Demonstrating the Value of SADC Transfrontier Conservation Areas (TFCAs) and Understanding the Funding Modalities for Investment

Summary Document

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1 INTRODUCTION

The Southern African Development Community's (SADC) eighteen Transfrontier Conservation Areas (TFCAs), represent a unique, non-substitutable ecological asset spanning approximately 1 000 000km^2 and covering both terrestrial and marine environments (Figure 1-1). Additionally, they incorporate over half of the declared conservation estate in the region. The mission statement for TFCAs is to develop a functional and integrated conservation network 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.

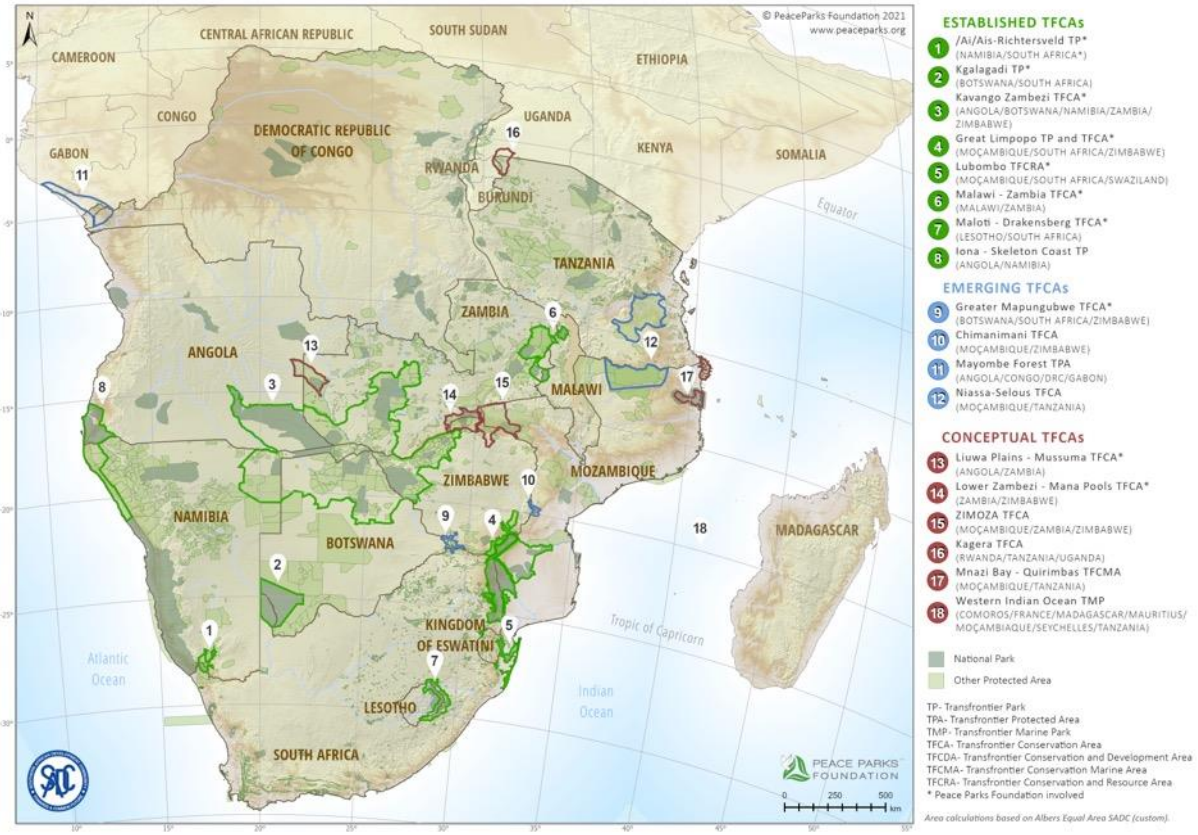

Figure 1-1. Location of SADC's transfrontier conservation areas (TFCAs) (Source: PPF, 2021)

Despite the potential role of TFCAs in sustainable, economic, and social development in SADC, it has been difficult to quantify and communicate the tangible benefits generated by these areas to beneficiaries at local, regional, and global scales. In addition, the sustainability of the TFCAs has been questioned as their funding remains largely dependent on support from International Cooperating Partners (ICPs), as well as contributions from the Member States. The advent of the COVID-19 pandemic has further exacerbated the precarious funding situation faced by many TFCAs and their constituent protected areas and has highlighted their dependence on the tourism income stream. As a result, there is an urgent need to diversify income streams and improve financial sustainability and resilience.

