemwa Community

Chipango Kamboyi, Miyanda Crispin and Bwendo Kabanda

WWF Zambia
Email: ckamboyi@wwfzam.org

Climate change impacts causing frequent and intense droughts continue to ravage the semi-arid western Zambia, exacerbating the already precarious human-wildlife conflict situation with communities. With support from the World Bank and the Government of the Republic of Zambia, WWF Zambia was engaged to be the Climate Risk Adaptation Facilitator (CRAF) for Mulimambango and Kalobolelwa wards of Sesheke district in Western Zambia... WWF Zambia's role was to assist communities in highly vulnerable areas to identify climate risks and hazards, and address the impacts of climate change in their local development plans especially those touching on their co-existence with wildlife. By using Climate Risk Assessment Manuals and techniques in Mutemwa, community members were able to identify climate related/associated challenges and were able to identify water shortage and droughts to be among the most threatening risks brought about as a result of climate change impacts. As a result of the Participatory Climate Vulnerability Assessments (PCVA) conducted with community members, Mutemwa community have three solar powered boreholes installed with supply capacity of 10000 liters (two) and 5000 liters supplying the primary school, and two clusters of villages i.e. Ilwendo and Kapasa villages respectively. In addition community members have more than 13 smaller projects complementing the bigger adaptation projects such as gardening, goat and chicken rearing that are helping cushion the impacts that climate change brings and reducing their exposure with wildlife risks. This has also reduced the number of hippos and crocodiles being snared and killed thus increasing the numbers.

KAZA Community Transboundary Forums – Progress and Future Evolutions for Locally Driven Transboundary Conservation

John Kamwi¹ and TNNRM Forum Chairs²

IRDNC, Namibia¹; TBNRM Forum Chairs, Botswana, Namibia, Zambia²
Email: johnkamwi64@gmail.com

The poster will present the development, lessons learnt and current plans for further evolution of the Trans-boundary Community Natural Resource Management Forums established by communities in 4 of the 5 KAZA countries that neighbour with Namibia. IRDNC has been actively promoting coordination and communication between the 15 Zambezi conservancies and associations and interested communities in Botswana and Zambia and Angola for a number of years. An outgrowth of this process has been the formation of a number of trans-boundary community led forums through which Zambezi conservancies and adjacent communities in other countries can discuss and coordinate management of shared natural resources. KAZA provides an opportunity to further strengthen these trans-boundary coordination forums

and to secure recognition by KAZA of the forums' validity as legitimate KAZA stakeholders. To date there are forums established and holding regular meetings and implementing joint action plans and initiatives such as joint patrolling and monitoring together with relevant Government agencies in 2 out of the 3 critical Wildlife Dispersal Areas (WDAs) in the KAZA landscape, engaging community conservancies or Trusts in Namibia, Botswana and Zambia. Exchange visits and mutual lesson learning has also occurred with Zimbabwean CAMPFIRE communities. One example of result from such community scale organisation across borders has been the recent seasonal fishing ban by all 3 countries on the Zambezi-Chobe river system. On-going engagement with Angolan colleagues and NGOs has been increasing with plans underway to add further community Forums in the 3rd WDA linking local representative bodies in Angola, Namibia and Botswana.

Integrated Anti-Poaching in Hwange National Park: Present and Future Perspectives

Phillip Kuvawoga

WWF Zimbabwe, 10 Lanark Rd, Belgravia Zimbabwe
Email: pkuvawoga@wwf.org.zw

Hwange National Park (1.4 million ha) is Zimbabwe's largest protected area supports considerable biodiversity. With over 45 000 elephants, the park holds twice its ecological carrying capacity of the species. However, the elephant population in this area (1.4 million ha) is under severe pressure from organized poaching syndicates. In 2013, over 100 elephants died from cyanide poisoning of salt licks and two water points in the remote and poorly accessible section of Hwange National Park. Anti-poaching efforts are not proving effective because of the remoteness of some of its outposts and its long boundary with Botswana in the west and communal areas in the south and east. As a result of its size, HNP faces many challenges including constraints in terms of manpower (patrol density (i.e. number of rangers/km²) for HNP is 105km²/ranger, infrastructure and equipment.

