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Sustainable Use: A Contentious Promise

A Case Study on International Funding of Consumptive Sustainable Wildlife Use in South Africa's Biodiversity Economy

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Abstract

In South Africa, sustainable use of wildlife is widely recognized as providing economic incentives and actively engaging rural communities in conservation management. Aiming to combat rampant poverty and wildlife crime in communities around protected areas (PAs), the country's biodiversity economy envisions to scale (non-)consumptive activities in the pursuit of creating economically and environmentally viable wildlife businesses. Nevertheless, past findings suggest that international funding of previous communal resource programmes has focused mainly on the development of non–consumptive uses, namely ecotourism, while neglecting multidimensional benefits arising from consumptive wildlife uses (i.e. hunting, bioprospecting). Using qualitative research, this study assesses international conservation finance actors' (ICFAs) attitudes toward consumptive sustainable use and its perceived potential and limitations in scaling up in the biodiversity economy. Through interviews with six major ICFAs and three regional cooperation partners (RCPs) operating in South Africa, the relationship between the non-consumption paradigm and ICFA's willingness to finance consumptive sustainable use is explored. The Multi-Level Perspective (MLP) framework is applied to examine the process of adopting consumptive sustainable use into ICFA funding agendas. The findings suggest ambiguity in the way ICFAs view and address consumptive sustainable use in project funding following uncertain sustainability implications and ethical concerns over animal welfare. The study identifies three key limitations to scaling: local resource governance, market and supply chains, and the enabling environment. Insecure land tenure thwarts communal wildlife use rights, limiting conservation incentivization and beneficiation. Meanwhile, uncertain harvest conditions, tight markets and short-lived commercial partnerships are met with nascent regulatory mechanisms struggling to manage international finance and multi-stakeholder cooperation. The study concludes that despite South Africa's productive infrastructure and ambitious strategies for a biodiversity economy, consumptive sustainable uses are not yet regarded as bankable and viable as their non-consumptive counterpart. The latter thus prevails in ICFA funding prioritization.

Keywords: biodiversity economy, sustainable use, international conservation finance, community-based conservation, economic development, wildlife economics, South Africa

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List of Abbreviations

AWEI: African Wildlife Economy Institute
CBD: Convention on Biological Diversity
CBNRM: Community-based Natural Resource Management
CITES: Convention on International Trade in Endangered Species of Wild Fauna and Flora
DFFE: Department of Forestry, Fisheries and the Environment
GEF: Global Environment Facility
ICFA: International Conservation Finance Actor
IUCN: International Union for Conservation of Nature
NBES: National Biodiversity Economy Strategy
NBSAP: National Biodiversity Strategy and Action Plan
NDP: National Development Plan
OECD: Organization for Economic Co-operation and Development
ODA: Official Development Assistance
PA: Protected Area
RCP: Regional Cooperation Partner
SDG: Sustainable Development Goals
TFCA: Transfrontier Conservation Area

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1. Introduction

"We need to step up our efforts to utilise our biodiversity sustainably and economically to support livelihoods of all South Africans including present and future generations."

(E. E. Molewa in DEA, 2016a)

As Africa's most biodiverse country, South Africa greatly relies on the protection of its ecological infrastructure to address its main development challenge of conserving natural capital while reducing steadfast poverty and inequality (DEA, 2016b). Two decades after the fall of the apartheid regime, South Africa ranks amongst the most unequal countries in land and income distribution in the world. Latent unemployment and poverty remain particularly persistent in rural areas, where 32.6% of the total population lives off subsistence farming and social assistance (World Bank, 2022; Redders, 2021). Hosting 17% of the world's flora and fauna of exceptionally high endemicity and abundance, South Africa's biodiversity and related ecosystem services present crucial income and livelihood sources for rural communities and landholders (ALU, 2020). Tourism and farming have been driving forces in its national economy, with the former contributing 3.7% of the national revenue generated and 773 533 people formally employed in 2019 (Statssa, 2021). However, insecure and complex land tenure, increasing biodiversity loss through encroachment and unfolding climate change exert increasing economic and environmental pressures on naturally arid to semi-arid habitats (DEA, 2016a).

1.1 Problematisation

In an effort to drive both conservation and development, the 1980s saw a regional surge in internationally funded community-based natural resource management (CBNRM) programmes across Southern Africa. Aiming to strengthen natural assets and social equity, communities were granted user and ownership rights over wildlife to both independently manage and benefit from its sustainable use (Dressler and Büscher, 2008). In catalyzing development outcomes, however, South Africa's market-based conservation prompted the creation of public-private partnerships,"favor[ing] private sector investment in non-consumptive resource uses, rather than resource-based livelihoods." (Dressler and Büscher, 2008, p.452).

Due to governmental and international donor dependence on private sector project execution, international conservation funding and capacity development thus overwhelmingly targeted community employment opportunities in the tourism service sector, instead of investing in larger-scale wildlife resource-based economies. Consequently, non-consumptive (e.g. eco-tourism) or conservation-neutral activities (i.e. bead making) came to be favored over tangible income generation through consumptive resource use (Dressler and Büscher, 2008).

Meanwhile, there is growing acknowledgement of the "need to strike a balance between short-term acceleration of employment opportunities and conservation and sustainable use of biodiversity" (GEF-UNDP, 2019,p. 2). Governmental support for sustainable use through policy and public planning has spurred significant growth in South Africa's biodiversity economy. The latter aims to scale "businesses and economic activities that either directly depend on biodiversity for their core business or that contribute to conservation of biodiversity through their activities." (DEA, 2016a, p.ii; ALU, 2020) South Africa's National Biodiversity Economy Strategy (NBES) thus presents an extensive policy framework for the expansion of bioprospecting[1] and the wildlife sectors[2] in 18 predetermined high-density biodiversity nodes (see Appendix 1), through which it seeks to generate socio-economic and ecological sustainable growth. Entrepreneurial development initiatives particularly focus on historically marginalized communities (DEA, 2016a). On private land, game farming and hunting (around 17% of the total land mass) have seen a stark increase, thereby generating USD 7.7 billion in annual returns and 100 000 jobs (DEA, 2016b). Due to internal sector intricacies, however, these developments have not translated into widespread gains for impoverished black communities which continue to rely on internationally co-funded CBNRM projects (Kamuti, 2015; DEA, 2016a).

Given the varying degrees of success of sustainable use projects under CBNRM and the Covid-19-induced recession of the tourism industry, there seems to be a mismatch between communal needs for socio-economic sustainability and household-level diversification and the

[1] The development, application, utilization, trading and exporting of indigenous biological/genetic resources for herbal and medicinal purposes.

[2] The breeding, live sales of indigenous wildlife, production and sale of game meat and hunting industry (i.e. game meat, trophy, biltong)

motivations of international donor institutions to fund the consumptive use of wildlife resources for commercial and subsistence purposes.

1.2 Aim of the Study

Against this backdrop, this thesis seeks to tease out the relationship between the "non-consumption" paradigm in international conservation and the availability of international finance for scaling the consumptive sustainable use of wildlife in South Africa. This implies that this study seeks to explore the perceptions of international conservation funding actors (ICFAs) on the sustainable use of flora and fauna for development and conservation and the perceived limitations and possibilities to financing their expansion.

This study is guided by the following research questions (RQs):

Overall RQ: What is the relationship between the 'non-consumption' paradigm in international conservation and the willingness of ICFAs to scale the consumptive sustainable use of wildlife in South Africa?

Sub-RQ 1:How is consumptive sustainable use of wildlife viewed by ICFAs intervening in South Africa?

Sub-RQ 2: What limitations and possibilities do ICFAs observe in the scaling of consumptive sustainable use projects in the biodiversity economy context?

1.3 Terminological Clarifications and Delimitations

As *sustainable use*, *biodiversity economy* and *international conservation funding actors* (ICFAs) constitute the main terminologies guiding the RQs and the entire thesis, it deems necessary to clarify their intended meaning in this study context.

Sustainable use describes the controlled, (non-) and consumptive utilization of wildlife resources for local subsistence and income opportunities. According to the NBES, this is separated into the use of wildlife animals, along with ecotourism comprising non-consumptive use, and the utilization of flora and their biological and genetic components for herbal and medicinal utility

(DEA, 2016a). Both uses comply with national and international wildlife use protocols such as CITES and the CBD (DEA, 2016a). Different wildlife-based uses constitute crucial elements in rural livelihoods due to communities' encompassing dependence on renewable resources (DEA, 2016a).

The *biodiversity economy* is the official terminology used by the Department of Forestry, Fisheries and the Environment (DFFE) to catalyze the (non-)consumptive sustainable use of wildlife and biological resources through value chain creation for inclusive rural development and economic growth at a rate that allows for natural replenishment (DEA, 2016a). While international and regional publications use complementary terms such as wildlife economy and wildlife based economy (IUCN, 2020; ALU, 2020), this study will conform with South Africa's official wording to avoid terminological unclarity.

The World Bank (2016) defines international donors as bilateral and multilateral institutions, United Nations Programs, International Non-governmental organizations (NGOs), Foundations and Funding distribution and Implementation Partners (World Bank, 2016). This paper uses the umbrella term *international conservation funding actors* (ICFA), while limiting its stakeholder scope to multilateral, bilateral donors and international conservation institutions that support integrated conservation-development projects in South Africa through funding and capacity building support (DEA, 2016b).

Furthermore, this thesis only focuses on sustainable use of terrestrial resources, and its funding on communally owned lands either close to protected areas (PAs) or further away. The reason therefore is that this bachelor thesis strives to present a thorough analysis of international funding perspectives given limited access to data, time and capacity.

1.3 Thesis Outline

This thesis entails six consecutive sections. The first section provides an overview on the history of sustainable use in South Africa, the relevant national and international policy frameworks facilitating its implementation and as well as an overview of international biodiversity funding

spending. The second section contains the literature review which compiles and contrasts previous study findings to place sustainable use in a broader conservation debate while situating it in the study of wildlife economics and the conservation funding landscape, to identify the gap this thesis aims to address. The following section introduces the theoretical framework which has guided the methodological tools chosen for data inquiry and their analysis. The next section presents the methodology, containing the research design, the data collection and their analysis process, while recognizing their limitations. Lastly, the study's findings are analyzed and discussed within the paper's theoretical scope. Closing remarks and suggestions for future research are concluding this paper.

Background

2.1 The History of Sustainable Use of Wildlife in South Africa

Preceding colonial rule, indigenous South African civilizations introduced indigenous wildlife resource management systems to secure natural capital stocks for subsistence, spiritual and cultural practices (DEAT, 1997). With the onset of colonisation, these were subverted through the creation of game reserves and parks in an attempt to spatially restrict European leisure hunting that came to trigger increasing species decline through intensified offtake of wildlife (DEAT, 1997).

After independence, South Africa's conservation trajectory continued to follow internationally promulgated models and ideas of conservation practice (Hutton et al. 2005). Alternating emphasis on securing large land tracts for state-led natural-or developmental purposes was heavily driven by ICFA involvement through funding, policy, infrastructural and capacity support (Abensperg-Traun et al. 2011, pp.30-31; Hutton et al. 2005). Whereas international donors funded industrial-inspired wildlife farming in the early 1920s, growing illegal wildlife use and rapid species decimation shifted ICFA support to protectionist 'fences and fines' approaches, omitting any form of human presence in PAs. Apart from the 1926 National Parks Act to enlarge state-owned PAs "accompanied by forced removals and resource dispossession

among black people" (DEAT, 1997, p.16), private landholders also set up private reserves on their lands to 'safeguard' pristine areas.

