Closing the gap

Financing and resourcing of protected and conserved areas in Eastern and Southern Africa

INTERNATIONAL UNION FOR CONSERVATION OF NATURE - BIOPAMA PROGRAMME

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Executive summary

Photo: Ukhahlamba Drakensberg Park - IUCN

The funding gap

Africa's protected and conserved areas play a vital role in sustaining human well-being, protecting biodiversity and providing valuable ecosystem services upon which people, wildlife and economies depend. However, these natural assets are not adequately funded, putting them and the services they provide at risk. Global and regional studies have been done on the financial gap and all conclude that a significant gap exists for the funding and resourcing of protected areas (PAs).

Perhaps the most striking example of this financing gap in the Eastern and Southern African region is a recent assessment of the annual cost of managing protected areas that support lions. This study assessed more than 282 state-owned protected areas and concluded that available funding only satisfied 10-20% of management needs. In total, the funding gap for Africa's PAs with lions was estimated at approximately USD 1.5 billion per annum (Lindsey, P.A., et al., 2018).

While PAs with lions are more expensive to manage and budget requirements differ from protected area to protected area, the outcome of this study provides a stark reminder of the sheer size of the annual conservation financing gap in Africa. Personal communications with a range of conservation actors (governments, PA agencies, private individuals, community associations and non-profit organisations) during the development of this report confirmed that conservation work is largely underfunded and severely limits conservation management.

In addition, despite the clear lack of resources for the adequate management of the existing protected areas, there is a need to increase the PA estate to adequately conserve Africa's biological diversity and ecosystem services. This is putting additional pressure on the already stretched budgets of those that traditionally fund conservation work (such as governments, donor agencies and conservation organisations). This is especially true in developing regions, where conservation funding currently competes with other development objectives, such as infrastructure, education and public health.

Sources of funding

Traditional sources of funding for conservation include government and donor support as well as self-generated revenue, such as for example fees collected from nature-based tourism or the utilization of wildlife through hunting and wildlife ranching.
While governments and donors provide significant funding for conservation, it is clear that these sources alone are inadequate to bridge the funding gap. Protected areas are therefore increasingly underperforming and will become more dependent on self-generated revenue.

Many protected areas in the Eastern and Southern African region have significant economic potential and can optimise their economic potential if revenue generating models are designed properly. While not all areas have the inherent values and potential as some of the more iconic and accessible landscapes, the vast majority of protected areas can do more to develop internal revenue sources and increase revenue.

Nature-based tourism in particular represents a significant opportunity to develop and maximise revenue streams for conservation and to generate benefits for communities. The Eastern and Southern African region is well placed to maximise tourism related revenues for conservation, including developing products and services that serve different market segments and optimising existing and new concession agreements. An enabling policy environment and factors such as appropriate infrastructure, ease of access, and safety and security, alongside inherent values such as large intact landscape and charismatic wildlife are prerequisites for the successful development of nature-tourism.

In addition to the traditional sources of funding, there are also various other financing options, either already in use or in development across the Eastern and Southern Africa region. These include emerging finance mechanisms such as Debt for Nature Swaps (DNS) and biodiversity offsets as well as more creative mechanisms such as outcomes-based financing, green or blue bonds and tax incentives. There is significant opportunity to scale these mechanisms across the region.

Reducing the funding gap

From this report it is evident that most protected and conserved areas in Eastern and Southern Africa face a significant funding gap and that there is a need to increase self-generated revenues and develop innovative finance mechanisms.
Key recommendations in this regard include:

- **Understand the gap:** In order to develop and implement effective strategies to address the protected area funding gap, governments and conservation management agencies and managers must first understand the gap by conducting an assessment for individual protected areas and the entire protected area system;

- **Develop and execute associated plans and strategies:** Strategies to address the gap must be developed and implemented based on actual needs, including practical business or tourism development plans for individual or clusters of protected areas;

- **Encourage the development of self-generated revenue:** Self-generated revenue, especially derived from appropriate and sustainable nature-based tourism, should be fully developed, diversified and maximised. Tourism must be developed with a professional tourism plan. Adequate funding must be reinvested into the natural assets generating this revenue, the protected areas, wildlife and ecosystems;

- **Explore innovative finance options:** Different emerging or new financing mechanisms should be explored following the business plan needs outlined above. Development of these mechanisms require proper commercial due diligence, an in-depth understanding and significant technical support, resources and the relevant enabling environment; and

- **Build an enabling environment:** An enabling policy and regulatory environment is a critical requirement and must be created to ensure that self-generated revenues as well as more innovative financing solutions can be developed and that revenue is used to improve conservation management, secure the natural asset and benefit the local communities living alongside these protected areas.

Most of these recommendations will require significant financial and technical support to government and protected areas authorities (government, private and community). It is suggested that donors and conservation organisations prioritise and design programmes and activities that will improve, support and develop the financial sustainability of protected areas and protected areas authorities. Specifically, donors should initially support the development of professional PA business plans, to be used as a blueprint for development and further fundraising.