A wildlife based anti-poaching plan was developed to optimize law –enforcement planning and monitoring. In order to effectively track its effective implementation, a poaching baseline and ranger capacity needs assessment was undertaken for three identified poaching hotspots. Results from the assessment showed that over 200 elephants were poached between 2014 and 2015. Patrol effort results have shown that overall extended patrol effort have declined from 17,791 man-days in 2014 to 13,935 man-days in 2015 on average it takes over 860 patrol days for every local poacher arrested. Under the current circumstances, it is difficult to effectively undertake wildlife protection operations. Funds are required to support infrastructure and mobility including the use of Unmanned Aerial Vehicles.

Wildlife Corridors in Key Wildlife Dispersal Areas in Namibia – Experiences To Date in Design and Models for Resourcing

Bennety Likukela, Dominic Mwema and Brian Jones

IRDNC, Namibia
Email: blbennety14@gmail.com

IRDNC with partners is undertaking a programme that aims at establishing greater long-term connectivity for populations of wildlife species that need large landscapes to move through and/or disperse within the Kavango/Zambezi (KAZA) Trans-frontier Conservation Area. This approach relies on the identification and institutionalization of wildlife movement corridors. Potential corridors, as well as those already in existence, have been examined from a human perspective as well as a wildlife perspective. This is being done at three scales: Macro-level (the KAZA landscape as a whole), Meso-level (within and between countries) and Micro-level (at the community-protected area interface). The poster will present progress in developing practical designs for these corridors, the institutional models emerging and experience collated on innovations in

resourcing such corridors. Progress includes that; a detailed methodology has been developed and now under implementation to guide corridor securing and institutionalising, Dzoti and Sobbe conservancies have reached the stage of developing preliminary plans securing their corridors, and all relevant corridor areas in Zambezi Region have been recorded as specific approved land uses within the Zambezi Regional Integrated Land Use Plan. Current steps include finalization of the preliminary plans in Dzoti and Sobbe and the consideration of possible payments for ecosystem services (PES) to conservancies for successful maintenance of corridors. The latter has included visits to East Africa to learn from their experience in wildlife corridors and the 'easement' approaches to them. The poster will detail IRDNC's corridor experience noted above through text, maps and diagrams for improved engagement with wider KAZA stakeholders.

Status Survey of Large Carnivores and Their Principle Prey at the Kafue – Zambezi Interface: Implications for Landscape Level Connectivity

Robin Lines and Joseph Tzanopolous

The Durrell Institute of Conservation and Ecology, University of Kent, U.K.
Email: rl291@kent.ac.uk

While much attention is placed on formally protected areas in driving conservation and development, important needs exist to understand and manage key natural resources within nominally unprotected and increasingly human-altered landscapes, at appropriate scales. Such scaled management approaches are vital for conservation of large carnivores that provide critical ecological services in structuring habitat and driving ecosystem production, and generate much tourism interest.

This study compares the contemporary predator-prey guild between Kafue National Park and the Zambezi River against a baseline known from 1978 using an Occupancy Estimation and Modelling framework to map species occurrence and distribution. Site-calibrated spoor surveys covered 1,224km of spatially and temporally replicated transects throughout two Game Management Areas, an Open Area and a Communal Conservancy considered representative of key biophysical and management zones proposed as a landscape-level linkage between clusters of wildlife managed area.

Predator/prey occurrence was largely unchanged at the Game Management Area scale. Significant declines in species occurrence and distribution occurred south of the Mulobezi-Livingstone railway line through an Open Area and into the Simalaha Conservancy, where all large carnivores and 15 of 21 existing prey species went undetected.

While acknowledging detection error of a single season sample approach, these data indicate a significant decline/severing of functional connectivity at the large mammal scale. Human-induced pressures are hypothesised to preclude recolonisation of many large mammals under existing circumstances. Interventions aimed at improving benefits of wildlife-based land uses and functional connectivity need be addressed at appropriate site and species-specific scales, and systematically evaluated for effectiveness.