Yet, little legal coercion in conservation practice beyond state-protected areas and rising political decentralization in the 1980s, led to the onset of incentive-driven approaches aiming to align rural communities' needs with human-centered conservation policy through devolving resource ownership and management responsibilities to the local level (Abensperg-Traun et al. 2011,pp. 31-32). Seeking to couple developmental and conservation-driven agendas, ICFAs majorly supported the spread of CBNRM initiatives, and thus sustainable use projects arguing that "conservation can best be achieved by giving rural people a direct economic interest in the survival of species." (Adams and Hutton, 2007,p. 151) ICFAs support of sustainable use strategies had also come to leverage wildlife ranching[3] which, separate from development agendas, turned from a sparsely practiced activity by mostly white farmers into a commercially viable agricultural production model on privately-owned lands. Rising production costs due to marginal land productivity and rising aridity thus accelerated land conversion from previous conventional crop and livestock farms into wildlife ranches and game farms[4] (Otieno, 2016).

Although consumptive sustainable use has been subject to periodically changing narratives and longstanding contention in the international policy arena, South Africa's evolving legislation has enabled the growth of wildlife use activities by inducing private and communal ownership and user rights paired with the market integration of wildlife to expand its management beyond PAs while enhancing rural economies (Muir-Leresche and Nelson, 2000; DEAT, 1997). The most essential legal acts and their connection to the international conservation policy realm will be presented briefly in the following sections (for more, see Appendix 2).

[3] Following Garnett et al. (2007 in Otieno, 2016, p.1) wildlife ranching refers to (un)bounded privately-owned or communal land that is managed for the provision of wildlife-based goods and services such as tourism, hunting, live sales and direct uses of mostly hooved animals. Lands are kept in their natural state and animals are not additionally fed or domesticated.

[4] According to Otieno (2016), game farms are smaller estates with extensive wildlife management.

2.2 Relevant Policy Frameworks for Sustainable Use

2.2.1 National Level

South Africa's National Development Plan (NDP) 2030 renders species and natural habitat protection as a major tool for inclusive growth stimulation and inequality reduction (DEA, 2016a). Sustainable use is recognized in South Africa's Constitution (1996), whereby its bill of rights stresses the importance of conserving and sustainably and equitably managing national biodiversity stocks against further anthropogenic deterioration (DEAT, 1997). The 'White Paper on Conservation and Sustainable Use of Biodiversity' (1997) acts as the fundamental policy basis for the promulgation of sustainable use in light of the historical, economic and environmental obstacles facing its sustainable development (DEAT, 1997). The 2016 complementary rollout of the NBES and the National Biodiversity Conservation Strategy and Action Plan (NBSAP) laid the operational foundation for the realization of the NDP 2030. The NBES seeks to scale sustainable use activities into formalized bioprospecting and wildlife sectors. Aiming to create socially-equitable value chains around PAs, it sets out to stimulate inclusive rural economies while conserving biodiversity (Appendix 1). The NBSAP presents the national planning scheme for conservation, sustainable use and the mainstreaming of biodiversity management objectives into different sectors. It aims to enhance rural welfare across informal and formal economies while bolstering environmental and social resilience (DEA, 2016b).

2.2.2 International Level

South Africa's national regulatory framework is fully compliant with major international treaties, such as the United Nations Convention on Biological Diversity (CBD) and the Convention on International Trade in Endangered of Wild Flora and Fauna (CITES), which were signed between 1995-1997 (DEA, 2016a). Leveraging sustainable development, the CBD presents an international mechanism to acknowledge the holistic and intrinsic value of biological diversity for human welfare through controlled resource use. As a member to the CBD, South Africa committed to realizing the convention's three objectives: "the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of benefits arising from the utilisation of genetic resources." (DEA, 2016a, pp. 1-2) South Africa's NBSAP presents the key mechanism of the CBD agenda through which to implement the Aichi

Biodiversity Targets (ABT) and the sustainable use benefit-sharing principles laid out in the Nagoya Protocol. This is re-inforced through its participation in CITES which seeks to protect flora and fauna from overharvesting and depletion caused by international wildlife trade (DEA, 2016a; 2016b). Despite South Africa's membership at these high-level conventions, poaching and illegal wildlife trade particularly around PAs remain pressing, and thus a top-priority on ICFA's funding agendas (World Bank, 2016). Whereas illicit wildlife trade is fuelled by ongoing local and global demand, the "[...] trafficking [of] high-value products such as ivory and rhino horn by organised criminal networks [...]" (GEF, 2019, p. 23) inhibits long-term species recovery and stabilization.

2.1.3 International Biodiversity Funding in South Africa

To grow its biodiversity sector, comprising conservation, sustainable use and ecosystem services, South Africa pools funding from ICFA, domestic public as well as national and international private sector sources. Interestingly, international conservation funding has barely been assessed quantitatively "[...] as the donor procedures, processes, and systems to collect and report on funding data are complex and time-consuming, and they involve many agencies." (World Bank, 2016,p. 2) Furthermore, differing definitions and funding classifications guiding donor contributions complicate attempts at data standardization. Until today, the only comprehensive funding overview remains the 'Analysis of international funding to tackle illegal wildlife trade' published by the World Bank (2016). Detailing ICFA funding for conservation and sustainable use between 2010 and 2016, it concludes that from a total of US$ 1.3 billion allocated to Africa and Asia, almost half of the total spending targeted protected area management and anti-poaching programs, while 15% went into sustainable use and livelihood development. During this time, ICFA allocations to South Africa totaled US$ 19 million and were channeled through 25 regional bilateral and national multilateral donor projects (World Bank, 2016).

Figure 1 visualizes the ICFA funding trends of sustainable use in South Africa between 2016 and 2022 in relation to the overall ICFA biodiversity funding. This is to assess whether there has been greater willingness on the part of ICFAs to fund sustainable use projects following the NBES-based formalization of the biodiversity economy. Funding accounts were taken from the

Global Environment Facility (GEF) database due to data accessibility and project transparency reasons, constituting only a marginal share of the complete ICFA biodiversity spending between these years. Since there was no indication of the actual funding disbursement, all funding records respond to their respective year of project approval. Furthermore, sustainable use spending refers to multi-activity projects which comprise sustainable use activities such as periodical reporting and policy revision support, tourism-and wildlife resource-based livelihood development (CBNRM) and wildlife-based value chain development, within broader illegal wildlife and poaching prevention projects (Global Environment Facility, 2022a).

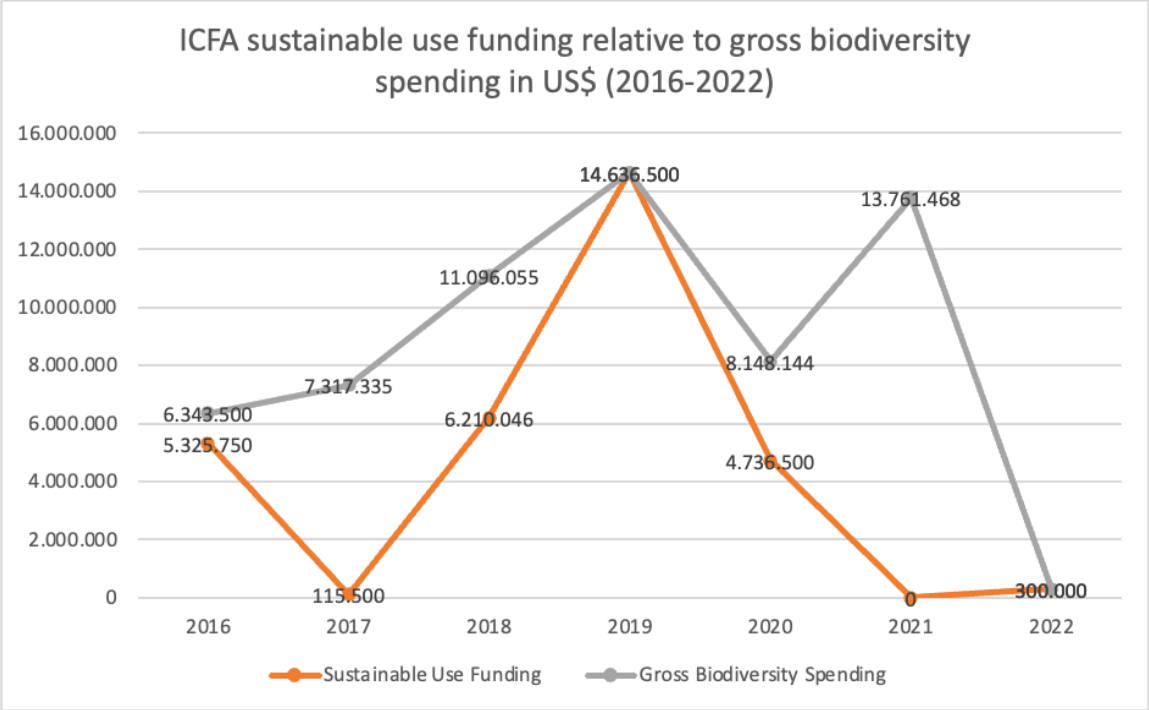

Figure 1: ICFA sustainable use funding relative to gross biodiversity spending in US$, 2016-2022, Data Source: Global Environment Facility, 2022a

It appears that the funding of sustainable use-incorporating projects has visibly suffered the consequences of the 2020 Covid-19 induced decline in biodiversity spending. An upward trend in sustainable use funding peaking at US$ 19 million in 2019, is thus seemingly contrasted by a stark decrease between 2020 and 2021. It remains to be seen whether sustainable use funding will experience a renewed surge. Interestingly, the upward slope in total spending in 2021

resulted from funding the development of the first-ever wildlife conservation (rhino) bond[5], a market-based financing tool issued by the World Bank that aims to catalyze international biodiversity finance through 'bankable' private sector investments in response to deep cuts in public biodiversity funding (Global Environment Facility, 2022a,b). Consequently, it becomes apparent that while both the overall biodiversity and sustainable use spending soared following the 2016 release of the NBSAP and the NBES, the Covid-19-stipulated cuts in public ICFAs funding affected both domains alike, ultimately prompting the emergence of market-based funding mechanisms.

3. Literature Review

This thesis aims to explore the views and perceptions of international biodiversity finance institutions on consumptive sustainable wildlife use for conservation and development and their potential and limitations for scaling within the biodiversity economy.

In providing the conceptual grounding for the subsequent analytical assessment of the empirical research findings, the following literature review seeks to present a holistic overview on the sustainable use debate, the theoretical premises of wildlife economics, and the role and impact of international funding networks in conservation. Based on previous findings, this section will conclude by pointing out the identified research gap that this study aims to address.