Note from the Editor

This report was written before the emergence of the global pandemic caused by Coronavirus SARS-CoV-2 (COVID-19). The COVID-19 crisis has brought into sharp focus the underlying financing and resourcing challenges facing protected and conserved areas around the world. For example, the pandemic has resulted in the shutdown of the tourism industry, resulting in a significant decrease in conservation-related funding for many protected areas who rely on tourism-based revenue.

The COVID-19 pandemic has exposed the risks inherent in the current funding model for protected areas across Eastern and Southern Africa. The crisis is exacerbating the existing gap in funding for protected areas and provides a harsh reminder of the need for revenue diversification and the risks of over-reliance on a single source of funding, such as tourism.

This report highlights a number of creative financing mechanisms that are already in place in Africa. These need to replicated and scaled up to increase the resilience of the region's conservation estate to future shocks.

Photo: Isimangaliso Wetland Park - Christine Mentzel

Glossary and list of acronyms

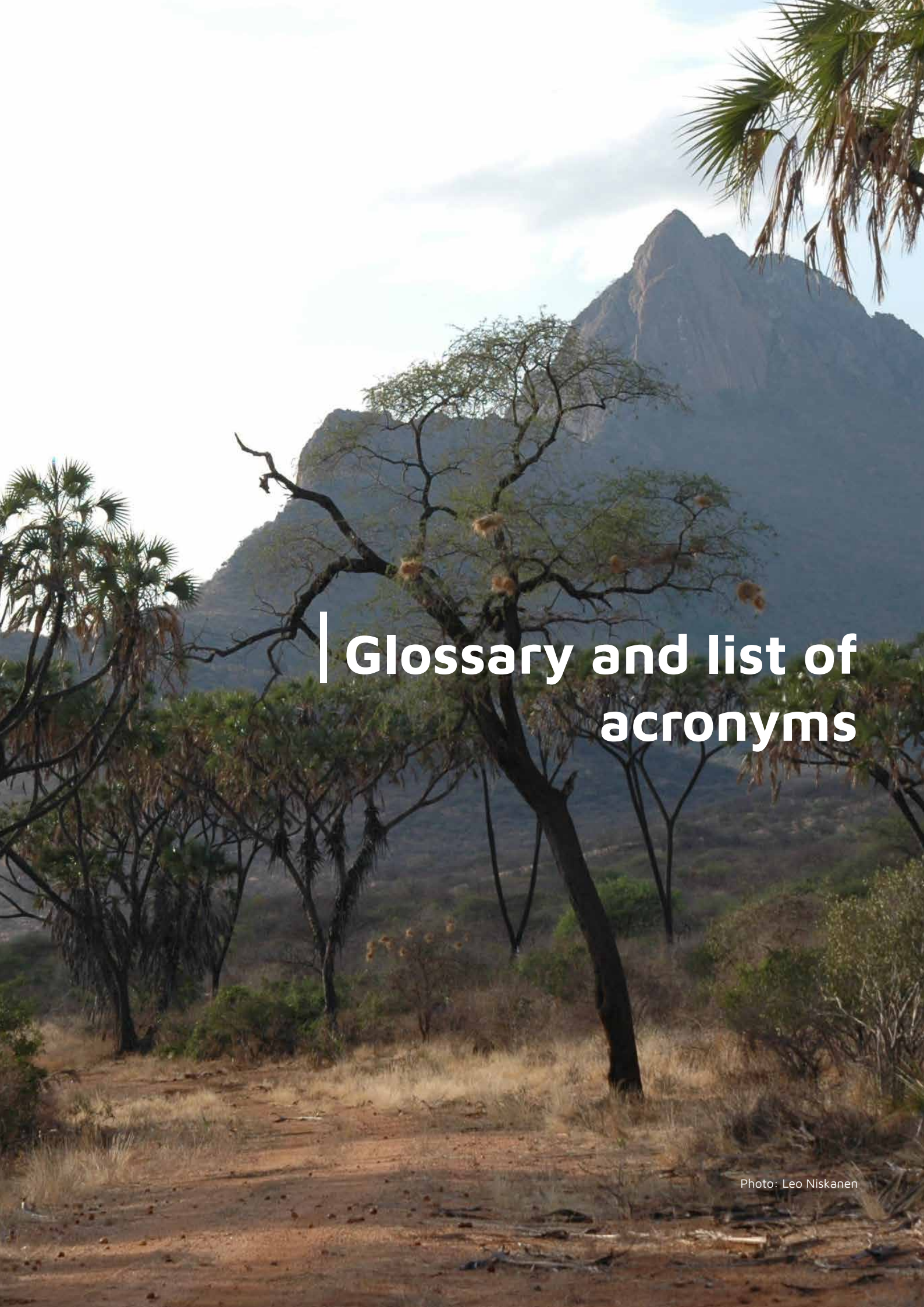


Photo: Leo Niskanen

Glossary

Biodiversity Offsets	Biodiversity offsets compensate for the net impacts of a development project after other mitigation measures have been implemented.
Conservation Trust Fund	Private, legally independent grant-making institutions that provide sustainable financing for biodiversity conservation and often finance part of the long-term management costs of a country's protected area system or a specific protected area.
Collaborative management	Collaborative management occurs when a non-profit organisation or a private sector entity partners with a wildlife authority, and the authority either outsources aspects of management or specific conservation activities to the partner organization, or enters into an agreement with the private partner that covers the full spectrum of management. This is increasingly taking the form of a public-private partnership (PPP), e.g. through delegated management, integrated co-management, bilateral co-management, or financial and technical management.
Debt-For-Nature Swap	An agreement that reduces a developing country's debt stock or service in exchange for a commitment to protect nature from the debtor government.
Effectively and equitably managed protected area	A PA managed with planning measures in place to ensure ecological integrity and the protection of species, habitats and ecosystem processes, with the full participation of indigenous and local communities, and such that costs and benefits of the areas are fairly shared (CBD, 2020b).
Financing	Ability to secure stable and sufficient long-term finance (BIOPAMA, 2019).
Green and blue bonds	A green or blue bond is a debt instrument issued by governments, development banks or others to raise capital from investors to finance projects with positive environmental, economic and climate benefits.
Joint-Venture	Business arrangements in which two or more parties agree to pool their resources for the purpose of accomplishing a specific task (Hargrave, M., 2020).
Nature-based tourism	Nature-based tourism is any type of tourism that relies on experiences directly related to natural attractions and includes ecotourism, adventure tourism, extractive tourism, wildlife tourism and nature retreats (Pacific Asia Travel Association; 2015).
Outcomes-based financing mechanisms	Innovative financing instruments that attract investment capital to address issues traditionally funded by the public

	sector. Examples include species bonds and protected area bonds where investors receive a financial return only on the completion of the objective.