With this context in mind, the overarching objective of the assignment was to demonstrate the value that TFCAs provide to a multitude of beneficiaries. This is achieved by utilising an ecosystem service assessment (ESA) framework which identifies the linkages between the ecological asset (the TFCA estate), the subsequent delivery of ecosystem services and the benefits provided to society.

Furthermore, the assignment aimed to identify barriers to investment in TFCAs, how risk factors can be overcome and options for diversifying investment streams through innovative financing mechanisms.

The final output provides the SADC Member States with a value proposition for the TFCA estate which can be used to leverage additional and sustained support from International Cooperating Partners (ICPs) as well as the Member States themselves.

The intended audiences of the report are the Member States, TFCA staff, politicians, decision-makers and investors with incentives and mandates for making sustainable long-term investments in TFCAs. Together with this summary report, a detailed technical report is available.

2 DEMONSTRATING THE VALUE OF TFCAS THROUGH ECOSYSTEM SERVICES

2.1 Ecosystem Services

Ecosystem services are the many and varied benefits that humans obtain from the natural environment and from properly functioning ecosystems - for free (TEEB, 2010). The present concept of ecosystem services was first defined and described in detail by the United Nations' "Millennium Ecosystem Assessment" (MEA 2005) which explicitly made the link between ecosystem services and human well-being (Figure 2-1). Since the inception of the MEA, there have been several ecosystem service assessment (ESA) frameworks which further disaggregate and classify the benefits people derive from ecosystem services, to allow for a thorough assessment of their economic value.

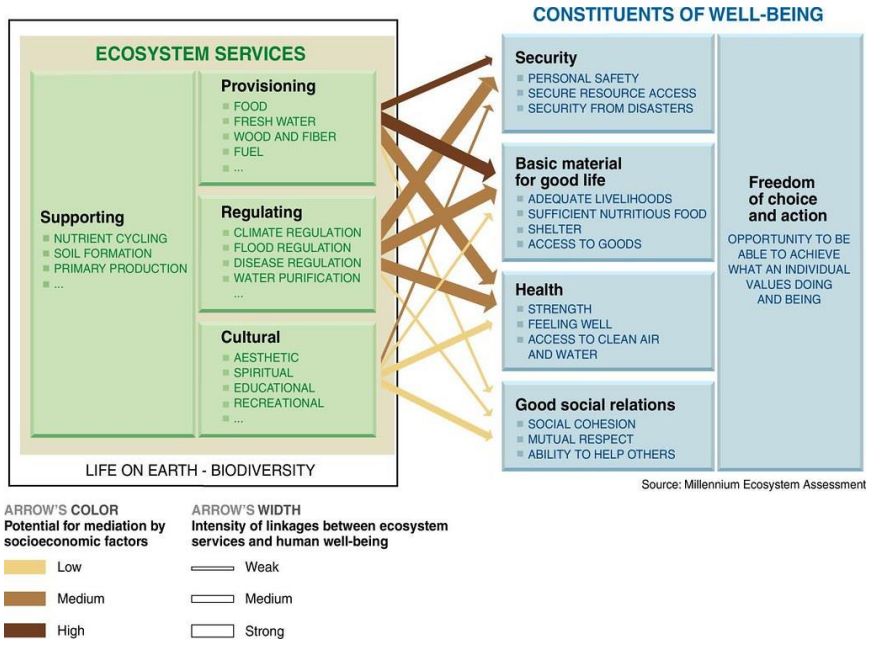

Figure 2-1. The relationship between ecosystem services and human well-being (MEA, 2005)

2.2 Methodology

Assessing the values of TFCAs can be a complex task, considering the range of values and their perceived importance by different stakeholders. This complexity is amplified by the large number of countries involved, the difference in underlying legislative conditions and diverse land uses. Developing a methodology which takes cognisance of these differences, is difficult and is compounded by the numerous methodologies available. In the interest of simplicity and repeatability, the authors have

employed an ESA approach based on the MEA, TEEB and the United Nations Statistics Division's (UNSD) System of Environmental Economic Accounting (SEEA) (UN, 2021). The approach is underpinned by the relationship between ecological assets (in this case the TFCAs themselves) and their delivery of ecosystem services to society and the subsequent social and economic benefits that they provide.