3.1 The Nexus Between Development and Conservation

At the heart of much of the literature on conservation lies the long-standing debate on whether human welfare is compatible with the preservation of pristine wildlife habitats. This polarised debate is fought between proponents of protectionist, "non-consumptive," and sustainable use approaches and centres most commonly around formally-established protected areas (PAs). Since most conservancies are located in the global South and are situated in areas experiencing acute poverty and political instability, the debate on how to address conservation in the context of

[5] Independent of whether the wildlife bond will be funding sustainable use projects in the future, for this estimation it has not been categorized as sustainable use-oriented as its main funding purpose was the creation of the financing mechanism itself.

political and economic livelihood threats to adjacent communities becomes even more contentious (Wilshusen et al. 2002).

Adams and Hutton (2007) point out that a lopsided conservation curriculum has caused a divergence between both social and natural science perspectives which consequently hampers the mainstreaming of more integrated and holistic conservation approaches. An inherent lack of terminological clarity present in conservation and sustainable use literature keeps proponents on both sides in disagreement. This comes to be pertinent in categorising non-consumptive and consumptive utilisation of wildlife according to their perceived impacts on wildlife and natural habitats (Leader-Williams et al. 2010; Hutton and Leader-Williams, 2003). With its three overarching aims, the CBD is thus mirroring this conflict between protectionist and use-oriented conservationists (Hutton and Leader-Williams, 2003).

Since the creation of the first African colonial game reserves in the late 19th century, many conservationists have viewed human existence as a threat to the biological sustainability of natural environments (Noss, 1991; Terborgh, 1999). “Objections include its possible disruption of ecosystem functions[…], its possible endangerment of the continuing existence of harvested species and/ or of species dependent on these[…], and the view that killing animals is cruel and violates animal rights[...]” (Tisdell et al. 2007,p.129). This perception has led to the wide-reaching omission of human presence and active use of wildlife resources in many PAs, thereby turning them into fully enclosed wildlife habitats. In the belief that natural habitats can only correctly function by means of restricted and regulated park conservation, Terborgh (1999) and other scholars insist that instating ‘order and discipline’ is necessary to safeguard biodiversity in the presence of malfunctioning governance systems in developing countries (p. 192; Van Schaik and Kramer, 1997; Oates, 1995).

Despite long-standing international support, mounting public and policy pressure by sustainable use and human rights proponents points to long-standing neglect of economic and social principles of protectionist conservation (Wilshusen et al. 2002; Mathur and Sinha, 2008). Common critique focuses on little empowerment and beneficiation of local communities as well as lacking financial sustainability (Damania and Bulte, 2007; McClanahan et al. 2008; Adams

and Hutton, 2007). Reserving vast tracts of land solely for wildlife protection results in mounting, and partly unbearable costs for governments and communities (Crosmary et al., 2015). Moreover, Adams and Hutton (2007) hold that the promulgated conceptual divide between people and nature in fenced-off conservation has caused their physical estrangement, "and often [...] a denial of rights and of historic human presence." (p.153). According to MacKenzie (1988), this disenfranchisement is rooted in the colonial history of PAs that have long functioned as elite 'playgrounds' for leisure activities such as trophy hunting. Therefore, many local communities come to "view conservation as yet another manifestation of external control that, in some contexts, mirrors earlier eras of imperial domination." (Wilshusen et al. 2002, p.23)

Studying the conflict between local and state people regarding development and conservation in Nech Sar National Park in Ethiopia, Debelo (2012) argues that imposed protected area conservation has repeatedly counteracted local knowledge and practice of wildlife management, with destabilising effects on livelihood developments. Other social impacts involving crop damage and physical danger by freely roaming wildlife, vulnerability to extortion by park staff, and arbitrary displacements (Adams and Hutton, 2007). In the latter, the enforcement of forceful conservation mandates in PAs has served to strengthen elite power over disputed lands (Hitchcock, 1995). The resulting displacement is found to pose the greatest threat to communities due to their susceptibility to economic, social and cultural deprivation. Their overwhelming reliance on wildlife sources for survival renders the displaced prone to food insecurity and financial hardship (Adams and Hutton, 2007).

Against this background, sustainable use of wildlife proponents emphasize the need to unite both human welfare and environmental objectives by employing economic incentives and benefit-sharing through local community ownership and income creation (Wilshusen et al. 2002; Mathur and Sinha, 2008). The importance of wildlife utilisation as a centrepiece of the conservation agenda thus stems from the continued reliance of rural communities on ecosystem services and wild resources as well as its importance for cultural and spiritual practices. Hutton and Leader-Williams (2003) define sustainable use "as an imperative or choice in the pursuit of livelihood strategies, the need to manage use to achieve biological sustainability and the possibility that use can provide incentives to conserve biodiversity." (p. 216). Robinson (1993)

considers that sustainable development can only be successful if human welfare is achieved while accounting for the decline and deterioration of wildlife. In this respect, previous cases of wildlife overharvesting and depletion have ignited concerns that the concept of sustainable use will give way to exploitative use (Terborgh, 1999; Van Schaik and Kramer, 1997; Oates, 1995). For conservation to occur within the natural carrying capacity, more complex systems thinking proves crucial given the varying dimensions of human impact on different species and ecosystems, the needs and endeavours of resource users, and their rights to it (Robinson, 1993). In this respect, Selier and Menin (2015) highlight the importance of an integrated conservation management system, ensuring that use falls within biological boundaries through continuous harvest and population assessments. In safeguarding ecological sustainability, Wilshusen et al. (2002) further emphasize the importance of accounting for context-dependent, socio-political, cultural and institutional interdependencies and the organizational complexities present in local communities. The recognition of the political dimension behind conservation thus deems necessary to "build on past experience and constructively negotiate ecologically sound, politically feasible, and socially just programs in specific contexts that can be legitimately enforced based on strong agreements with all affected parties." (Wilshusen et al. 2002, p.36). In contrast, policy deviation towards authoritarian protection enforcement will further aggravate ecological outcomes, as it deters previous local allyship from realizing conservation as a universally beneficial and legitimate practice (Wilshusen et al. 2002).

Given that these considerations are met, the sustainable consumptive utilisation of wildlife resources holds various benefits for inclusive biodiversity conservation beyond PAs while leveraging the commitment of local communities (Crosmary et al. 2015; Lindsey et al. 2007). This also proves a critical economic and conservation strategy on private or community-owned lands where wildlife is prone to habitat loss and where few or no charismatic species are present. "Enabling private sector and personal benefit where wildlife ownership and management were previously vested exclusively in the governments can lead to innovation, competition, and positive outcomes in species and habitat protection." (Wilson et al., 2016, p.485).

3.2 Wildlife Economics

One of the arguments that has been put forward in the literature is that it is not possible to monitor and manage what we cannot measure. Against this background, a broad range of theoretical approaches within natural resource and environmental economics seeks to provide conceptual guidance for the socio-economic valorization and the controlled management of natural assets for an optimal level of use and protection (Heltberg, 2002; Bulte et al. 2003; Damania and Bulte, 2007; Child et al. 2012). Consequently, wildlife economics pursues the measuring and internalising of all the costs and benefits accruing from the preservation and exploitation of biodiversity while determining its socio-economic and ecological use optimum.

Investigating the relevance of different economic instruments in wildlife management, Bulte et al. (2003) argue that lacking attention paid to the use and non-use biodiversity values has caused three inherent failures to emerge: the institutional failure, market failure and policy failure. Although the three failures are discussed separately, it is essential to acknowledge their interdependence. In this regard, policy failures tend to prompt the emergence of institutional and market failures. Therein, rational government decision-making is diverted through perverse incentives, giving rise to distortions that trigger ensuing failures in institutional and market domains (Bulte et al. 2007).

With regards to policy failure, Child et al. (2012) highlight the implications of historical state monopolisation of wildlife in South Africa when evaluating the profitability of wildlife and livestock operations in South African drylands. The government's decision to establish PAs and keep wildlife out of the trade realm has prevented the induction of reliable wildlife pricing. Despite the more significant economic and social gains resulting from wildlife, state funding in Southern Africa has largely supported livestock conversion since the 1960s, thereby accelerating habitat and species loss (Child et al. 2012). For biodiversity to become a liable investment counterpart to agricultural development, it proves indispensable to turn into an economically competitive asset. Bulte et al. (2007) argue that profits generated through habitat and wildlife utilisation should, at best, trump those of conventional land uses. However, this relies upon policy enforcement which affects the proper assignment of biodiversity values in a wider market context. Therein, legally enforceable proprietorship linked with sustainable wildlife resource use

presents fundamental linchpins to biodiversity and habitat valorisation. The absence of such mechanisms triggers distortions in the institutional and market sphere which are discussed in the consequent sections.

Institutional failure presents a significant factor behind resource destruction through insecure property rights, and open access regimes, with longstanding effects on species' survival and natural habitats. In the absence of firm use policies, an open-access situation removes any economic incentive for the individual to conserve wildlife, causing harvesting to thwart its conservation (Bulte et al. 2003). In rural areas, predominant land arrangements are either marked by state-owned PAs or community/private ownership, the latter being subject to vague land and resource proprietorship. Owing to this insecurity, land users tend to successfully claim ownership through agriculturally developing lands (Bulte et al. 2003). The likelihood of land conversions and the excessive harvesting of wildlife results from the issue of free-riding. In that, personal benefit exceeds the worth of collective welfare alongside the little institutional capacity to enforce individual accountability (Heltberg, 2002). The resultant tragedy of commons or, as Bulte et al. (2003) put it, the ‘tragedy of open-access’ inflicts higher external costs on other users through public competition for resource extraction in the face of dwindling resource availability (Heltberg, 2002). In averting such a failure, comprehensive use policies paired with the devolvement of property rights could incentivise local communities to back determined conservation objectives rather than undermine them due to systemic outlawing of wildlife use. Establishing a concession for restricted use thus enables local stakeholders to obtain access to livelihood-enhancing assets. Moreover, the induction of benefit-sharing policies proves fundamental for revenue sharing and preferential employment schemes that allow equal allocation of gains within communities (Bulte et al. 2007).

As previously alluded to, market failure in wildlife management results from insecure property rights and the market exclusion of wildlife stipulating systemic resource undervaluation. By managing natural assets as a public good, wildlife and their habitat are prone to depreciate in perceived worth, eroding land owners’ and users' incentives to conserve rather than exploit or develop the land. In the absence of proper valuation methods, financial markets and institutions continuously fail to accurately reflect the actual value of using, preserving and depleting

biodiversity (Child et al. 2012; Deutz et al. 2020). Since asymmetric access to information causes proliferating transaction costs to emerge, rising opportunity costs determine the extent to which wildlife conservation is valued relative to other land uses. Consequently, opportunity costs paired with distorted markets weaken incentives for owners and users of land to conserve wildlife habitats. The relative security of agricultural returns on converted grounds outcompetes the marginal benefits accrued from conserved lands. This pervasive market failure arises from a multitude of the above-mentioned institutional failures, thereby causing a "gap [to emerge] between the actual price of a good and its real value." (Child et al. 2012,p. 2)

In light of the failures mentioned above affecting the conservation and extraction of wildlife, institutions prove paramount for effective and enforceable wildlife management through the promulgation of "[...] rules, norms, habits and formal hierarchies that shape agents' actions and expectations." (Heltberg, 2002,p. 190). Considering the role of external funding in biodiversity conservation, it proves paramount that international funding organizations support conservation models that are based on the consumptive sustainable use of wildlife.