Payments for Ecosystem Services (PES)	Payments for Ecosystem Services occur when a beneficiary or user of an ecosystem service makes a direct or indirect payment to the provider of that service.
Protected Area	A protected area is a clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long term conservation of nature with associated ecosystem services and cultural values. (IUCN Definition 2008)
Resourcing	Allocation of finance in a timely manner and appropriate form (BIOPAMA, 2019).

List of acronyms

APN	African Parks Network
AWF	African Wildlife Foundation
BBDO	Batten, Barton, Durstine & Osborn
BBOP	Business and Biodiversity Offset Programme
BIOPAMA	Biodiversity and Protected Areas Management Programme
BIOFIN	Biodiversity Finance Initiative
CA	Conservation Area
CAMPFIRE	Communal Areas Management Programme for Indigenous Resources
CBNRM	Community-Based Natural Resource Management
CBD	Convention on Biological Diversity
CFR	Central Forest Reserve
CTF	Conservation Trust Fund
DNS	Debt for Nature Swap
DNPW	Department of National Parks and Wildlife
DGEF	Directorate of Environment and Forestry (Direction générale de l'environnement et des forêts Comores)
EAC	East African Community
ESA	Eastern and Southern Africa
EA SOPA	East Africa State of Protected Areas Report

EWCA	Ethiopian Wildlife Conservation Authority
FZS	Frankfurt Zoological Society
GEF	Global Environment Facility
GIZ	German Corporation for International Cooperation
GMA	Game Management Area
IAG	International Airline Group
IUCN	International Union for Conservation of Nature
JV	Joint Venture
KWCA	Kenya Wildlife Conservancies Association
KWS	Kenya Wildlife Service
MEWT	Ministry of Environment, Wildlife, and Tourism
MPA	Marine Protected Area
MSR	Marine Special Reserve
NACSO	Namibian Association of Community Based Natural Resource Management Support Organisations
NBSAP	National Biodiversity Strategy and Action Plans
NRT	Northern Rangelands Trust
OECD	Organisation for Economic Cooperation and Development
PA	Protected Area
PADDD	Protected Area Downgrading, Downsizing, and Degazettement
PES	Payments for Ecosystem Services
RDB	Rwanda Development Board
REDD	Reducing Emissions from Deforestation and Forest Degradation
SANParks	South African National Parks
SMNP	Simien Mountain National Park
SMSP	Seychelles Marine Spatial Plan Initiative
SNPA	Seychelles National Park Authority
TANAPA	Tanzania National Parks Authority
TNC	The Nature Conservancy
TIES	The International Ecotourism Society

UN	United Nations
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
USAID	United State Agency for International Development
UWA	Uganda Wildlife Authority
WB	World Bank
WCMC	World Conservation Monitoring Center
WDPA	World Database on Protected Areas
WMA	Wildlife Management Areas
WCS	Wildlife Conservation Society
WTTC	World Travel and Tourism Council
ZAWA	Zambia Wildlife Authority
ZPWMA	Zimbabwe Parks and Wildlife Management Authority

1 | Introduction

Photo: Elephants - IUCN

Africa supports an extraordinary diversity of wildlife and wild lands. The continent hosts one third of the planet's biological diversity. Approximately one quarter of the planet's mammalian species and a fifth of all bird species occur in Africa (Conservation Capital, Space for Giants, Conservation Capital, Space for Giants, United Nation Environment Program (UNEP), 2019).

Protected areas have historically and continue to play a vital role in protecting biological diversity and ecosystem services upon which Africa's economy and people depend (Wuerthner, G., Crist, E. and Butler, T., 2015). These areas need reliable and sustainable sources of funding to maintain their daily management operations, meet conservation targets, provide quality visitor experiences, where appropriate, and provide benefits and income to government and to the communities living in or in proximity to the conservation areas.