Figure 2-2 below shows the method used for the assignment. In summary, the ecological assets, in this case, the TFCAs themselves, provide a suite of ecosystem services, which in turn provide benefits to society through various economic sectors. The list of ecosystem services is shown below and is based on the prioritisation exercise undertaken as part of this investigation. The arrows represent the flow of benefits as well as the complexity and linkages that the entire complex socio-ecological system provides to society.

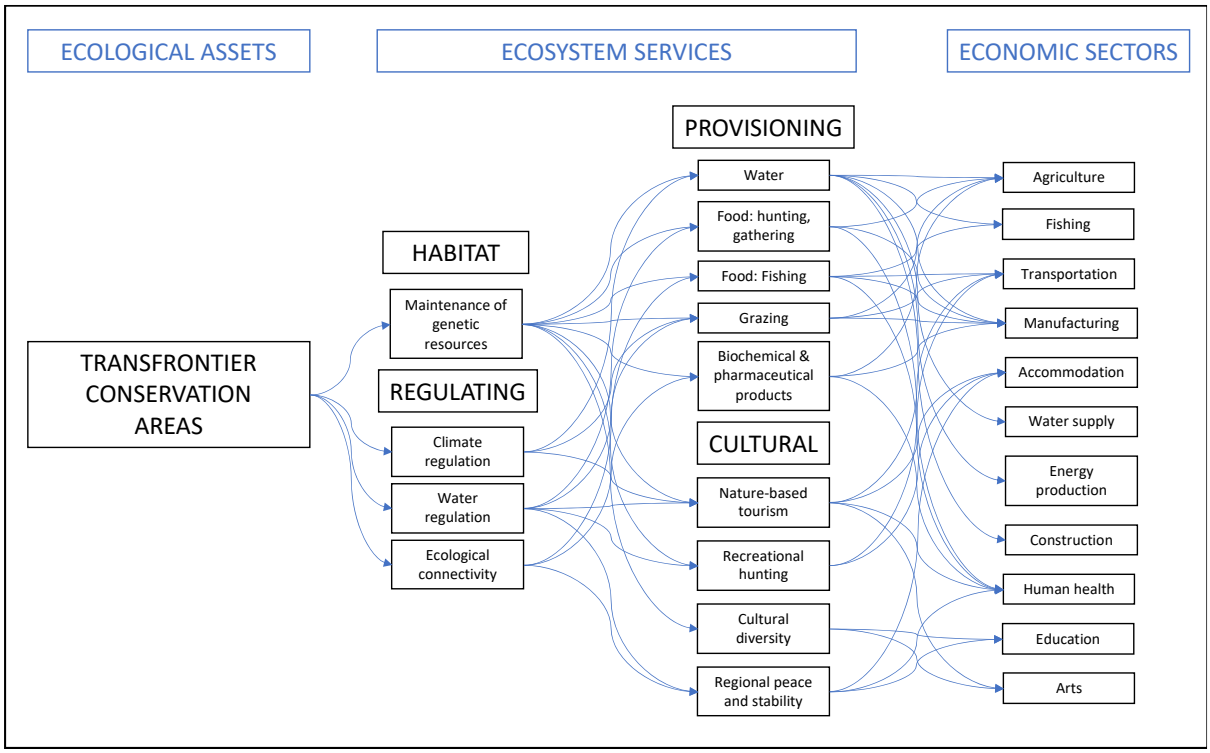

Figure 2-2. The ecosystem service assessment model shows the relationship between the ecological assets (TFCAs), the delivery of ecosystem services and the benefits that accrue to society through different economic sectors. The main components of the ESA model are underpinned by the Millennium Ecosystem Assessment (MEA, 2005), The Economics of Ecosystems and Biodiversity (TEEB, 2010) and the United Nations Statistics Division's (UNSD) System of Environmental Economic Accounting (SEEA) (UN,2021)

Broadly, the case studies identified three sets of TFCA beneficiaries who derive value from the TFCA natural assets:

1. Local communities that have a direct livelihood dependence linked to the TFCAs – these communities benefit primarily through provisioning services, such as food, fodder, fibre, fuel wood and job creation through eco-tourism activities. Some of these services have specific benefits for women. These benefits provided by TCFAs can be expressed through various measures of household income and well-being, as well as Sustainable Development Goals (SDG) measures.