3.3 The Role of Funding in Biodiversity Conservation

There is overall consensus on under-resourcing in conservation, which is seen to hamper the realisation of ambitious conservation agendas laid out by the CBD. Although recent reports indicate an increase in global biodiversity finance from US$ 78-91 billion annually in 2014 to US$ 143 billion in 2019[6], triple the amount of government finance flowing into environmentally-harming industries has spawned an annual funding gap of US$ 598-824 billion (OECD, 2020; Deutz et al. 2020). Current finance providing a mere 16-19% of overall expenditures to counter biodiversity loss, is moreover faced with intensifying threats of degradation and species extinction through climate change, thereby widening the existent funding gap (Deutz et al. 2020; Buckley et al. 2016). Waldron et al. (2013) point to the global pervasiveness of underfunding following their study sample of 124 developing and developed economies indicating scarcity in conservation budgets. Corresponding appeals, therefore, suggest changes in public sector mechanisms for improved targeting of scarce funding (Evans et al. 2012), environmentally harmful subsidies (Deutz et al. 2020; Evans et al., 2012) and the wasteful

[6] These numbers account for national and international public and private funding mechanisms.

utilization of funds (Martin et al. 2018; Bruner et al. 2004). In contrast, other findings point to notable increases in conservation aid flows on both regional and global levels. In this respect, bilateral aid allocations for biodiversity have increased by USD 3.25 billion between 2007 and 2010 due to growing official development assistance (ODA) commitments and biodiversity-specific spending (Parker et al. 2010). Miller et al. (2013) and Bare et al. (2015) show a parallel increase in both conservation and conventional aid flows, with particular growth in Sub-Saharan Africa until 2008. This is however overode by spatial inequities in global funding distribution. Larson et al. (2016) find that conservation funding both originates in and reaches industrialized countries to a greater extent than the global South, therefore prioritizing geographical proximity over actual needs. Parker et al. (2010) highlight that Africa, Latin America and Asia (excluding China) are each allocated only 6-7% of the total biodiversity funding available while hosting the largest global biodiversity stocks. On the African continent specifically, conservation aid bias causes 10 countries to receive 63% of the total funding (Bare et al. 2015). Despite multilateral, bilateral, philanthropic and corporate sustainability spending and grants, conservation is thus overwhelmingly funded through national budgets (Parker et al. 2010). To improve finance distribution and allocation, recent debates around biases aim to optimize conservation funding through prioritization strategies. Common critique circumvents the mismatch between funding allocation and the urgency of conservation (Holmes et al. 2012; Larson et al. 2016).

Overriding agreement in the literature is found regarding the inherent lack of data when attempting to assess the financing of wildlife conservation in quantitative terms. Concurrent shortfalls in data accessibility and standardized documentation thus hinder a comprehensive analysis of funding records across time and geographical scale (Waldron et al. 2013; Miller et al. 2013; Bare et al. 2015; Evans et al. 2012; Bos et al. 2015; Deutz et al. 2020). The use of differential methodological and quantitative approaches has caused difficulties in determining the scope of both the chasm and the optimal state of funding (Feger and Pirard, 2011). Insufficient proof of causal impact relationships between increasing funding and biodiversity protection as well as conservation and poverty reduction, feeds into overall ambiguity when seeking to “inform investment decisions by evaluating the costs of achieving a noneconomic benefit.” (Martin et al. 2018, p. 2; Evans et al., 2012).

3.4 International Organisations in Conservation Funding

As biodiversity finance is tied into multi-stakeholder networks, diverging funding interests can substantially impact whether finance can enhance or restrain practice on the ground. These networks feature geo-strategic donor agencies as well as international conservation and multilateral organisations, acting as node points of conservation finance. Bilateral funding through the former is conditioned by political and historical (colonial) relations between donor and recipient countries. Greater bargaining power by the latter is seen to leverage financing for environmental and developmental purposes (Reed et al. 2020; Miller et al. 2013).
International organizational actors in the global biodiversity network comprise the "[...] CBD, (see the Aichi biodiversity targets), the United Nations Environment Programme (through the Biodiversity Finance Initiative), World Bank (via Global Environmental Facility) and well-funded international nature conservation organizations (The Nature Conservancy, World Wide Fund for Nature, Wildlife Conservation Society, Conservation International)" (Anyango-van Zwieten, 2021, p.27). Cost-effectiveness as the overall determinant for funding prospects prioritizes localities with previous funding allocations issued either by the same or other actors. The imminent concern about investment risk, therefore, deviates financing toward species-rich places with greater sophistication in access infrastructure, institutional networks, and track records of previous conservation interventions (Hermoso et al. 2017; Ahrends et al. 2011). This prioritisation approach to international biodiversity funding consequently leaves those with little or no previous funding lagging behind those with extensive project records. In that respect, Leader-Williams et al. (2010) contend that increasing refinement of conservation practice necessitates the disclosure of latent decision-making in conservation policy.

In the pursuit of mobilising resources beyond "traditional" public financing, international emphasis has been laid on developing and strengthening market-based mechanisms. A study on for-profit actors' motives for investing in conservation found that organizational conservation goals and missions are becoming increasingly important, rather than focusing solely on expected financial returns. Combined, investments with prospects of maximizing conservation impact and a proven management track record (45%) ranked higher than the likelihood of reaching or surpassing a financial return objective (35%) (Hamrick, 2016). Although Payments for Ecosystem Services (PES) and other market-based instruments serve as the principal funding

alternatives, increasing critique suggests little success to date, as core funding remains heavily dependent on public funds. Differential financing outcomes have spurred a debate on whether PES will succeed in addressing the biodiversity financing gap (Dempsey and Suarez, 2016; Balmford and Whitten, 2003; Hein et al. 2013). A gross underspending of around USD3.1 billion in biodiversity conservation at the end of 2015 has been argued as a consequence of an apparent lack of "bankable projects". The latter implies the absence of appropriate risk/return and small-scale investment opportunities alongside insufficient management track records and government facilitation (Hamrick, 2016).

3.5 The Role of Funding for Sustainable Use: A Gap in the Literature

Previous research has focused on assessing the policy impact of international conservation governance institutions on national conservation law and practice. Akama's (1998) study on wildlife conservation policy development in Kenya suggests that "[t]he conservation goals and objectives of international conservation organizations are framed and dominated by Western ethical and environmental values, and western scientific philosophies." (p. 109)

Very few studies have investigated international project support in implementing sustainable use strategies as part of larger conservation programs (Barnes et al. 2002; Wilshusen et al. 2002). Among them, Wilshusen et al. (2002), for instance, highlight the long-term engagement of the German bilateral aid agency (GIZ) in successfully averting common land conversion for conventional agricultural production in Quintana Roo, Mexico through the creation of a community-managed biosphere forest corridor providing opportunities for wildlife use. Framed as "hybrid" CBNRM, Dressler and Büscher (2008) discuss how international donors and South African government agencies have been "privileging local involvement in low paying service sector jobs and devaluing diverse rural production strategies" (p.453) due to their bias for private sector investments in tourism-based conservation to finance TFCA development. Apart from scarce case studies like these, there is little data available specifically on the relation between international finance and sustainable use (Nelson and Agrawell, 2008; King, 2007; Bare et al. 2015).

As conservation and sustainable use projects are alike depending on international donor funding, it deems particularly important to tease out related values and perceptions as they represent the rational-driven motives behind institutional decision-making and the positioning along the conservation continuum. In the case study context of South Africa, this is best done by investigating the prevailing perceptions of (non-)consumptive sustainable use projects within different ICFAs and their national collaboration partners. The perspectives raised are seen to inform decision-making on funding allocations for consumptive sustainable use.

4. Theoretical Framework

As the background section and the literature review elucidated, conservation governance is marked by historical changes in conservation narratives and a power divide impacting local conservation practice through international funding allocation and policy agendas. The need to explore these dynamics using appropriate theoretical tools prompts the cautious application of a theoretical framework mainly consisting of the 'Multi-level Perspective' (MLP) which enables an analysis of the weaker niche (local consumptive sustainable use) and the dominant regime (international conservation finance actors (ICFAs)) in bringing about sustained change through a transition toward enhanced socio-economic sustainability in conservation. It will do so, by investigating the normative positioning (sentiments) of ICFAs on consumptive sustainable use and their willingness to turn this niche innovation into a viable and just value chain activity in the South African biodiversity economy context. Ultimately, the perceived potential and constraints determine the likelihood of its adoption through ICFAs as a viable and sustainable conservation business model.

The MLP and Sociotechnical Transitions towards Sustainability

Given the need for transformational change towards sustainable development, Smith et al. (2010) seek to explore the implications of novel technologies and practices within a broader system context. Yet, successful innovation trajectories prove difficult to realize relative to its imminent danger of default provoking undesirable side-effects. Besides the unpredictable structural impacts of innovations on society and the environment, pervasive "ambivalence over standard

measures of ‘sustainability’ [...] [and] [t]he precise meanings and trade-offs for society between specific environmental, social and economic features of innovative activities [...] [leaves them] open to interpretation and negotiation.” (Smith et al., 2010, p. 437). As diversity in thought and interpretation is inherently bound to differential individual political and economic capacity, some conceptions are deemed more justifiable than others.

Acknowledging the relative power divide and the governance structures behind innovation-driven transitions for sustainability, Geels and Schot’s (2007) MLP defines the latter as a result of multi-dimensional struggles and rule-based interaction between three inherently interdependent socio-technical levels - the niche, the landscape, and the regime.

The sociotechnical landscape refers to external factors such as global economic trends, climate change and crises that, although unlikely to occur in the short-term, come to affect the regime while enabling niche advances (Geels aand Schot, 2007). Based on a broad network of actors, *the sociotechnical regime* forms the backbone of institutional structures and processes in the socio-technical system. Due to its dense networks of actors and social groups, the establishment of formal and informal rules and its organizational and physical assets, make it the most capacitated and powerful level in the MLP. Given its regulatory and normative capacity, the regime exhibits structural coherence, durability and autonomy in the face of exogenous uncertainty. The regime produces institutional elements such as markets, sectoral policy, investments and infrastructure patterns, knowledge and expertise as well as regulations and standards (Geels and Schot, 2007). In contrast, *niches* constitute the smallest entity in the MLP and the ‘birthplace’ of primitive innovations undertaken by small groups of committed stakeholders, external to mature governance structures and markets. The infancy and fluidity of innovations as well as the small-sized network marked by an inconsistent supporter base, makes their growth reliant on their adoption by the regime and its traditional power networks (i.e. selective markets, institutions, policies) (Geels and Schot, 2007).

In regulatory environments both the regime and niche operate according to common rules. Agency implies that rules can be created and altered by actors while simultaneously building the regulative, normative and cognitive foundation for their actions. Therefore, “[r]ules are not just

constraining (making some actions more legitimate than others), but also enabling (creating convergence of actions, predictability, trust, reliability)." (Geels and Schot, 2007, p.403) Embedded in extensive, rule-driven structures and yielding greater institutional power, regimes tend to experience larger rule-based restraint than niches and are thus slower to change or adopt novel trends (Holtz et al., 2007). A combination of multi-stakeholder bargaining over rule changes and long-term cooperation are elemental for regime modifications to occur in the form of change in "goals, guiding principles, [and] search heuristics" (Geels and Schot, 2007, p.414) catalyzing transitions toward societal progress (Holtz et al., 2007).