There have been various assessments done on how much it costs to manage protected areas (Parker, C. et al., 2012; Credit Suisse, World Wildlife Fund (WWF) & McKinsey, 2014; Emerton, L. et al., 2006). While the exact financial gap might be debated, it is widely accepted that protected areas need a reliable source of funding for effective management and that the current funding available for African protected areas is wholly inadequate (Fitzgerald, K.H., 2017).

This report aims to provide an overview of the current status of protected area finance in the Southern and Eastern African region, covering 24 countries,[1] to understand the extent of the challenge. The report also outlines the different innovative finance mechanisms that might be used to help decrease the funding gap. This report is meant to support protected area authorities and governments in understanding mechanisms for increasing funding for conservation management and to help the International Union for the Conservation of Nature design effective programmes that will help mitigate funding gaps and sustainability challenges for protected areas in Africa and support the capacity development of protected area managers.

Increasing revenue for protected area management is just one aspect of what is required to ensure effective conservation management. How and where revenue is spent within a protected area system is critical. For example, if revenue from a park simply supports a protected area headquarters, this will not result in enhanced conservation performance. The topic of revenue and capital allocation (resourcing) and expenditure is a critical issue and partially addressed in this report (section 4.6). However, a detailed analysis is beyond the scope of this report.

Photo: Eastern Arc Mountains, Kenya-Tanzania - Peter Howard

[1]Angola, Botswana, Comoros, Djibouti, Eritrea, Eswatini, Ethiopia, Kenya, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Rwanda, Seychelles, Somalia, South Africa, South Sudan, Sudan, Tanzania, Uganda, Zambia, and Zimbabwe