When Lions Grow Corn: The Use of Mobile Communal Bomas to Reduce Human Carnivore-Conflict and Increase Crop Yields

A. J. Loveridge, L. J. Mathe, L. Sibanda, J. E. Hunt and David W. Macdonald

Wildlife Conservation Research Unit, Department of Zoology, University of Oxford, United Kingdom
E-mail: andrew.loveridge@zoo.ox.ac.uk

African lions (*Panthera leo*) are declining in many parts of the continent, with retaliatory killing for attacks on livestock being an important cause. Human carnivore-conflict also causes serious socio-economic challenges

for people living adjacent to Protected Areas. We tested the effectiveness of mobile bomas (cattle enclosures made of PVC canvas sheets), installed in communal lands adjacent to Hwange National Park, in protecting livestock overnight from predation by lions and spotted hyenas (*Crocuta crocuta*) and simultaneously increasing the productivity of crop fields they were sited on. Our findings showed that, over a three year period, mobile bomas were 100% effective in protecting livestock from carnivore attacks at night. Cattle in bomas break-up compacted soil with their hooves and fertilize the site with their dung and urine. Crop yields were significantly higher on sites fertilized this way. Maize plants grown on boma sites were 94 % taller (187cm) with thicker stems and produced double the number of cobs per plant compared to plants grown on control sites. The study highlights the potential value of mobile bomas as an effective mechanism reducing human wildlife conflict and improving rural livelihoods in KAZA's human and livestock dominated areas. The results are particularly beneficial for farmers living in communal lands classified under agro-ecological region IV of Zimbabwe which are characterized by poor agricultural soils and erratic rainfall. We recommend the testing and adoption of mobile bomas in areas affected by depredation as a proven method to mitigate human carnivore-conflict.

Guarding Rural Communities and Saving Lions in KAZA-TFCA

Andrew Loveridge¹, Lovemore Sibanda¹, Bongani Dlodlo², Jane Hunt¹, Jessica Dawson², Roger Parry², Lovelater Sebele³ and Paul Funston⁴

*WildCRU, Hwange Lion Research, Zimbabwe*¹; *Victoria Falls Wildlife Trust, Zimbabwe*²; *Zimbabwe Parks and Wildlife Management Authority*³; *Panthera, Lion Programme*⁴
E-mail: andrew.loveridge@zoo.ox.ac.uk

Rural communities living alongside protected areas are often heavily affected by human-wildlife conflict, particularly livestock depredation by large carnivores such as African lions and spotted hyenas. Recent research around Hwange and Zambezi National Parks reveals that levels of conflict can be explained by a complex interplay between location, season, predator behavior and local agricultural practices. Seasonal livestock herding practices are particularly important in determining levels of conflict. Our data shows that 80% of livestock killing incidents by large predators occurs when stock are left grazing unattended with 60% of incidents occurring at night. To protect both predators and people, improved mitigation strategies are urgently needed. To address this a team of 14 community guardians were recruited in local communities to provide an interface between the community and conservation. They have received training to collate and report on wildlife conflict incidents in their areas and to provide advice and assistance to local people on the best livestock protection practices (with particular focus on bringing livestock to secure enclosures at night and herd guarding during the day). Through use of GPS collars on potential problem lions 'alerts' are relayed to guardians, via a smart phone 'whatsapp' group to warn community members when lions are nearby. Remedial action is taken by guardians to chase lions back into the protected area. Since 2012, through these actions, we have recorded a 50% decline in livestock loss to large predators, particularly lions. The community guardian concept has the potential to be adopted elsewhere in the KAZA-TFCA.