> [...] [C]hange can be triggered by larger-scale ideological shifts and movements of capital, leading in turn to enhanced opportunity and agency for previously marginalized actors, in other cases, change may be more dispersed and grassroots in nature, cascading up from local innovations that disrupt system dynamics to create structural change. (Scoones et al., 2020, p.68)

The MLP framework will frame the discussion between consumptive use of wildlife (the niche) and the existing narratives and practices of the dominant actors in conservation (the regime). To anchor this thesis, particular focus will be paid to the role of ICFAs to investigate to what extent issues around the consumptive use of wildlife are pervading their non-consumption narrative, thus opening up space for transformations.

5. Methodology

5.1 Research Design

This research employs an exploratory case study approach to investigate the extent to which ICFAs are considering to fund sustainable use projects in the context of the biodiversity economy in South Africa (Punch, 2005,p. 144). Whereas previous studies surveyed public and local sentiments regarding wildlife protection and sustainable wildlife use (Tisdell et al., 2007; Manfredo et al., 2003), there exists no data on such views and their practical implications within major international funding conservation institutions. Exploratory cases through qualitative data

collection and analysis (through interviews and document analysis) are especially useful for examining phenomena for which data are scarce, such as the one discussed in this thesis - the nature and commonalities of these prevailing attitudes as the basis for impactful decisions made in the international conservation funding realm (Yin, 2009, p.11;18). The overall guiding questions and conceptual ideas emerging from observations and conversations during a 10-week long internship at the African Wildlife Economy Institute (AWEI) at Stellenbosch University between January and March 2022. These were increasingly concreticized as common themes emerged from the data (Punch, 2005,pp. 22-23).

5.2 Data Collection and Material

This study uses primary and secondary data collection to discern predominant institutional perceptions, strategies, and visions shaping international funding allocations for sustainable use projects in South Africa. Data enquiry followed a two-tiered structure, whereby qualitative data were collected both through institutional funding reports (secondary data) and the conducting of semi-structured interviews (primary data) with individuals working in ICFAs and major affiliated (South) African conservation organizations. Both were previously mapped according to their funding and capacity involvement in South Africa's conservation management, whereby the latter allocates major international funds on the national level. Purposive sampling focused on the most influential international institutions (and their national distribution channels) and was guided by the concrete listing of leading ICFAs in the NBSAP (2015)[7] (Robson and McCartan, 2016,p.281). This list was complemented by industry evaluations from the AWEI staff. Despite insufficient and scattered documentation of the conservation spending from each of the respective ICFAs in South Africa, their relevance for sustainable use project funding and integrated conservation-development projects has been highlighted through both these governmental and professional sources. This selection was consolidated through the findings of the complementary quantitative data representation on international funding for sustainable use in Section 2. By interviewing different stakeholders in the international conservation funding

[7] USAID, DANCED, GIZ, NORAD, WWF, IUCN, GEF, Fauna and Flora International, and the International Fund for Animal Welfare (NBSAP, 2015)

realm, the findings gathered enabled a holistic view of the stakeholder relationships and the implications of values, thoughts and perceptions on sustainable use for funding allocations.

5.2.1 Semi-Structured Expert Interviews

This research used snowball sampling, whereby the researcher started reaching out to an initial sample of participants provided by AWEI staff who acted as 'gatekeepers' to facilitate contact with expert circles. During the interviews, participants passed on further contacts working in the same or other ICFAs. Ultimately, 40 individuals from 20 ICFAs[8] and national academic and practice affiliates were invited to interviews via email and LinkedIn, resulting in 9 individual and group interviews scheduled between 15 April 2022 and 19 of May 2022 and conducted online through Zoom and Google Meets (Appendix 3). Prior to the interviews, a consent form was sent out to inform about the study aim, participation conditions and the anonymization and handling of the interview data.

The participants share diverse professional backgrounds in conservation funding and practice, with some specifically focusing on sustainable use and alternative livelihood development. Most have previously worked in different institutional, organizational and academic environments on conservation issues and the private and public financing thereof. Therefore, six of the interviews were conducted with ICFA mission/project/departmental representatives, while three of the interviews were held respectively with representatives from i. A regional conservation organization based and active in South Africa as well as ii. A regional conservation research and training institution. The latter interviews were sought to better evaluate ICFA's willingness to fund consumptive sustainable use projects in the context of the biodiversity economy, following these organizations' experiences in ICFA funding cooperation and field research. The participants' names and organizations remain confidential due to the signing of a non-disclosure agreement. This study will refer to them as ICFAs and regional cooperation partners (RCPs). All interviews lasted between 30 minutes and one hour and followed a rather conversational semi-structured format. The initially extensive interview guide (Appendix 4) was shortened by at least 10 questions and was adjusted according to the interviewee's responses to acquire more

[8] This refers to different departments,working groups, delegations within different ICFAs.

in-depth perceptions and experiences of professionals working in the ICFA field (Robson and McCartan, 2016, pp.285; 293; Bogner et al. 2018). This provided the possibility to refine as well as compare previously made observational and contextual conclusions derived from the researchers' time at AWEI.

5.2.2 Qualitative Secondary Data and Triangulation

As this study was unable to interview all relevant ICFAs, document analysis of accessible project reports/concepts and policy documents was used to cross-check the findings emerging from the interviews. Data triangulation through primary and secondary qualitative data thus compensated for the missing oral accounts in primary data. Secondary data was collected from all ICFAs regardless of whether they participated in the interview series or not (Robson and McCartan, 2016,p. 170). All documents were sourced from the respective institutional websites and the GEF project database, thereby providing the latest information on ICFA's stances on sustainable use and their funding approaches towards a biodiversity economy.

5.3 Data Analysis

All interviews were recorded online, transcribed through otter.ai and coded using the NVIVO software. Due to the density of the interview data, the researcher used the Miles and Huberman Framework to reduce, display and draw conclusions in a recurrent and iterative fashion (Punch, 2005,p.196). This involved loose coding and memoing following general questions from the interview guide to lead the research by constructing an initial thematic baseline (Punch, 2005,pp. 196-201). Keywords and themes emerging from the data were further aggregated, associated and visually organized. Constant memoing helped construct interpretive categories under which descriptive first-level codes were grouped. The emerging patterns were interrelated and connected to the theoretical-conceptual framework (Punch, 2005,pp. 196-201). The textual sources were coded in the pursuit of answering the research questions and to strengthen and contrast previous codes stemming from the interviews. This enabled a systematic review and comparison of both the oral and written accounts (Punch, 2005, pp.144-146).

5.4 Data Limitations

Despite using mixed qualitative sources, limitations to data representativity and generalizability are inherent to qualitative case study research. Context-specific data enquiry makes this exploratory study unique to the South African context and is therefore not to be extrapolated to other countries or regions. Nevertheless, theoretical and empirical patterns could be tested in other contexts following regional patterns raised during the interviews (Punch, 2005, p.146). This research thus serves as a conceptual point of departure for future case studies in Southern Africa.

Unable to account for the entire scope of ICFAs in South Africa, a limited number of six interviews prompts the cautious exploration of findings. To enhance data validity and representativity and to fill occasional gaps in country-specific data, the document analysis focused specifically on South African-based projects and ICFAs that did not participate in the interviews (Robson and McCartan, 2016,pp. 169-170). Furthermore, this research deals with biases affecting the objectivity of both the researcher and the qualitative data gathered. Researcher bias and preconceptions stemming from conversations and work experiences at AWEI inevitably shaped the researchers' understanding of sustainable use and the role of ICFAs prior to the research process. These were actively addressed through reflecting on and acknowledging their impact throughout the data collection and analysis. However, biases are also affecting expert interviews and ICFA reports in which actors might want to portray themselves as more sustainable use-oriented than is the case in practice.

6. Analysis and Discussion of the Findings

This section seeks to answer the following sub-research questions with the aim of setting empirical grounding for the discussion of the overall research question. In doing so, the qualitative findings will be analyzed and discussed in relation to the above-mentioned theoretical considerations of the MLP and previous research.

Overall RQ: What is the relationship between the 'non-consumption' paradigm in international conservation and the willingness of ICFAs to scale the consumptive sustainable use of wildlife in South Africa?

Sub-RQ 1:How is consumptive sustainable use of wildlife viewed by ICFAs intervening in South Africa?

Sub-RQ 2: What limitations and possibilities do ICFAs observe in the scaling of consumptive sustainable use projects in the biodiversity economy context?

6.1 Views on Sustainable Use

Considering the historical dependence of rural communities on wildlife resources for traditional, spiritual, subsistence and commercial purposes, there is growing recognition of the importance to preserve traditional usage rights and knowledge, while enabling active communal participation in the design and management of PAs (USAID, 2018; Laird and Wynberg, 2021; FFI, 2013). In bridging both species preservation and livelihood enhancement, sustainable use is incentivizing communities to partake in and benefit from conservation interventions (BMZ, 2020; Laird and Wynberg, 2021). Interestingly, one of the interviewees indicated that while sustainable use has " [...] *always been quite strongly on the [regional] agenda, [...] it's taken the international community that is supporting many of these initiatives a very long time to really understand the need for it." (ICFA 2)* Following the theoretical considerations of the MLP, ICFAs have been reluctant to change due to their consolidated policy frameworks stirring funding allocations. Their practice orthodoxy can be seen to have delayed efforts to adapt to novel-seeming conservation approaches and models such as consumptive sustainable use (Geels and Schot, 2007).

6.1.1 Sustainability in Use

Although sustainable use is viewed as *"a critical conservation tool and critical for the development and livelihoods of local communities."* (ICFA 3), differing environmental outcomes and overall resource management uncertainty in areas with endangered species and habitats, have kept this approach under scrutiny (FFI, 2013). The interviews reveal that environmental sustainability of wildlife use is thus viewed as ambiguous and difficult to guarantee. Its context- and case-specific nature is argued to hinder the development of a standardized use approach that is capable of ensuring the recurring replenishment of wildlife stocks. This goes in accordance with Smith et al. (2010) who emphasize the latent uncertainty of innovations whose direct and indirect socio-economic and ecological implications are unforeseeable and subject to differential interpretation. The potential repercussions arising from sustainable use are evaluated differently depending on whether actors associate with the regime or the niche. This thus renders the creation of sustainability criteria a difficult task due to ambiguity in formulating universally-applicable and acceptable sustainability standards (Smith et al. 2010; Geels and Schot, 2007). The interviews and previous studies agree that the resulting absence of a transparent, multi-level policy framework providing comprehensive environmental, social and economic parameters by which to carry out harvesting activities is said to have 'muddied the waters' of sustainable use activities, giving way to resource overutilization and illegal wildlife trade (ICFA 3; Lindsey et al., 2007; Terborgh, 1999). Therefore, location-specific, scientifically-based quotas and sustainable management procedures are viewed as critical in achieving environmentally-secure harvesting and socially-conducive allocation of arising benefits (ICFA 3; ICFA 1). The interview findings thus correspond with Crosmary et al. 's (2015) emphasis on long-term monitoring of harvesting to ensure that hunting can be a viable conservation option. Sustainable wildlife use implies inclusion and benefit-sharing through financial sustenance (economic), communal beneficiation (social), and conservation (environmental) outputs (ICFA 3).