2 | Methodology

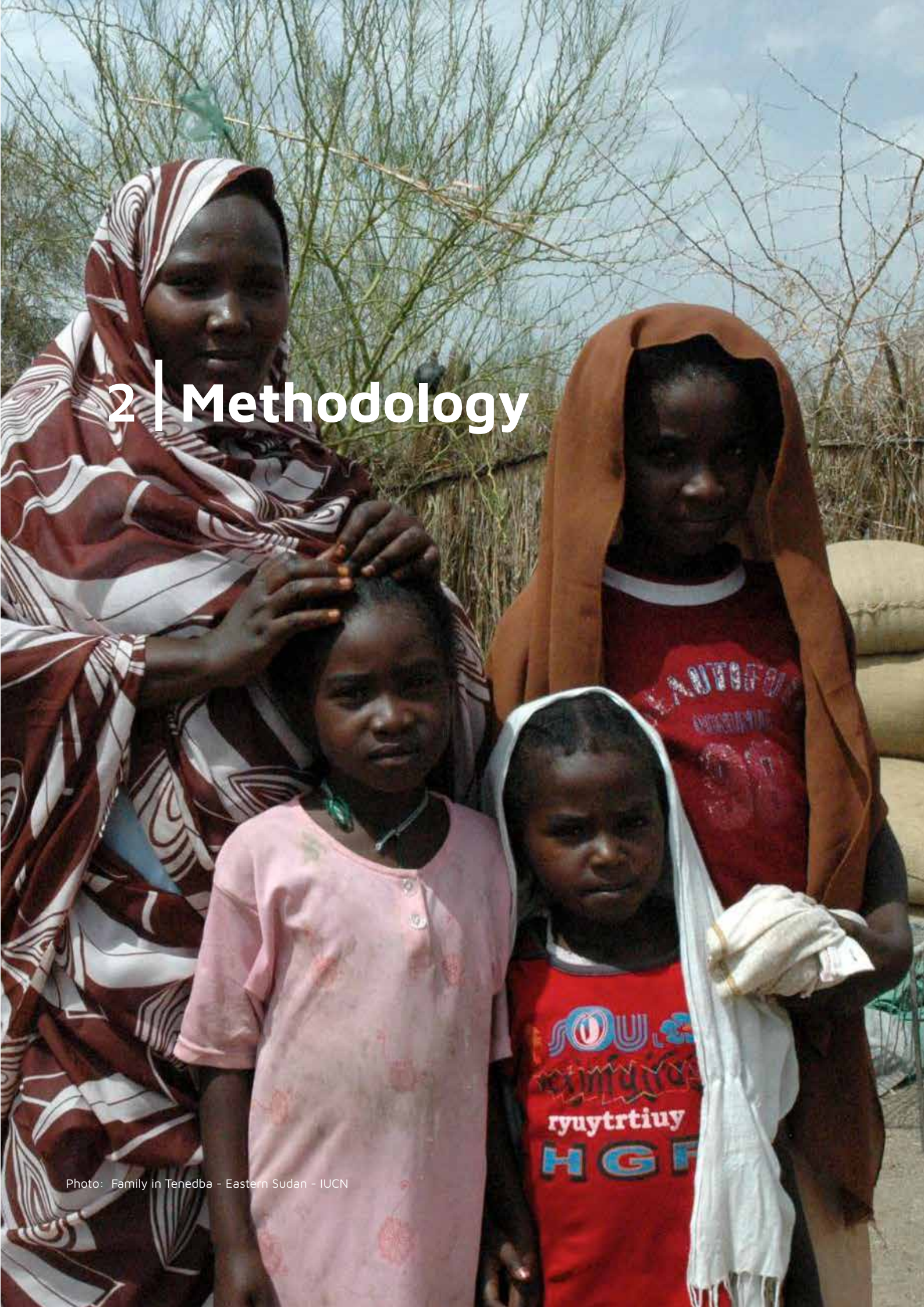


Photo: Family in Tenedba - Eastern Sudan - IUCN

2.1 Objective

This study aims to better understand the financing and resourcing needs and challenges and the associated funding gap of protected and conserved areas in 24 countries in Eastern and Southern Africa (ESA), explore the opportunities and potential for the development of financing mechanisms that can support conservation, and enable governments, protected area authorities and managers to increase revenue generation to reduce the funding gap while improving the management of Africa's protected areas.

This study is a first step towards measuring the conservation financing gap in ESA and reviewing existing and potential finance mechanisms. The Biodiversity and Protected Areas Management Programme (BIOPAMA) of the International Union for the Conservation of Nature (IUCN) will use this study to design and execute initiatives to support building the capacity of the ESA governments to assist them in addressing the financing gap.

2.2 Scope of the study

Geography: The study covers the Eastern and Southern Africa regions, including the following 24 countries: Angola, Botswana, Comoros, Djibouti, Eritrea, Eswatini, Ethiopia, Kenya, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Rwanda, Seychelles, Somalia, South Africa, South Sudan, Sudan, Tanzania, Uganda, Zambia, and Zimbabwe.

This study covers the following dynamics:

- Identification of general financing gaps in protected and conserved areas;
- Existing financing and resourcing that are being used by protected and conserved areas throughout the region, challenges and opportunities;
- Use of the existing funds in each country;
- Identification of alternative innovative financing approaches, the pros and cons of each mechanism and examples of its applicability; and
- Development of case studies illustrating relevant financing examples throughout the report.

"Financing" and "resourcing" of protected areas: BIOPAMA defines "financing" as "an ability to secure stable and sufficient long-term finance," while "resourcing is an allocation of finance in a timely manner and appropriate form" (BIOPAMA, 2019). This report will cover both aspects and looks at sources of PA financing, as well as on how the funding is allocated and used by the PAs.

2.3 Protected area definition and scope

For this report, protected and conserved areas are defined according to the IUCN and Borrini-Feyerabend and Hill definitions.

The IUCN protected area definition is: *"A clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values (IUCN definition 2008).*

The Borrini-Feyerabend and Hill (2015: 178) conserved area definition: A conserved area is one that *"...regardless of recognition and dedication, and at times even regardless of explicit and conscious management practices, achieves de facto conservation and/or are in a positive conservation trend and likely to maintain it in the long term."*

For the purpose of this study, the following categories of terrestrial and marine protected and conserved areas were considered:

- National Parks and Reserves
- Multiple Use Conservation Areas (i.e. Game Management Areas (Zambia), Safari Areas (Zimbabwe))
- Community conservancies and indigenous conservation areas (i.e. Wildlife Management Areas (WMAs) (Tanzania) and Communal Areas Management Programme for Indigenous Resources (CAMPFIRE) areas (Zimbabwe))
- Privately owned conservation areas

The terms protected area and conservation area (CA) are used interchangeably in this report and are defined as above.

2.4 Sources of finance and expenditures of protected areas

The main method of data collection for this study was a desk-based research approach using various sources of information. This report was not meant to collect primary data. Data was collected from the latest available annual reports and financial statements from state protected area authorities, community conservancy associations, and community and private conservancies. Current information on PA revenue and expenditures was not easily obtained.

Table 1 presents the data available from PA management authorities (reports available online and information obtained directly from the PA authorities). The desktop analysis was complemented by stakeholder interviews and by information available in existing literature and case studies providing relevant examples to illustrate the trends.

Table 1: Available data for a selection of Protected Areas management authorities.

Organization Name	Country	Number of PAs under management	Total area under management, Hectares	Information year
Kenya Wildlife Service	Kenya	66	4,803,832	2016
Kenya Forest Service	Kenya	0	1,975,236	2014
Tanzania Forest Services Agency	Tanzania	506	13,600,000	2015
Uganda National Forestry Authority	Uganda	661	1.136.306	2018/2019
Tanzania National Parks	Tanzania	22	10,455,910	2013
Rwanda Development Board, Tourism and Conservation Department	Rwanda	5	233,519	2017
Uganda Wildlife Authority	Uganda	40	2,475,597	2018/2019
South African National Parks	South Africa	19	0	2017/2018
Namibian Association of CBNRM Support Organisation	Namibia	84	16,315,100	2017/2018
The Northern Rangeland Trust	Kenya	39	4,221,483	2017
Seychelles National Park Authority	Seychelles	8	6,105	2017
Eswatini National Trust Commission	Kingdom of Eswatini	4	35,457	2018/2019
National Park and Conservation Service	Mauritius	11	7,232	2014
Ethiopian Wildlife Conservation Authority	Ethiopia	13	2,947,298	2018/2019
Ministry of Environment, Wildlife and Tourism	Botswana	18	10,921,400	2012/2013
TOTAL		**1,478**	**61,213,102**	

2.5 Defining the protected area financing gap

Conservation organizations and authorities are restricted by their funding allotment. Most often protected area authorities develop aspirational budgets for PA management; however, their actual annual budgets are based on funding available. Therefore, an analysis of their current expenditures from annual reports and other literature does not reflect the real costs and budget requirements needed for effective conservation management.