Mapping Corridors for Lion Conservation and Management Across KAZA

Samuel A. Cushman¹, Nicholas B. Elliot², Dominik T. Bauer², Kristina M. Kesch², Laila Bahaa-el-Din², Godfrey Mtare³, David W. Macdonald² and **Andrew J. Loveridge**²

*US Forest Service, Rocky Mountain Research Station, USA*¹; *WildCRU, Department of Zoology, University of Oxford, UK*²; *Zimbabwe Parks and Wildlife Management Authority/ KAZA-TFCA Secretariat*³
Email: andrew.loveridge@zoo.ox.ac.uk

Habitat fragmentation is a major driver of population declines and extinction for large terrestrial carnivores. Connectivity models provide practical tools to objectively evaluate population-wide, synoptic patterns of

connectivity and identify the most important core areas and the linkages between them. We mapped and ranked the relative importance of habitat linkages between the major African lion core areas across the KAZA TFCA and beyond in order to provide a quantitative analysis to inform land-use management and decision making. We used an empirically optimized resistance surface, based on analysis of 927, 30 day movement trajectories of 50 GPS collared lions, to calculate core areas and population connectivity paths. We ranked linkage areas based on relative importance to population connectivity across the region. Results identified six major lion core areas, connected by six dominant linkages. The Hwange-Sebungwe and Makgadikgadi-Central Kalahari corridors are the strongest and most important linkages which should receive priority consideration in developing regional conservation strategies for lions. Minimizing development through optimization of land-use planning in key corridors and careful zonation of livestock and wildlife within corridor areas may safeguard these corridors, increase overall connectivity of the population and mitigate human-lion conflict.

Contestations of Land Reform, Livelihoods and Conservation: A Case of Transfrontier Conservation Areas in Zimbabwe

Bright Masocha

University of Cologne, Germany
Email: bmasocha@smail.uni-koeln.de

The diverse interests and approaches by these stakeholders, through various institutions, have ultimate effect on the conservation of wildlife and rural livelihoods. This paper is based on an ongoing academic research in the contestations of land use in Trans frontier conservation areas in Zimbabwe, Hwange communal areas, part of KAZA. An ethnographic approach has been used to collect data with the aim to examine the contestations brought about by diverse interests and institutional dynamics among the stakeholders and political ecology theory was used. Quantitative data collection techniques were also employed for quick comparison of results before conclusions are made. Preliminary results are pointing to the fact that human-human conflicts (socio-political challenges) are central to human-wildlife conflicts. Some forms of human-wildlife conflicts such as poaching and wildlife poisoning are key indicators of socio-political and economic problems in the KAZA, especially Zimbabwe. Land reform programme resulted in new forms of land ownership and lack of commitment to conservation issues due to lack of proper incentives. The findings will contribute immensely in policy and institutional analysis and shift in dealing challenges associated with poaching.

Keywords: Land reform, human-wildlife conflicts, conservation and TFCAs

Preparing Communities for Entry into the Tourism Value Chain in KAZA Through the KAZA 'Community Livelihoods Enhancement' Programme

Bruce N. Mead¹ and Pauline Lindeque^{1,2}

*CRIDF, South Africa*¹; *AGRA ProVision, Namibia*²
Email: bruce.mead@cridf.com

The KAZA area hosts the finest biodiversity and wilderness assets of the five Member States, whilst also providing a home to the poorest, most vulnerable and marginalised communities. The ability of the tourism sector to reap the full benefits of transboundary cooperation will be fatally undermined in the long-term unless the biodiversity and wilderness assets on which they depend are secured. Opportunities for KAZA communities to share in growth will be severely limited if they continue to rely on the consumptive and often unsustainable use of natural assets, and they will remain in a state of vulnerable subsistence.

The potential for symbiotic, sustainable and inclusive growth exists, but new and innovative uptake pathways will be required going forward. One such approach is being trialled by KAZA with support from the Climate

Resilient Infrastructure Development Facility CRIDE. In this approach, KAZA has developed a range of decision making databases and diagnostic tools to guide and focus the delivery of its ambitious 'Community Livelihoods Enhancement' programme which promotes investments such as '....joint ventures between communities and private investors, conservation agriculture, horticulture, community owned tourism and accommodation facilities and commercialisation of natural resources...'. Five value-chain 'products' are being developed as prototypes to demonstrate how communities can break into lucrative tourism supply chains. Taken to scale, the livelihoods programme will ensure that KAZA communities' have a seat at the regional and sustainable tourism growth table.