> *I think when sustainable is true, and that means quotas are scientifically set, they are managed, there is no cheating, and there is no corruption and all those other aspects. When sustainable use is sustainable, it's fine. But the tricky thing is what is sustainable? And how is that managed? And how are both local national regional policy and legal*

frameworks supporting that? The problem is that a lot of things were called sustainable use that aren't sustainable. [...] And as we move forward, I think it's gonna get more critical to have that defined or understood. I don't think defining it is going to work that well. (ICFA 3)

6.1.2 Ethics in Wildlife Use

The interviews exhibit broad agreement on differing ethical reasoning when evaluating the sustainability impact of using wild flora relative to fauna. Whereas the harvesting of medicinal and herbal wild plants for commercial and sustenance purposes is presented and understood as a socially and environmentally desirable objective, most controversy is centered around the use of fauna, and thus the hunting and culling of animals (ICFA 3-5; RCP 1-3). The interviews reveal that particularly trophy hunting has sparked disputes that come to shape the funding agendas of ICFAs. Although many recognize the possible economic benefits arising from trophy hunting activities on lands with no other feasible land use option, those considerations seem to be trumped by ethical concerns about animal welfare and accelerating species loss (ICFA 3-5; RCP 2-3). Previous studies on trophy hunting in South(ern) Africa exhibit similar lack of consensus on the effectiveness of hunting as a conservation and development tool due to methodological challenges in holistically assessing economic and environmental outcomes (Lindsey et al., 2007; Crosmary et al., 2015). Interviewee's feedback illustrates recurrent donor reactions to hunting activities forming part of funded CBNRM interventions:

Many [donors] *like the notion in community based conservation that communities are given rights to resources, but they get a bit sometimes taken aback, a little bit of a knee jerk reaction, when they find that what they're actually doing is selling a few big hunts every year. Like, they don't like that. It's often an emotional response. On some level, I suppose people feel it's unethical, or it's cruel, savage, brutal. I don't know. They attach more emotive responses to it.* (RCP 2)

Yeah, 100% - I would say wild plant use is just so much less controversial. A lot of donors have to then justify it (the funding of hunting) *back to their taxpayers in the countries of*

> *origin which don't have the lens and don't have the context of what sustainable use looks like in Southern Africa or South Africa.* (ICFA 4)

Attempting to explain this dichotomy in sustainable use discourses, two interviewees have pointed to the rising political pressures exerted by animal welfare organizations at both national and international policy levels respectively (RCP 3; ICFA 5). In light of the theoretical considerations of the MLP, ICFAs and their RCPs (regime) face constrained individual agency due to their entrenchment in and adherence to international conservation governance marked by multi-stakeholder policy processes at international conventions (i.e.CITES). Following Geels and Schot's (2007) hypothesis, ICFA's policy formulation is thus guided by scientific and ethical discourses in respect to contrasting viewpoints and values associated with sustainable use. As the interviews suggest, the ubiquitous impact of animal welfare advocacy in these spaces has rendered certain institutional actions and views on conservation and sustainable use more legitimate than others (ICFA 5). This arguably reinforces Akama's (1998) argument that discourses around conservation goals and strategies of ICFAs are shaped by Western ideals of ethical conservation and sustainable use. Broad public support of predominant narratives could be seen to condition particularly bilateral ICFA's leeway through their mandate to represent national interests. According to an interviewee, political condemnation of trophy hunting through import bans shapes their ICFAs' international funding commitments (ICFA 5). Instances in which animal harvesting forms part of wider conservation project funding in South Africa, hunting activities are being omitted from project descriptions or are couched in other terminology (ICFA 5, ICFA 4).

> *My personal opinion and the opinion of my colleagues would be that regulated hunting is something that we should support or at least not oppose. But we adhere to the outcome of the political discussions [...] where the advocates against trophy hunting or for a hunting ban are very strong. And if this then is the opinion of the majority of the [....] population, we are of course, serving our government here as an executing agency. We can give our opinion, but we cannot act against the will of our parliament or our government.* (ICFA 5)

6.2 Towards a Biodiversity Economy - Limitations and Potential of Scaling Consumptive Sustainable Use

Given the findings analyzed and discussed above, this section will address the second research question, and thus the perceived limitations and possibilities for the scaling of consumptive sustainable use in pursuit of growing South Africa's biodiversity economy.

While acknowledging the human development and conservation potential arising from consumptive sustainable use, the interviews and secondary data point to limitations related to (1) local resource governance, (2) market and supply chains as well as (3) the enabling environment that ought to be addressed as a precursor for its scaling towards a biodiversity economy. After detailing ICFA's safeguarding procedures for funding determination, the three identified barriers will be discussed, followed by findings that point to the potential for the scaling of sustainable use.

Landscape Approach and Safeguarding

> *Wildlife use on private land is now 17 to 20%, of the land area of South Africa. So can it scale? Yes, absolutely. It can scale. Okay. But it needs to scale in communities more than in the private sector.* (RCP 3)

When asked about the scaling potential of sustainable use activities into functioning biodiversity economy nodes, this interview data exhibits overwhelming agreement on future possibilities for growth. Feasibility studies are seen as crucial in determining the best possible land and resource use and the involvement of communities therein (ICFA 1; ICFA3-4; RCP2-3). This implies the assessment of productive, institutional and ecological capacities at a wider landscape level to successfully scale sustainable use businesses through the interlinking of value chains. Considering the economic dimension, scalability is thus said to depend largely on the kind of resource that is derived, its product quality and harvest predictability as well as the capabilities and resources at municipal and regional levels to successfully engage communities in the biodiversity economy (ICFA 4; GEF, 2019). This is in line with Crosmary et al.'s (2015)

emphasis on long-term monitoring of expenses and gains arising from local conservation and resource uses to determine the best possible sustainability outcome.

With regards to landscape approaches, environmental and social safeguard processes are common practice among ICFAs and involve the screening of and consultation with all project stakeholders and beneficiaries. In keeping with international frameworks such as CITES and the UN Human Rights Framework, safeguards follow similar standards across different ICFAs (WWF, 2020, p.5; ICFA 1). The interviews illustrate how ICFAs funding decisions primarily follow South African biodiversity regulations and governmental conservation strategies which can be withdrawn in cases of perceived risk of unsustainable practices and public condemnation. The evaluation of such a perceived risk seemingly impacts whether projects entailing consumptive sustainable use are funded (ICFA 1; ICFA 3; ICFA 5-6).

> *You might know about the Cycil lion issue in Zimbabwe. So that type of thing can happen to any funder, and there's potential risk for anyone. So you have to make sure that your funding doesn't end up in some type of situation where an activity is linked to, you know, the killing of a threatened species in the name of sustainable use.* (ICFA 1)

> *If one of the parks wanted to give money to a community to invest in a game meat slaughterhouse. I think that's a really interesting idea, because meat processing is a thing here. [...] First of all, it would have to be a viable business. [...] Where would the money be coming from and what are the standards that would be followed?* (ICFA 6)

6.2.1 Limitations

Local Resource Governance

According to the NBES, the sustainable and inclusive growth of the biodiversity economy requires the sound management of biodiversity through conservation and sustainable use in and around PAs (DEA, 2016). Alluding to the country's nation-wide dislocation of local communities during the apartheid era, one interviewee asserts that in a regional comparison *"Namibia and Botswana have been doing community conservation and beneficiation through sustainable use*

much longer than South Africa." (ICFA 2). The interviews elucidate that ICFAs are aware of conservation being inconceivable without local empowerment and incentivization while recognizing that insecure land tenure and resource access continue to complicate communities' bargaining power over and their entitlement to managing these resources. This prevents them from reaping the benefits from sustainable use while spurring illegal wildlife trade around PAs (Laird and Wynberg, 2021; ICFA1-5). This goes in line with Geels and Schot. (2007) who argue that niche innovations such as sustainable use businesses are marked by inherent structural insecurity due to little embeddedness in firm institutional frameworks. Unresolved issues surrounding land and wildlife access are thus effectively hindering the creation and growth of sustainable use initiatives while endangering the very assets they seek to manage. This has prompted ICFAs to support resource decentralization measures such as biodiversity stewardship and devolving of usage rights to communities (GEF, 2019; GEF 2016; FFI, 2013).

Market and Supply Chains

Following Bulte et al. 's (2007) reasoning, the scaling of sustainable use activities against other land uses requires their operation as economically viable businesses in the biodiversity economy. The interviews show that inherent climatic and anthropogenic impacts hamper the predictability and controllability of harvests, whereby the supply and revenue from wildlife products is likely to fluctuate. This is seen to complicate the planning and scaling of production volumes and their effective market integration (ICFA 3- 4). There is further agreement on premature markets not yet fully capturing the value of wildlife thereby stipulating greater price elasticity and fluctuation (ICFA 6; ICFA 3). One interviewee contends that while sufficient governmental capacity exists to evaluate different land and species use, wildlife is oftentimes not traded at full value due to high transaction costs between state institutions and local markets (ICFA 6; Child et al. 2012). This corresponds with Child et al.'s (2012) findings on asymmetric access to information causing a market failure in game ranching whereby the price of a good does not reflect its actual value.

Internal sector dynamics are furthermore said to determine the successful introduction and extension of consumptive sustainable use activities to communal spaces which tend to host a larger beneficiary base and greater harvesting interference (ICFA 1). An interviewee mentions

that dominant internal sector and market dynamics in the game meat industry seem to complicate the adoption of this production model by external novel actors (ICFA 1). This confirms Kamuti's (2015) findings on South Africa's game ranching sector whose capital-intensive nature complicates the access of new actors (particularly black South Africans), thereby reinforcing socio-economic inequalities and relative sector homogeneity.

When asked about the scaling of bioprospecting activities, the harvesting of plants is said to generate less income for communities due to lower prices paid per unit (ICFA 3; ICFA 5). For there to arise effective benefits at community-level, greater volumes would have to be harvested whereby *"quite often you can't have sustainable use with the predictability and quotas needed for really scaling up some of those businesses."* (ICFA 3). Despite South Africa's ratification of the Nagoya Protol, another major impediment to the scaling of wild plant value chains remains the insufficient beneficiation of communities in commercially harvesting wild plants for their utilization as genetic components in medical products (ICFA 4).

> One interviewee explains: *Basically a lot of the plants' value is not actually the plant itself, it's the DNA and the genetic sequence. And so this has been a massive loophole [...]. For every plant that turned into a pharmaceutical, there would be some kind of return and benefit distribution to the community. But that hasn't happened. And the reason is that a pharmaceutical company doesn't go around hand-harvesting plants to use its components. They get one plant, and then they sequence the DNA which they use and multiply as often as they want.* (ICFA 4)

This is seen to affect the durability of commercial partnerships with sourcing companies, thereby making trade in wild plants particularly susceptible to boom and bust cycles (Laird and Wynberg, 2021). Moreover, regional and international differences in the legal status of wild species are seen to hamper the formation of universally legalized and sustainable supply chains. The harmonization of wildlife trade is thus regarded as a critical tool in scaling sustainable use value chains across borders while preventing the unsustainable, illegal harvesting from accelerating species degradation (ICFA 3; RCP 2).