Based on the literature review, the most up to date and in-depth regional assessment of the financing gap is a 2018 study on the finance requirements of Africa's PAs that support lions. The data from this study includes information on 15 countries (Angola, Botswana, Ethiopia, Kenya, Mozambique, Malawi, Namibia, Rwanda, Sudan, South Sudan, Tanzania, Uganda, South Africa, Zambia, Zimbabwe) and covers 263 state-owed protected areas with lions and more than 1 million km^2 (Table 2).

Table 2: Country data used for estimation of the financing gap: 15 countries and 263 Protected Areas from Lindsey, P. et al 2018.

Country Name	Number of PA	PA Area in Lion Range, km 2
Angola	1	78,484
Botswana	61	242,738
Ethiopia	26	57,910
Kenya	20	36,189
Mozambique	20	115,935
Malawi	4	4,540
Namibia	10	64,763
Rwanda	1	1,020
(North) Sudan	1	8,400
South Sudan	4	42,292
Tanzania	37	177,146
Uganda	10	12,032
South Africa	13	30,579
Zambia	33	165,777
Zimbabwe	22	43,986
Total		**1,081,791**

Other literature and databases used during the review included:

- IUCN: Sustainable Financing of Protected Areas, 2006; National Biodiversity Strategy and Action Plans (NBSAPs), Convention on Biological Diversity (CBD), 2005, 2018, 2019, 2020;
- BIOPAMA: Management Effectiveness, Governance, and Social Assessments of Protected and Conserved Areas in Eastern and Southern Africa, 2019;
- Databases: PADDDTRACKER, Global Database on Protected Area Management Effectiveness, Protected Planet, World Tourism Organisation, World Travel & Tourism Council;
- Protected Area reports and annual budgets;
- Key word research in academic data bases; and
- Studies conducted and reports developed by Conservation Capital or partner organisations.

All relevant sources of information and references are mentioned in footnotes throughout the report and provided in the literature review and the reference list.

Photo: Batwa women earning about visioning their landscapes, Burundi - IUCN

3 | The funding gap in Eastern and Southern Africa

Photo: Serengeti National Park - Christine Mentzel

3.1 The global biodiversity funding gap

Protected and conserved areas play a key role in protecting biological diversity and ecosystem services upon which people depend. These areas need reliable and sustainable sources of funding to maintain their daily management operations, meet conservation targets, provide quality visitor experiences, where appropriate, and provide benefits to communities living in proximity to the conservation areas (Convention on Biological Diversity, 2018).

A number of studies have been completed to assess the financial gap for PA management (Parker, C. et al., 2012; Credit Suisse et al. 2014; Emerton, L. et al., 2006). While the exact figure may vary, there is general consensus that the current amount of funding available for the protection and management of conservation areas are wholly inadequate. A report by Credit Suisse, WWF, and McKinsey Group in 2014 estimated that USD 300-400 billion is required annually to fund global biodiversity protection. Even if the current governmental and philanthropic conservation efforts are doubled to roughly USD 100 billion per year, the report theorised, global biodiversity conservation is still faced with a global funding gap of USD 200-300 billion per annum (Credit Suisse et al, 2014). The United Nations Development Programme (UNDP) Biodiversity Finance Initiative (BIOFIN) suggests a similar estimate of the global annual financing gap at USD 150 – 440 billion (BIOFIN, 2019).

The exact estimate of global spending on biodiversity and ecosystems services is challenging to provide due to considerable gaps and inconsistencies in biodiversity finance reporting and tracking (Organisation for Economic Cooperation and Development (OECD), 2019). According to Parker, C. et al. (2012), global spending on biodiversity and ecosystem services reached USD 53 billion per year in 2010, the OECD estimation of spending on biodiversity-relevant activities (based on available government budgets data) was USD 49 billion in 2015 (by comparison, the fossil-fuel and agriculture sectors received USD 500 billion of subsidies and government support per year (OECD, 2019)). Of USD 53 billion allocated for biodiversity conservation, 74% was spent in the developed world, only 6% in Africa (Parker, C. et al., 2012) and 5% in Latin America.

A recent study of 2,167 PAs, representing 23% of the global terrestrial protected area estate, found that less than 25% of the PAs have adequate resources, staffing or budget (Coad L., et al., 2019). In developing countries, this PA financing gap was estimated to be approximately USD 0.2-0.9 billion per year in 2005 (CBD, 2005)[2], while fewer than 6% of the countries reporting to the CBD indicated that they had adequate resources for protected area management (Watson, J. et al., 2014).