To fund the investment, KAZA is applying to the Green Climate Fund for the entire livelihoods programme.

Increasing Human-Animal Coexistence: Mitigating Human Wildlife Conflicts in Silwana Complex

Nyirenda A Moses¹, Luwaya H. Maseka² and Kamboyi Chipango¹

WWF Zambia¹; Department of National Parks and Wildlife, Sioma NP, Zambia²
Email: mnyirenda@wwfzam.org

Human wildlife conflict is a serious concern in the Silwana complex. It occurs in different forms including crop raids especially by elephants, hippo raids of fields/gardens near rivers, as well as predation by carnivores as well as crocodile attacks on humans. Human wildlife conflict has over time resulted in strained relationship between DNPW and local communities, with DNPW often being accused of valuing the life of wildlife more than human beings (especially after crop raids, or instances of fatalities and predation). HWC driven wildlife persecution and retaliatory killings can be a serious barrier to the acceptance of wildlife as a land-use option in a GMA such as the Lower West Zambezi where wildlife based tourism is still in its depressed state. Designing and implementation of effective measures to mitigate HWC are one of the pillars for wildlife management in communal wildlife landscapes. WWF in partnership with DNPW, GRAD and local communities initiated the design of low cost solar powered mammal large animal restraining fences. A total of 6 solar powered animal restraining lines have been erected in 5 village clusters Kabula, Kaanja, Mutemwa (Namtondo village), Mutemwa (Kapasa village), Malombe and Imusho. Which are protecting crops and property for over 2000 people in Lower West Zambezi GMA. Erection of the animal restraining line has significantly lowered HWC, upto 80% in some cases. The highest HWC reduction was observed in 2015. These pilot interventions show that it is possible to mitigate HWC at low cost and with community ownership of the projects. Experience and lessons from these pilot sites can inform national HWC mitigation strategy if and when it will be developed.

Catalysing the Recovery of Key Wildlife Species in the Sioma Ngwezi NP and Lower West Zambezi GMA

Nyirenda A Moses¹, Luwaya H. Maseka² and Kamboyi Chipango¹

WWF, Zambia¹; Department of National Parks and Wildlife, Sioma NP, Zambia²
Email: mnyirenda@wwfzam.org

Since the creation of the KAZA TFCA, populations of high tourism value wildlife species including elephants, impala, roan, reedbuck, zebra, buffalo and large carnivores has remained low in the Silwana complex due an interplay many factors ranging from heavy depletion of wildlife resources during the liberation wars, poaching for ivory and bush meat, sub optimal management, inadequate water availability (worsened by consecutive drought years), wild bush fires and blockage of corridors. A gradual recovery of the less water depended species such as eland, sable, giraffe and common duiker has been also been reported. In an effort to reinforce the recovery of wildlife species and to restore Sioma Ngwezi NP as an important wildlife habitat and tourism destination within the KAZA TFCA, an Intensive Protection Zone (IPZ) has been set up within Sioma Ngwezi

National Park. This is a partnership among DNPW, WWF, PPF the BRE and the two community resources boards that seeks a four pronged approach of 1) phased restocking/ reintroduction of high fecundity but low risk herbivore species 2) intensifying wildlife security 3) enhancing habitat carrying capacity through careful water augmentation and 4) introducing a tourism concession in the Chibee pans area, South East of Mufulani.. To date, a 100 hectare receiving boma has been constricted, over 80 km of management looped have been opened and 2 water boreholes have been sunk and equipped in the Sioma Ngwezi NP while the training of 30 additional WPOs and Villages scouts is underway.