Enabling Environment

The interviews show that the scaling of small-scale activities requires a state-induced enabling environment consisting of regulatory capacity for project financing and multi-stakeholder coordination (ICFA 3; ICFA 5-6). Covid-19 has pronounced previous public fiscal restraints exacerbating departmental budgets and mechanisms to facilitate decision-making across different executing agencies when implementing strategic plans for the formalization of biodiversity economy projects (GEF, 2021; ICFA 6). One interviewee asserts that this has substantially slowed down the process between project planning and implementation consequently delaying the disbursement of funds (ICFA 6). Project financing is further hampered by the difficulty of seeking loans as a small-scale cooperative or company (ICFA 6). Likewise, most international donor project involvement is said to be limited to short-term deployment of funds and capacity support (ICFA 1). The interviews thus conclude that inherent project instability beyond external funding leaves only a handful of viable sustainable use initiatives that require the emergence of new actors capable of coping with further investment risk (ICFA 1; ICFA 3; ICFA 6). Meanwhile, growing efforts to attract private sector finance through ICFAs and state-led initiatives are being met with local administrative constraints and nascent regulatory infrastructure to streamline private investments (ICFA 1; ICFA 6). Moreover, "[t]here still remain considerable gaps in understanding the opportunities for conservation finance at specific regional and national levels, given for example the ecology, context of governance, and the unique approaches to indigenous-and community-conserved areas." (Smith et al., 2022, p.3) One interviewee asserts that as most consumptive sustainable use projects are not yet bankable they continue to be grant dependent (ICFA 1). This reflects Hamricks' (2016) findings on lacking project bankability causing underutilization of private sector biodiversity finance.

> *The fiscal situation of the country is not great and there are a lot of constraints. [...] And there's no reason why they shouldn't be able to attract more private investment. Why haven't they? [...] It's being able to present bankable projects, having a pipeline of projects available and ready. And I think that's a big hurdle for South Africa. There are efforts to do this, though. I know that the Department of Forestry, Fisheries and the Environment has developed a platform that's meant to act as a matchmaker for investors*

and investment projects. They see the problem and they're making efforts to remove that barrier, but it's definitely still there. (ICFA 6)

6.2.2 Potential

Despite the afore-mentioned limitations, the interviews did also reveal overall optimism about the growth of biodiversity economy projects. One interviewee emphasizes South Africa's potential for regional and international supply of bioprospecting and game meat products due to its advanced productive infrastructure driven by state-led scientific research and planning (ICFA 6). It is furthermore argued that the economic importance of wildlife tourism and its valuation as an economic asset have enhanced public understanding for the value of wildlife conservation (ICFA 6). This is met with governmental capacity to ensure good oversight and monitoring over formal offtake activities that allow South Africa to scale sustainable use value chains (ICFA 6; ICFA 4).

South Africa, when it comes to the conservation of their biodiversity, the understanding of its value is very advanced, I mean, if not the most advanced probably. They have some of the best scientists, some of the best conservationists, and they have no shortage of very strong plans, and intentions, and they even have good structures and policies. (ICFA 6)

In building back better through the creation of viable biodiversity economy nodes, the interview data revealed that, currently, ICFAs and departmental agencies are looking into new market-based investment models to (co-)finance (non-)consumptive sustainable use initiatives (ICFA 1; ICFA 4-6) . Hereby, one interviewee emphasizes that *"international investors are very nervous about the idea of the wildlife economy."* (ICFA 4) Increasing attention is thus paid to the induction of structural and regulatory mechanisms aiming to streamline investments while mitigating investment risk.

How can we sort of incentivize the private sector to come in with public finance with de-risking insurance guarantees, building the pipeline, providing technical assistance, working in the enabling environment within a country to kind of get these opportunities

> *set up and sort of packaged, and then make it easy for investors to come in and just bring their money? (ICFA 4)*

In line with South Africa's strategy for 2030, the funding and development of sustainable use activities are focused on leveraging communal gains from wildlife through employment creation, resource access and ownership and inclusive eco-tourism expansion (GEF, 2021). This is envisioned through "promoting a new generation of partnerships between protected areas, the private sector and communities to assist with the transformation agenda." (GEF, 2021, p.40) This shift is further supported by recently passed international and regional resolutions on the biodiversity economy (IUCN, 2020), while two research institutions are taking the lead in exploring opportunities in the biodiversity economy that go beyond ecotourism (ICFA 2).

The recently completed 3-year long ABioSA project involving the cooperation between different ICFAs and the DFFE presents a successful example of a community focused wild plant value chain development in South Africa (GIZ, 2021).

> It worked mostly with 13 biotrade plant species and value chains and focused on productive use of plant biodiversity to create permanent and seasonal jobs in biotrade and bioprospecting value chains, develop livelihoods for rural people and to boost the value of biotrade products in local and international markets. (GIZ, 2021, p.2)

6.3 Tackling the Relationship under Study

In discussing the data conclusions drawn from the findings above, this section seeks to answer the overall research question on the relationship between the (non-)consumption paradigm in international finance and the willingness of ICFAs to fund the scaling of consumptive sustainable use.

Among ICFAs, consumptive sustainable use remains an ambiguous topic: it is both recognized for its potential to actively address and empower communities in conservation, while also treated with caution due to concerns over social, environmental and economic risks. This is seen to impact ICFAs' perceived potential to expand ongoing sustainable use projects, with operational constraints outweighing project sustainability findings. Against this background, non-consumptive forms of sustainable use have remained steadfast on ICFA agendas. ICFAs mention that long-standing funding experience and its highly-rated investment-return profile render ecotourism the most successfully practiced and investment-ready conservation business to be scaled within the biodiversity economy at present (ICFA 1; ICFA 5; ICFA 3). This goes in line with previous findings on track-record based funding allocation to avoid investment risks (Hermoso et al. 2017; Ahrends et al. 2011). Given the repercussions of the Covid-19 pandemic on wildlife tourism, there is agreement on the risk-bearing nature of funding one-sided income streams, presenting diversification a vital risk-mitigation strategy in sustaining local income security (ICFA 1-6). Notwithstanding, another interviewee emphasizes how the recession has much more elucidated the importance of tourism as a crucial revenue (economic), livelihood (social) and conservation (ecological) source in South Africa (ICFA 5). Consequently, ecotourism remains unchallenged in its capacity to generate economic development through job and revenue creation. Overall, there does not seem to be any comprehensive international financing strategy in place aiming to finance consumptive sustainable use as a core element, but rather as a part of diversified livelihood programmes. The latter is viewed as a crucial way to leverage investment capacity for private sector involvement (ICFA 3-5).

> *I think a lot of that funding is channeled towards that area, because it's a simpler model. And it's a model that's been tested. It's a model that works. [...] So if you're looking at someone who says we have this tourism market, we just need to build a facility and this*

> *our numbers in terms of traffic getting in an area. So it's a much simpler thing to find, instead of someone who says I want to go on this bioprospecting thing, which is something that's quite new, we want to go and test and do research. So those types of things, they don't tend to get funded, because they still have quite an early space in their own development.* (ICFA 1)

> *I would say that [consumptive] sustainable use over the years has tended to be a part of our programs, where it's appropriate. But we don't go and say this is going to be a sustainable use program.* (ICFA 3)

These findings thus confirm Dressler and Büscher's (2008) argument that long-term private funding for tourism has been repetitively favored over the intentional development of resource-based models of wildlife use. In the context of the MLP, consumptive use projects at community level (niche) are still in their infancy and hence plagued by financial insecurity and ambiguity over regulatory processes and socio-environmental implications (Smith et al., 2010). As shown above, Covid-19 has not provoked any major disruptions in the ICFA funding landscape, but rather manifested long-standing funding practice in favor of ecotourism. It thus appears that pure consumptive sustainable use projects have not yet caught traction among ICFAs (regime), while lacking the enabling environment to become bankable projects for the private sector (Geels and Schot, 2007). Although a few initiatives such as the ABioSA project present successful pilots in the biodiversity sector, the breakthrough moment for their universal scaling has not yet been reached.

7. Concluding Remarks

This thesis started with acknowledging differential funding allocations to non-consumptive and consumptive sustainable use in international conservation finance. In considering ICFAs as dominant actors in South Africa's conservation finance realm, this research aimed to explore the predominant perceptions and sentiments of ICFAs towards consumptive sustainable use to better understand the limitations and potential behind the scaling of communal resource-based activities in the biodiversity economy.

The following research questions were formulated and answered through semi-structured interviews with ICFAs and RCPs:

Overall RQ: What is the relationship between the 'non-consumption' paradigm in international conservation and the willingness of ICFAs to scale the consumptive sustainable use of wildlife in South Africa?

Sub-RQ 1:How is consumptive sustainable use of wildlife viewed by ICFAs intervening in South Africa?

Sub-RQ 2: What limitations and possibilities do ICFAs observe in the scaling of consumptive sustainable use projects in the biodiversity economy context?

In applying the theoretical considerations of the MLP approach, this study sought to analyse the structural power relationship between consumptive sustainable use as a niche innovation and the ICFAs as the predominant regime. The scaling of the former is therefore dependent upon the latters' willingness to induce consumptive sustainable use as a best practice.

The findings regarding RQ1 suggest ambiguity in the way ICFAs view and address consumptive sustainable use in their funding agendas. While acknowledging the multi-dimensional dependence of rural livelihoods on the consumptive use of wildlife for traditional, subsistence and income purposes, the uncertainty over its sustainability implications in the absence of scientific management systems causes reluctance in funding interventions. While plant-based use is widely accepted and funded, animal uses such as trophy hunting face wide reaching political

objection, consequently impacting the determination of ICFA's involvement in sustainable use projects and the communication thereof.

In answering RQ2, the study identified three major limitations to the scaling of consumptive sustainable use, namely *local resource governance*, *market and supply chains*, and the *enabling environment*. These seemingly affect its standing as an economically sound conservation investment for both ICFAs and the private sector. *Local resource governance* remains burdened by the legacy of apartheid which has hindered many communities from receiving access and ownership rights to land and wildlife resources. This is seen to thwart consumptive sustainable use projects in their pursuit to incentivize conservation through communal beneficiation and participatory resource management. *Market and supply chains* are described as nascent and volatile due to inherent uncertainty in harvesting and trading wildlife products. Incomplete market information combined with restricted sector entry and erratic commercial partnerships, curb revenue generation as products are not traded at full value. Covid-19 has arguably impacted South Africa's *enabling environment*, delaying regulatory mechanisms that leverage project finance and multi-stakeholder cooperation. Short-term ICFA funding and limited public financial resources have restrained viability of sustainable use projects, while the facilitation of private sector finance is not yet matched with the regulatory and administrative capacities on the ground. Nevertheless, findings point to future potential in scaling consumptive sustainable use through established supply chain infrastructure and ambitious strategies and policies formulated by governmental institutions. This is leveraged by the interest of international investors and conservation conventions in supporting biodiversity economy growth.