3.2 The need to increase the protected area estate and related funding

Global context

While there are clearly not enough financial resources for the adequate management of existing protected areas, there is a need to increase the protected area estate globally to secure the world's biological diversity (Nature Needs Half, 2019). Over the past four decades there has been a ten-fold increase globally in the number of PAs listed by the United Nations (UN), with over 104,000 PAs reported in 2004, and 242,423 PAs (terrestrial and marine) in 2019 (UNEP-WCMC, IUCN, Protected Planet, 2019b). The area under protection has likewise expanded globally, from 2.4 million km^2 in 1962 (Emerton, L. et al., 2006) to over 20.4 million km^2 in 2019 (UNEP-WCMC, IUCN, Protected Planet, 2019b). The PA terrestrial coverage increased from 14.7% in 2016 to 15% in 2019, and marine coverage increasing from 10.2% to 17.1% in national waters worldwide (UNEP-WCMC, IUCN, Protected Planet, 2019b). In 2010, at the CBD, members agreed to Target 11: By 2020, at least 17% of terrestrial and inland water, and 10% of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes (CBD, 2018). It is anticipated that at the forthcoming CBD meeting in China in 2020, new targets will be established for protected areas, calling for potentially 30% of the world land and waters to be protected by 2030 (CBD, 2020a). Other campaigns such as Nature Needs Half are calling for 50% of the globe to be set aside for conservation (Nature Needs Half, 2019).

The potential expansion of PAs will require an increase in funding for conservation management. However, the increase of protected areas (CBD, 2020a) has historically not correlated with an increase in finance for management. According to a study published by the WWF, the cost of increasing global marine conservation areas to 30% will require USD 228 billion over the period from 2015 to 2050 (Reuchlin-Hugenholtz, E. & McKenzie, E. 2015), while

[2]Convention of Biological Diversity (CBD) (2005). 'Options for Mobilizing Financial Resources for the Implementation of The Programme of Work by Developing Countries and Countries with Economies in Transition', Working group on protected areas, Italy. Available at: http://web.bf.uni-lj.si/students/vnd/knjiznica/Skoberne_literatura/gradiva/zavarovana_obmocja/mt_catini_rpt.pdf.

more recently a study estimates the gross costs for nature conservation across half the Earth could be USD 100 billion per year (Dinerstein, E. et al, 2019). Despite the expected increase in the government and donor financing (Credit Suisse et al., 2014) the financing gap is nearly impossible to cover without involvement from the private sector and moving beyond depended on traditional funding sources.

3.3 Protected and conserved areas in Eastern and Southern Africa

Eastern and Southern African countries have achieved important progress in establishing and maintaining a globally significant network of PAs, having on average 17% of their territories protected, which represents 2.1 million km^2. The 24 countries in the scope of this study include more than 5,000 (UNEP-WCMC and IUCN. Protected Planet, 2019a) protected areas,[3] including 431 "strict" protected areas with IUCN management categories I through IV (all of them in one way or another strictly limiting human activities in the areas, except the minimum necessary for maintenance and the conservation activities and eco-tourism) (Dudley, N., 2013).

However, despite an important achievement in the protection of the terrestrial areas, marine water protection is below the Aichi targets (10 % of coastal and marine areas to be conserved by 2020 through effective and equitably managed connected systems of protected areas) (CDB, 2018) with only 6% (485,000 km^2) of marine waters protected (computation based on UNEP-WCMC and IUCN. Protected Planet, 2019a). The rest of Africa (34 countries) have relatively similar achievements in terms of terrestrial area protection (13% of terrestrial area protected representing 2.2 million km^2), but better marine protection results (16% of protected marine area, representing 1 million km2 (computation based on UNEP-WCMC and IUCN. Protected Planet, 2019a). However, the high coverage of marine protection is mostly due to several island countries such as Saint Helena, Ascension and Tristan da Cunha (with 55% of marine area protected) and Mayotte (100%). Without these countries, the level of marine areas under protection would only be 1% (computation based on UNEP-WCMC and IUCN. Protected Planet, 2019a).

Photo: Isimangaliso Wetland Park - Christine Mentzel

[3]The protected area types include all national designation categories, such as national parks, marine and terrestrial reserves, hunting, natural, game reserves and others. Source: UNEP-WCMC and IUCN. 'Protected Planet: The World Database on Protected Areas (WDPA)'. Protected Planet [online data base]. (October 2019a). Cambridge, UK: UNEP-WCMC and IUCN. Available at: https://www.protectedplanet.net/. (Accessed: 6 November 2019).

Table 3: Protected area overview of 24 countries in Eastern and Southern Africa: 17% of terrestrial and 6% of marine area. Adapted from UNEP-WCMC and IUCN