2. Country citizens who have direct and indirect welfare dependence on the TFCAs – these people benefit through the regulating services provided to the national economy, the national economic impacts of tourism and the opportunity to enjoy a range of cultural services. These

benefits can be expressed as contributions to macro-economic indicators such as contribution to GDP, as well as other welfare or prosperity indicators not captured by GDP.

3. Citizens from other countries derive direct and indirect benefits from the TFCAs – these people benefit through a range of provisioning, cultural and regulating services. These benefits are often measured through a country's GDP through eco-tourism activities, but there exists also a willingness to pay variable, which is difficult to measure, and which relates to the unique and scarce features of TFCAs. A critically important example of a regulating service of international significance is the carbon sequestration and storage service provided by the TFCAs.

In summary, the study clearly shows that TFCAs provide real value in the form of ecosystem services and are therefore an irreplaceable ecological asset for the entire SADC region and the global community. While the study did not work with TFCA operating budgets, the values are likely to far exceed these and show a highly positive cost: benefit ratio. A summary of selected ecosystem service values for the TFCA estate is given in Table 2-1 below.

Table 2-1. Selected ecosystem services values for TFCAs

Category	Ecosystem Service	Case Study	Value
TEEB (2010)			
Provisioning	Food Wood & fibre Biochemical & pharmaceutical products	Greater Limpopo TFCA	Mean annual direct-use value of $627 (adjusted for 2021) per household (Twine et al. 2003).
		Across all TFCAs	Expressed as a land value, the value of these types of provisioning services can be as high as $7 000/ha in the most productive biomes (derived from Maua et al. 2019).
	Grazing	Across all TFCAs	The grazing value of land, expressed as an asset value, across SADC, is approximately $2 800/ha (Prime Africa, 2022).
Cultural	Nature-based Tourism	• GLTFCA • Malawi-Zambia TFCA (MZTFCA) • Kavango-Zambezi TFCA (KAZA) • Lubombo TFCA • Zimbabwe-Mozambique-Zambia Transfrontier Park (ZIMOZA) • Greater Mapungubwe Transfrontier Conservation Area (GMTFCA)	There are an estimated 284 000 – 473 000 tourist visits a year and the annual revenue from accommodation bookings is as much as US$790 million a year. The approximate number of jobs created within the TFCAs is 34 000 – 38 000. (PPF, 2019). When expressed as a per hectare value, nature-based tourism can contribute on average $6,000/ha to the TFCA estate (PPF, 2019).
	Recreational hunting	SADC Countries.	Average annual revenue for recreational hunting across SADC countries was in the region of US$260 million (Snyman et al. 2021).

Category	Ecosystem Service	Case Study	Value
TEEB (2010)			
	Cultural diversity	• Greater Mapungubwe TFCA (GMTFCA) • Kgalagadi Transfrontier Park (KTP)	The Mapungubwe Cultural Landscape (MCL) was proclaimed a UNESCO World Heritage Site in 2003 and together with the TFCA makes a significant cultural historical contribution to Southern Africa. The KTP is an important cultural heritage area for the ǂKhomani San People and incorporates the ǂKhomani Cultural Landscape which was established as a world heritage site by UNESCO in 2017.
Regulating	Water regulation	Maloti Drakensberg Transfrontier Park (MDTP)	The MDTP has been shown to have Unit Reference Values (URV) of 0,31 and 0,48 (MDTP, 2007). URV is a term used by SA water resource planners as an expression of the relationship between the costs associated with obtaining water services and the value of the benefits.
	Climate regulation	Across all TFCAs	The carbon capture value of biomes across TFCAs can vary between $900 - $2 700/ha, expressed as a land value (UNEP, 2017).
Habitat	Habitat and biodiversity	Across all TFCAs	Expressed in terms of an equivalent land value, this value may vary between $6 000 - $21 000ha for TFCAs (Crafford et al. 2022).

3 RISK FACTORS AND DIVERSIFYING FUNDING OPTIONS IN TFCAS

TFCAs remain largely dependent on funding from ICPs and the Member States. TFCAs provide a diverse set of benefits to local communities as well as further afield to national, regional, and global economies. Taking this inherent value into consideration, further investment into the TFCA conservation estate is necessary and is likely to enhance the flow of benefits to beneficiaries. However, understanding the current barriers to investment and identifying the risk profile of TFCAs is key to any potential investor.