Enhancing Wildlife Habitat Connectivity Through Land Use Planning: The Case for Lower West Zambezi GMA, General Management Plan Zambia

Nyirenda A Moses¹, Luwaya H. Maseka² and Kamboyi Chipango¹

WWF Zambia¹; Department of National Parks and Wildlife, Sioma NP, Zambia²
Email: mnyirenda@wwfzam.org

One of the key of the objectives of the KAZA TFCA is to promote and facilitate the development of a complementary network of Protected Areas within the KAZA TFCA linked through corridors to safeguard the welfare and continued existence of migratory wildlife species. The Lower West Zambezi GMA provides for important elephant corridors that have historically been used by elephants to access water from the semi-arid Sioma Ngwezi NP to the Zambezi River in the east and the Kwando river in the west and also allowing for the seasonal transboundary movement of elephants from Zambia into Angola and Namibia and vice versa. Pursuant to provisions of the Zambia Wildlife Act No 14 of 2015, the participatory process land use planning process used in development of the Lower West Zambezi GMA General Management Plan resolved to facilitate the free transboundary movement of wildlife *into* and *out of* the Lower West Zambezi GMA. Using the best indigenous knowledge and scientific data, all the known active elephant corridors were zoned as wildlife corridor zones. The wildlife corridor zones were described as 2-3 km wide strips which should be maintained in pristine state where no cultivation and establishment of new villages will be allowed. The consultative process also provided for the voluntary relocation of individuals whose farms fall within the wildlife corridor zones. Among the planned activities in the implementation of the GMP will be to determine the extent to which the proposed corridors are still free of human settlements and conduct negotiated relocation where feasible.

Carbon Sequestration as Payment for Ecosystem Service

Professor Willem van Riet

Transboundary Consulting Africa
Email: prof@transbcafrica.com

Payment for ecosystem services has been written about as often but implementation has been slow. Payment for carbon sequestration is one important effect of conservation. It is therefore one of the most sustainable source of funding for conservation as a form of land use. The development of the REDD+ processes has established that there is opportunities in the tropical region of Africa. The IPD has not given must attention to this as a conservation focus. Through our work in Cameroon on the protection of the rainforest through conservation has involved me in the implementation of REDD+ processes. In Cameroon we based much of our analysis on research of NASA and specifically Dr Saatchi of the Jet Propulsion Laboratory in the USA. We completed a draft application for KAZA based on the database for Africa to test the implications of Redd+ implementation. We produced a map of KAZA illustrated the carbon potential which throws new light on the distribution of natural resource of KAZA. This is the type on research and investigation that should be targeted in the future.

Finding Common Ground – Experiences in South-South Exchanges for Innovation in Transboundary Conservation and its Resourcing

Bright Sanzila¹, Ingelore Katjingsiua², Reuben Mafati³, Janet Matota³, Richard Diggle² and Simon Anstey³

Ministry of Environment and Tourism (MET) Zambezi Region, Namibia¹; WWF Namibia²; IRDNC Namibia³; NACSO, Namibia
Email: bsanzila@yahoo.com

Since 2015 there have been significant efforts within IRDNC and together with its partners to learn from experiences, gain ideas and assess innovations through 'South-South' exchange visits. These have focused on 'practioners' (community, local NGO, regional government conservation staff) visiting East Africa or *vice versa*. This poster will present the process and results of visits so far to Kenya and Tanzania and the key lessons learnt and current steps to implement these in the Zambezi Region and for exchanges of ideas and practical results with KAZA stakeholders. Issues that have formed the core aims of learning through exchange visits and links with institutions include; institutional innovations at both the local 'conservancy' level and the support NGOs and Government policies (such as mechanisms of local financial management, research and sustainable financing of activities), various approaches and lessons from establishing 'wildlife corridors' in Tanzania, resourcing innovations and diversification options for local natural resource management entities ranging from voluntary carbon income, other Payments for Ecosystem Services (PES) in species and landscape approaches (in both Tanzania and Kenya drylands) and how different Government Policies promote or constrain key issues around land fragmentation and diversifying incomes from sustainable natural resource management at local scales. The poster will also identify on-going plans, including staff secondments, for embedding this mutual learning 'South-South' further for the benefit of improved trans-boundary management and learning within KAZA.