Consequently, this study has found that the domination of limitations in the interviews relative to its potential is seen to maintain consumptive sustainable use as a smaller program component, while reinforcing the importance of ecotourism for conservation and community beneficiation. This adds to Dressler and Büscher's (2008) argument on the prevailing funding preference for non-consumptive uses in the form of ecotourism. Given current efforts to attract growing private sector investments, it remains to be seen whether future funding arrangements will uphold this previously described bias against the urgency of developing consumptive use activities (Dressler and Büschler, 2008).

Since the biodiversity economy is still in its early stages, future research will be necessary to further investigate the multi-dimensional challenges faced by ongoing and prospective consumptive sustainable use initiatives and ways in which to address them. This could involve research spanning across a wide range of stakeholders, while particularly focusing on national and regional finance actors to assess potential differences in sentiments and perceptions on the formalization and scaling of consumptive wildlife use in a community context. As became apparent during the data collection, further research is required across different disciplines to evaluate wildlife uses against different social, economic and environmental criteria. Future findings can inform efforts to strengthen supply chain and market formation, while leveraging the inclusion and beneficiation of communities as active stakeholders toward an equitable and sustainable biodiversity economy.

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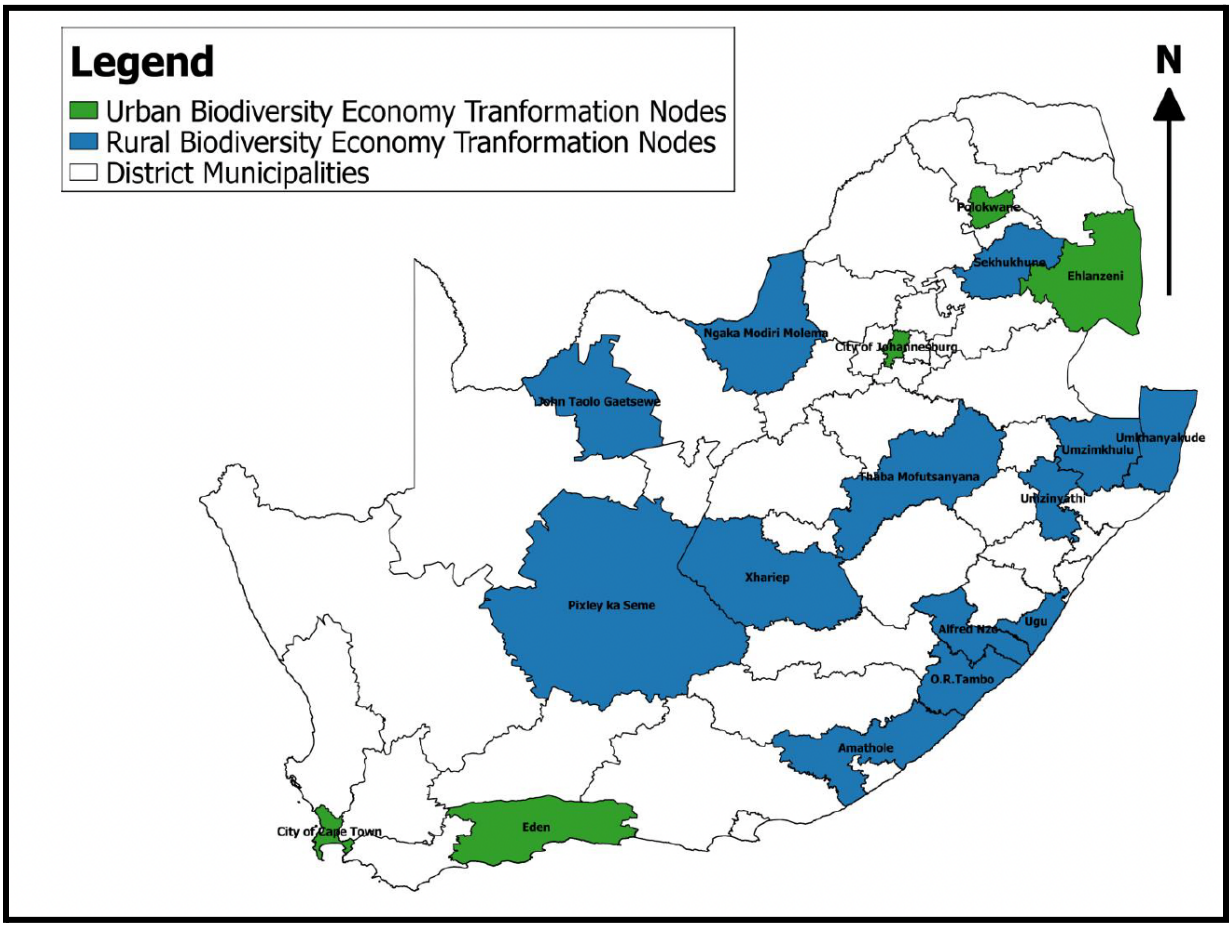
Appendices

Appendix 1. Map of the Biodiversity Economy Transformation Nodes that present the transformation priorities of the NBES



Source: NBES (DEA, 2016a)

Appendix 2. National Sustainable Use Policies

Policy	Year	Purpose
Game Theft Act Communal Property Association Act	1991 1996	Enable both private and communal landholders to obtain ownership and management rights of the land and its wildlife (DEA, 2020, p.65).

The National Environmental Management: Biodiversity Act	2004	Presents a systematic approach to managing and preserving biodiversity and threatened species while prescribing benefit-sharing principles to bioprospecting activities (DEA, 2020)
Protected Areas Act	2003	Aims to integrate rural livelihood strategies into PAs by "providing for the sustainable use of natural and biological resources, creating or augmenting destinations for nature-based tourism; [and] managing the interrelationship between natural environmental biodiversity, occurring in South Africa, human settlement and economic development." (DEA, 2020,p. 63)

Appendix 3. Interview Schedule

Organization Typology ICFA*; RCP**	Interview Dates	Sharing of Interviews***
ICFA 1	19 April 2022	On request
ICFA 2	15 April 2022	On request
ICFA 3	25 April 2022	On request
ICFA 4	25 April 2022	On request
ICFA 5	18 May 2022	On request
ICFA 6	19 May 2022	On request
RCP 1	22 April 2022	On request
RCP 2	28 April 2022	On request
RCP 3	26 April 2022	On request

*International Conservation Funding Actor: International donors from bilateral and multilateral institutions, United Nations Programs, International Non-governmental organizations (NGOs) and Funding distribution and Implementation Partners (World Bank, 2016)

**Regional Cooperation Partner: Regional conservation institutions/ organizations that receive and allocate international funds across their own portfolio of conservation projects; organizations that receive international funds for research and capacity building purposes.

***Prior to sharing the requested interview transcripts, the researcher will inform the respective interviewee(s) of their public disclosure and ask for renewed consent. Moreover, any sensitive information alluding to the interviewee and their respective organization will be omitted to ensure that the participants' right to integrity is safeguarded.

Appendix 4. Preliminary Interview Guides

1- Questionnaire for international conservation finance actors (ICFAs)

Warm-up

Nexus between Human Development and Conservation & Conservation challenges

1. What are the biggest challenges that conservation in South Africa is facing today?
2. Would you say there exists a gap between development and conservation and how is this an issue in South Africa?
    a. How well have conservation initiatives so far addressed human development (near protected areas/on private lands)?
    b. How is your organization addressing this spasm?

Sustainable Utilization

3. How does your organization define the biodiversity/wildlife economy?
    a. Is sustainable utilization of wildlife part of it?

4. Do you think that sustainable utilization is an environmentally and socially conducive approach to conservation in times of rising population pressures?
    a. In what ways does it contribute to biodiversity conservation and human development?

5. What are your thoughts on the government formalizing the biodiversity economy through the NBES?

a. Has this sparked any recent developments in the biodiversity/wildlife economy in South Africa?
b. Do you see any potential for consumptive wildlife use activities[9] to become an equal counterpart to ecotourism in rural value chain creation?

6. Has your organization/institution (co-)funded sustainable use projects in South Africa?
    a. If so, through which funding mechanisms/arrangements have you financed these projects?
    a. Have you collaborated with any conservation organization/ industry associations[10]/governmental agencies on the ground?
    b. What are the biggest obstacles in financing and implementing such projects?
    c. Are you planning to increase funding for sustainable use in the future?

Impact of International Conservation Finance on Sustainable Use

2. To what extent do you think that international conservation actors stir conservation practice on the ground?
3. What current trends in international conservation finance do you observe?
4. Do you think there is a growing tendency of international finance aiming at ecosystem services and sustainable use of wildlife resources?
    a. What role does private sector finance play in the funding of biodiversity economy activities?

Cool Down

[9] Activities include: biltong, game meat and trophy hunting, bioprospecting and the processing of indigenous crops,fruits,etc., carbon credits

[10] E.g. South African Hunters and Game Conservation Association, Wildlife Producers Association, Bioprospecting Association of South Africa

2- Questionnaire for South African conservation organizations working with international donors funding

Warm-Up

Nexus Between Human Development and Conservation & Conservation Challenges

1. What are the biggest challenges that conservation in South Africa is facing today?
2. Would you say there exists a gap between development and conservation and how is this an issue in South Africa?
    a. How well have conservation initiatives so far addressed human development (near protected areas/on private lands)?
    b. How is your organization addressing this spasm?

Sustainable Utilization

3. How does your organization define the biodiversity/wildlife economy?
    a. Is sustainable utilization of wildlife part of it?

4. Do you think that sustainable utilization is an environmentally and socially conducive approach to conservation in times of rising population pressures?
    a. In what ways does it contribute to biodiversity conservation and human development?

5. What are your thoughts on the government formalizing the biodiversity economy through the NBES?
    a. Has this sparked any recent developments in the wildlife economy in South Africa?
    b. Do you see any potential for wildlife use activities[11] to become an equal counterpart to ecotourism in rural value chain creation?

Impact of International Conservation Finance on Sustainable Use

1. To what extent do international conservation actors stir conservation practice on the ground?
    a. Is international funding conditioned by your donors' conservation agendas?
    b. What current trends in international conservation finance do you observe?
    c. Do you think there is a growing tendency of international finance aiming at ecosystem services and sustainable use of wildlife resources?

[11] Activities include: biltong, game meat and trophy hunting, bioprospecting and the processing of indigenous crops,fruits,etc., carbon credits

i. What role does private sector finance play in the funding of biodiversity economy activities?

2. Has your organization/institution (co-)funded sustainable use projects in South Africa?
    a. If so, through which funding mechanisms/arrangements have you financed these projects?
    b. Do parts of this funding stem from international donor finance? What kinds of sustainable use activities do they finance?
    c. Have you collaborated with any industry associations[12]/governmental agencies on the ground?
    d. What are the biggest obstacles in financing and implementing such projects? How do you ensure regulation, access and benefit-sharing in resource use?
    e. Are you planning to increase funding for sustainable use in the future?

Cool Down

[12] E.g. South African Hunters and Game Conservation Association, Wildlife Producers Association, Bioprospecting Association of South Africa