3.1 Identifying and Overcoming Barriers to Investment in TFCAs

The World Bank Group (2020) survey on Global Investment Competitiveness surveyed 14 000 companies making foreign direct investment (FDI) in almost 28 000 greenfield and expansion projects in middle-income countries (Figure 3-1). The top three most common risk factors affecting investment decisions were: 1) political stability, 2) macro-economic stability and 3) legal and regulatory environments.

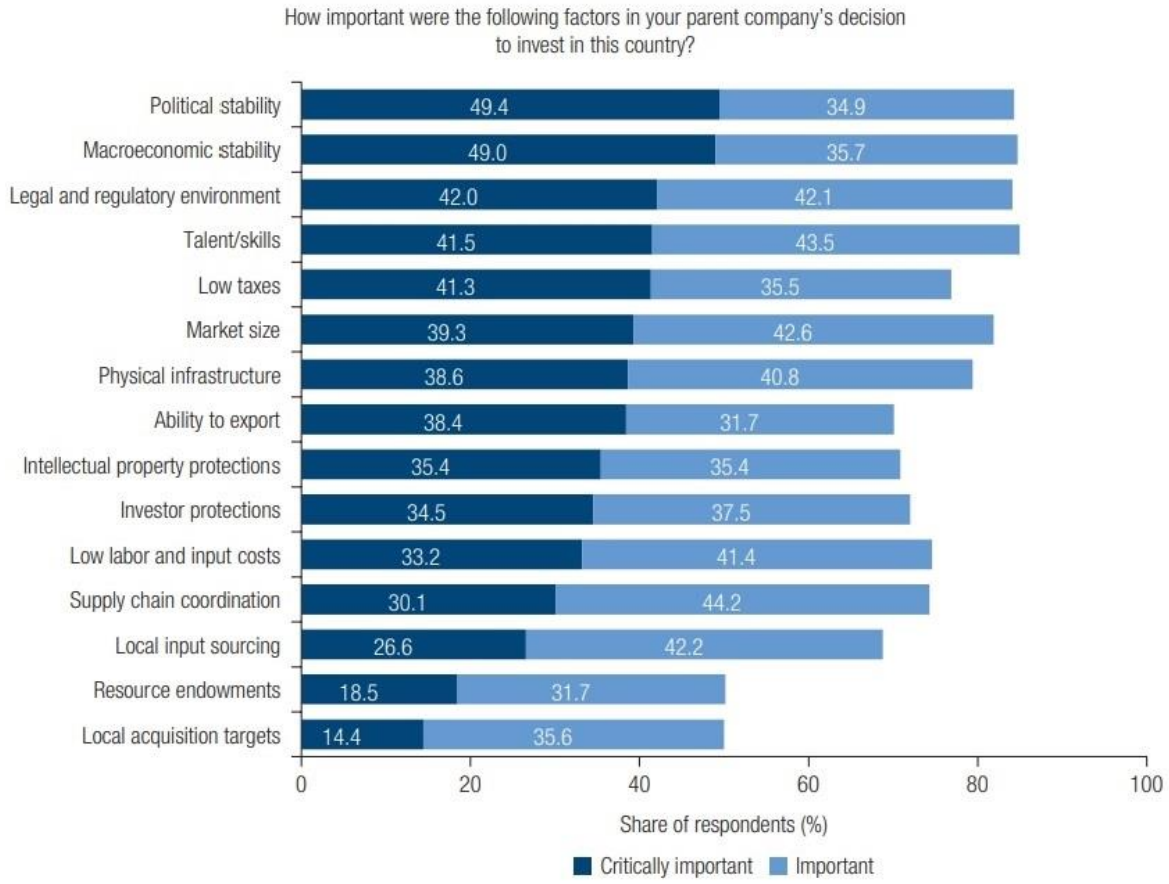

Figure 3-1. Top factors affecting flows of FDI in 2019 (the most recent survey data) – WBG

Taking these risk factors into account, the best option would be to foster investment in TFCAs from within the jurisdictions with the lowest risks for financial and other (e.g., physical assets) investments. Such investments will likely provide a springboard for investments in jurisdictions that currently present higher risks to investor assets and capital, but at a later stage once the value proposition has been established for both the investor and regulators. Capital investment into member state jurisdictions with the most stable risk profile at the present time is likely to yield benefits to entire TFCAs, member states and investors while remaining within the acceptable risk domain of a broad range of investor types.