A Comparative Analysis of Allometric Equations Developed for Miombo Woodlands Versus Regional Equations

Priscilla Sichone, Ute Schmiedel, Jens Oldeland and Norbert Jürgens

Universität Hamburg, Biocentre Klein Flottbek and Botanical Garden, Ohnhorststr. 18, 22609 Hamburg, Germany
Email: priscilla.sichone@uni-hamburg.de

With the ever-growing pressure on the African Miombo Woodlands due to harvesting of selected trees for commercial and domestic purposes. This study will assess the structure and above-ground biomass (AGB) in the Miombo Woodlands and how these patterns relate to different land use types in western Zambia as part of the SASSCAL initiative. This will be done by describing the structure of the woody plants in terms of tree height, diameter and cover in the study area; establishing the ABG using three regional allometric equations and comparing their level of accuracy; and correlating the AGB of the Observatories in Miombo Woodlands to the land use types. Three Biodiversity Observatories (1 km x 1 km in size and subdivided into 100 hectare cells) approximately 100 km apart from each other were established in the Miombo Woodland of western Zambia. These sites were in different land use intensities of high (Luampa), medium (Dongwe) and low (Kafue National Park - a key protected area of KAZA TFCA). Diameter (DBH) and plant height for all trees with DBH >5 cm for the 100 m² and DBH >10 cm for the 1000 m² was sampled. A cluster analysis was performed in order to determine the slope of regression for size class distribution for diameter and height of the most abundant species. To determine the accuracy of the combination of allometric equations for AGB, multiple linear regressions using R² were used. The variance in AGB and structure of woody species in the three Observatories was related to the different land use intensities.

Addressing Human-Elephant Conflict on a Landscape Level: A Case Study in the Wildlife Management Area NG13 in Northern Botswana

Anna Songhurst¹, Graham McCulloch¹, Amanda Stronza¹, Peter Kerapetse², Hakoka Xhoro^{1,2}, Simon Simon², Tebogo Senyemba², Moyoyo Tamago², John Xaica², Keitumentse Johanan Mateusa², Phinneaus², Mathata Kashongo¹, Makata Baitseng¹, Ohitiseng Mosupi¹ and Cosmos Rathipana^{3,4}

Ecoexist Project, Botswana¹; Tcheku Trust²; Department of Wildlife and National Parks, Botswana³; Technical Advisory Committee⁴
Email: anna.songhurst@hotmail.com

The northeastern part of the eastern Okavango Panhandle in northern Botswana, NG13, covers an area of 2,500 km² and is a central part of the Kwando Wildlife Dispersal Area in the Kavango-Zambezi Transfrontier Conservation Area (KAZA TFCA). This area is highly important habitat for elephants during the wet season with an estimated population of ~5,000 elephants and density of 1.87 elephants/km². The area is also important for a variety of other wildlife species including Sable antelope, Roan antelope and Bush pig and has large areas of the near threatened *Baikiaea plurijuga* (Zambezi teak) woodlands. Currently there is limited human presence in NG13, it is mainly utilized by cattle posts and cattle herders. However, people in the surrounding communities are concerned that illegal hunting of wildlife for meat and elephants for ivory is high in the area, but not being managed.

A Holistic Approach to Reducing Human-Elephant Conflict within the KAZA TFCA

Anna Songhurst, Graham McCulloch, Amanda Stronza, Makata Baitseng, Ohitiseng Mosupi and Mathata Kashongo

Ecoexist Project, Botswana
Email: anna.songhurst@hotmail.com

The establishment of the Kavango-Zambezi Transfrontier Conservation Area (KAZA TFCA) encourages the opening of wildlife migratory routes to create one of the largest contiguous wildlife conservation areas in the world. These corridors, however, go through areas with human development. Effective solutions to Human-Elephant Conflict (HEC) in the region have, therefore, been identified as a priority and a prerequisite to the success of this initiative.