For the expansion of private investment into TFCAs, it is imperative that member states hosting TFCAs should endeavour to continue improving political stability and enhancing the macro-economic conditions in their respective countries. Regulatory frameworks would also benefit from improved clarity both within countries as well as in the way supra-national governance is managed by TFCA nations. Regulators and legislators acknowledge that the success of TFCAs will not rely solely on improved conservation regulations. Better national and supra-national financial regulations may prove to be even more important in ensuring positive outcomes for conservation and biodiversity, as these can improve capital inflows and security.

3.2 Addressing Investment Risks

In terms of a way forward to enhance investment, challenges need to be addressed at two main levels. Firstly, at the political level, political risks and uncertainty, macro-economic conditions and regulatory

environments should be actively addressed and improved in order to attract capital inflows from investors. This pattern should be universally observed by politicians irrespective of current conditions, as tending towards improvement is beneficial in all contexts. Capital may be sourced within country or from international investors, as improving investment stability is beneficial to all investor types.

Secondly, finer scale challenges (i.e., at park/TFCA-level) need to be addressed within all TFCAs. Across the TFCA estate in Africa, the most apparent challenges appear to be issues of accessibility for guests and the safety of guests and travellers (from bandits and poachers, as well as tropical diseases such as malaria). It is also important to acknowledge that the TFCAs are often situated in areas experiencing high levels of poverty and marginalisation of the rural poor. Robust programmes of consultation with local and peripheral residents are an absolute necessity, and should from the outset give due consideration to inclusiveness and beneficiation for these residents as integral to the management of the TFCAs. When people have a vested interest in the success of the TFCA venture, stability and peace improve and the sustainability of the TFCA also progresses. This is particularly relevant in the post-COVID economies of countries that host TFCAs and can be used to improve the lives of many rural poor. Improving stability and sustainability of the TFCA estate will doubtless attract investment; KAZA and GLTFCA are good examples of this process in action.

4 INVESTMENT MECHANISMS FOR TFCAS

Existing capital flows into TFCAs whether at the TFCA level or via the Member States and is comprised primarily of ICP and Member State support. Below follows a concise description of potential sources of capital and/or revenue for TFCAs that have to date remained under/unexploited. Where possible, case study examples are provided to contextualise the opportunities discussed below.

- ***Debt for Nature Swaps*** are transactions wherein some financial debts of a nation are written off in exchange for investments in local conservation measures and biodiversity protection interventions. These transactions may occur between/amongst a variety of parties but are usually between a debtor country, and a creditor and/or donor from the public or private sector (donor country Finance Minister, export credit agency, bank, investment firm, company, or even private individual). No TFCA level debt for nature swaps is known to have taken place at this juncture, but there is no conceivable reason that such a mechanism could be integrated into TFCA agreements.

- ***Carbon Trading:*** Trading of carbon stock within TFCAs will require the calculation of the carbon stock present and under the control of the TFCA. The carbon can then be traded in established markets. Restoration interventions can also be funded with proceeds to further enhance carbon stocks. The carbon trading markets in savannas and marine environments are far less developed than those created for forests (e.g., the UN's REDD programme), but there is substantial value to be unlocked in extending carbon markets to include non-forest biomes.

- ***Biodiversity Offsets and Biobanking:*** In instances where negative impacts to biodiversity cannot be avoided, those responsible for the negative impacts can seek out biodiversity offsets from TFCAs, which can be undertaken directly by the TFCAs or specialist organisations. The purpose of the offset is to ensure that there is no net loss of biodiversity, by conserving biodiversity in one area when the loss of biodiversity in another is unavoidable. With respect to biobanking, the principles are the same as those for offsets, except those offset interventions are

undertaken *a priori*. Both options require that detailed natural capital valuations are undertaken for each TFCA.