HEC, comprising both actual and perceived conflict, emerge from an array of social, ecological, political, and economic factors and are often exacerbated by human-human conflicts. Drivers of HEC include: contradictory land use policies, which lead to overlapping patterns of land and resource use; susceptibility of crops to elephant foraging and farmer vulnerability to risk, and; state ownership and top-down management of wildlife resulting in negative attitudes toward wildlife among communities. All of these factors act over different scales and timeframes. A focus on short and long term dynamics and an integrative approach that considers all these factors is therefore key.

A collaborative effort is underway in Botswana to tackle the root causes of HEC and leverage effective, sustainable solutions, in order to create an enabling environment that supports changes in attitudes, policies, and incentives at local, national, and regional levels. This involves addressing the critical barriers to such changes in national and regional policy and legislation to reach change at scale.

A Framework for Evaluating the Impacts of the Realignment or Removal of Veterinary Cordon Fences on Wildlife Movement and Habitat Use

Robin Naidoo¹, Piet Beytell², Pierre du Preez², Ortwin Aschenborn², Greg Stuart-Hill³ and **Russell Taylor**³

WWF US, Canada¹; Ministry of Environment and Tourism, Namibia²; WWF, Namibia³

Email: rtaylor@wwf.na

Re-alignment or decommissioning of veterinary cordon fences (VCF) in southern Africa, in particular the Kavango-Zambezi Transfrontier Conservation Area (KAZA TFCA) is likely to provoke important changes in how wildlife use and move through the central part of this conservation and development landscape. These possible changes are evaluated using best available data and at scales that are relevant for wildlife space use, migrations, and fine-scale movements for multiple species of interest. A tiered approach is used to evaluate possible changes associated with the removal of fences. The methodology is flexible and applicable to a variety of places, species, and data types and we illustrate it empirically with data from GPS tracking collars deployed on African buffalo collared on the Namibian side of the Namibia-Botswana border where a robust VCF has been in place over the past 20 years. Using resource selection modelling, we analyse habitat suitability of newly accessible regions following fence removal that can be used to simulate how changes in any of the environmental features affect probability of occurrence across a new landscape. Against barriers to movement, we expect size and shape of home ranges adjacent to a fence to be different than those further away. To test this we calculated the home ranges of all buffalo, and compared their size and shape in relation to proximity to fences. At the finest scale we assessed how fences affect movement trajectories of individual buffalo by examining step lengths and relative turn angles along a gradient of fence proximity.

Protecting KAZA Fish Stocks for Future Generations

Denis Tweddle

NNF/EU Community Conservation Fisheries in KAZA Project

Email: d.tweddle@saiab.ac.za

Problems: Riverine, floodplain and lake fisheries throughout the KAZA landscape are all undergoing severe economic overfishing. Rising human populations and hence numbers of fishers lead to declining catch rates, resulting in fishers increasing effort to maintain catches and using destructive fishing gears, including dragnets (which are already illegal in most fishing areas), bashing, drift netting and monofilament nets. This inevitably causing stock collapses.

Solutions: Recovery can only be achieved through recognition by all stakeholders that commercial exploitation in rivers and floodplains is unsustainable and that food security for local rural populations should be the management goal. Lakes can in some cases sustain commercial fishing (e.g. kapenta in Lake Kariba and large cichlids in the ephemeral lakes Liambezi and Ngami when they are full of water), but nevertheless effort must be limited to levels that stocks can sustain. Recovery can be achieved by engaging with communities (also between neighbouring countries sharing resources) to assume responsibility for their fisheries in partnership with government departments. Networks of Fish Protection Areas (FPAs), modelled on Marine Protected Areas (MPAs) set up through community participation protect some breeding stocks and thereby allow improved recruitment to adjacent fishing areas. The use of destructive fishing gears need to be removed from the riverine and floodplain fisheries.

Role of KAZA: Active and effective engagement by authorities with fishing communities is essential to deliver extension messages about sustainable fishing practices throughout the KAZA landscape. KAZA has a major potential role to play in facilitating extension work and collaboration between countries, and coordinating fisheries interventions through the KAZA Fisheries Working Sub-Group of the Conservation Working Group, to achieve effective management.

kaza

Kavango Zambezi Trans Frontier
Conservation Area