- ***Wildlife Conservation Bonds:*** Recently, the World Bank has been involved in issuing wildlife bonds. The instruments are like national bonds issued by countries, with the exception that instead of interest payments accruing to investors, the interest is diverted towards the management and protection of wildlife over the bond term. A current example is the rhino bond which recently entered the market in March of 2022. The bond is based on the successful increase in rhino population numbers. The rhino bonds were sold to investors at lower than face value to guarantee a minimum return to investors. Depending on the successful increase in rhino numbers over the 5-year maturation period, a performance incentive fee of up to USD 14 million has been guaranteed by GEF, which will be shared out amongst investors. Although the wildlife bond market is relatively new, it is envisaged that TFCAs may be able to apply to receive interest from these bonds for conservation-related operational expenditure. Another angle that could be exploited in this regard would be for TFCAs to become candidate protected areas for specific species covered under a wildlife conservation bond, provided those species occur or are translocated to the TFCA.
- ***Payment for Water Catchment Services:*** Many TFCAs contain water catchment areas, wherein water is generated and used lower down the catchment by various user types and industries. Where the regulatory environment supports the development of payments for guarantees to maintain the integrity of the upper catchment, TFCAs should give serious consideration to developing this investment and/or revenue source.
- ***Direct Investment:*** Where legislative allowance has been made for private investors to partake in the development of TFCAs, private enterprise may make direct equity and non-equity investments into TFCAs. This could include infrastructure and hospitality services, through to management of bookings, hunting trips etc. It may also take the form of infrastructure supporting tourism development in TFCAs, for example, building and operating roads to and in TFCAs. Direct investment is a capital and revenue stream that can take a multitude of forms and opportunities and is thus a prospect in all TFCAs. Regulators and managers of the TFCAs and in the member states of TFCAs are duty-bound to ensure fiscal, political and business conditions, as well as the capacity and competency of TFCA employees and management, contribute positively to attracting such funding.

5 CONCLUSION

5.1 The Value of TFCAs and Non-Substitutability

Transfrontier Conservation Areas provide a multitude of benefits to communities living in proximity to the protected areas as well as those further afield. Using available literature, the study clearly shows that TFCAs provide real value in the form of ecosystem services and are therefore an irreplaceable ecological asset for the entire SADC region and the global community.

SADC emphasizes that, at the core of the TFCA value proposition, lies the re-establishing, renewing, and preserving of large functional ecosystems where natural resources and heritage can be protected and regenerated. The ultimate purpose of this is to supply the range of ecosystem services that are valuable to humans, ranging from the array of livelihood services provided to resource-dependent communities,

to the utility humans gain from knowing that these systems are managed ethically and preserved for future generations.

TFCAs thus comprise multi land use areas that are unique and non-substitutable. The attributes that make SADC TFCAs unique are:

- Southern African biomes that provide habitats for globally unique biodiversity
- Specific charismatic natural features that are globally unique and famous
- Specific ecosystems that preserve unique and keystone ecological processes
- An extensive scale, both in terms of landscape and the benefits that are provided to humans
- A trans-frontier management approach that fosters regional cooperation and stability for the benefit of local communities and countries as a whole.

5.2 Increasing Investment in TFCAs

The benefits that TFCAs provide are at risk from a range of hazards including land-use change, pollution, direct exploitation of species, climate change, and invasion of alien species and disease. Mitigation of these risks requires additional sources of investment from either the Member States, ICPs or new investment sources. Additionally, investment in TFCAs is also crucial to safeguard the current flow of benefits as well as to potentially enhance any future flows.

While the legislative and institutional frameworks may not be ready for all the Member States, new, innovative financing investment types including the following should be investigated for possible implementation:

1. Debt for Nature Swaps;
2. Carbon Trading;
3. Biodiversity Offsets and Biobanking;
4. Wildlife Conservation Bonds;
5. Payment for Water Catchment Services; and
6. Direct Investment.

These new, innovative financing mechanisms coupled with support from the Member States and ICPs, could possibly go a long way toward securing the ecological assets that are the TFCAs as well as safeguarding the current and future flows of benefits to society. In addition to the above TFCA practitioners need to:

- Embrace the need to better understand and represent the value of their TFCAs to decision-makers, funders, and potential investors.
- Identify opportunities to secure investments to improve the management effectiveness of their TFCAs.
- Embrace the need to play the role of broker and/or facilitate brokerage processes necessary to secure a diversity of financial and socio-economic agreements - an investment prospectus.

- Establish and implement robust M&E processes aimed at measuring the production and flow of ecosystem services and their benefits and use every opportunity available to report on these.
- Use the findings of this study as a point of departure to build on and refine the value proposition for their TFCAs.

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