Country	No of PA	No of PA with I - IV IUCN categories	Total terrestrial PA, km²	Total terrestrial area, km²	Terrestrial PA coverage, %	Total marine PA, km²	Total marine PA, km²	Marine PA coverage, %
Angola	14	12	87,507	1,255,218	7%	24	493,753	0%
Botswana	22	20	169,370	581,163	29%	NA	NA	NA
Comoros	8	1	173	1,701	10%	32	165,505	0%
Djibouti	7	1	344	21,844	2%	12	7,031	0%
Eritrea	4	3	5,936	121,834	5%	0	78,827	0%
Ethiopia	104	25	200,074	1,135,429	18%	NA	NA	NA
Kenya	411	41	72,545	586,770	12%	904	112,400	1%
Lesotho	4	1	80	30,495	0%	NA	NA	NA
Madagascar	157	55	33,242	594,719	6%	8,998	1,205,825	1%
Malawi	133	9	27,190	118,860	23%	NA	NA	NA
Mauritius	44	32	97	2,062	5%	50	1,280,068	0%
Mozambique	44	10	170,662	791,082	22%	12,821	574,410	2%
Namibia	148	12	313,534	827,465	38%	9,646	562,728	2%
Rwanda	10	5	2,320	25,452	9%	NA	NA	NA
Seychelles	40	14	242	487	50%	209,930	1,340,839	16%
Somalia	21	Not available	Not available	Not available	Not available	Not available	Not available	Not available
South Africa	1580	Not available	102,060	1,224,385	8%	224,640	1,542,560	15%
South Sudan	27	12	98,214	633,580	16%	NA	NA	NA
Sudan	23	4	42,698	1,871,252	2%	10,662	66,786	16%
Swatini	14	8	738	17,336	4%	NA	NA	NA
Tanzania	840	76	361,594	947,253	38%	7,330	243,130	3%
Uganda	712	22	39,059	243,145	16%	NA	NA	NA
Zambia	635	36	286,161	755,640	38%	NA	NA	NA
Zimbabwe	232	32	106,837	392,573	27%	NA	NA	NA
Total	**5234**	**431**	**2,120,677**	**12,179,745**		**485,049**	**7,673,862**	

3.4 Downgrading, downsizing, and degazettement of protected areas in Eastern and Southern Africa

While the average percentage of terrestrial PAs in 24 countries in the scope of this study (17%) have achieved the Aichi Target 11 (to have at least 17% of terrestrial and inland waters protected by 2020) (CBD, 2018), some countries significantly outperform others, with protected area coverage varying by a factor of 20 (between 2% and 50% of each country's terrestrial territory) (Table 3).
The Seychelles (50%), Tanzania (38%), Namibia (38%) and Zambia (38%) have the greatest percentage area protected, while almost 60% of the countries in the region, have not yet achieved the CDB 2020 target.

In addition, PAs have been downgraded, downsized or degazetted (DDD) in the region. According to a study on DDD from 1900 to 2010, at least three countries would also have reached the 2020 CDB target in Africa in the absence of these events: Kenya (12% coverage would be 18.5%), Rwanda (9% coverage would be 22.9%), and Uganda (16% coverage would be 20.7%) (Masciaa, M. B. et al. (2014).

A further analysis of DDD events from 1902 to 2018 shows that 87% of the DDD event took place in five countries, with Kenya hosting almost half of the DDD events (307) in the region.

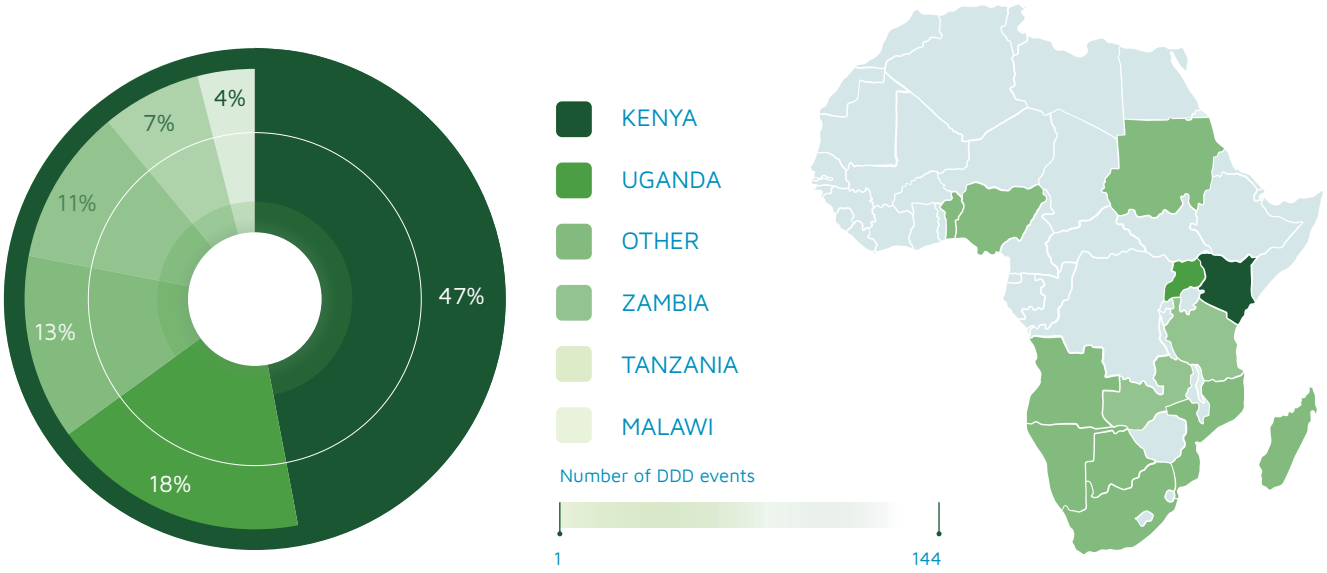


Figure 1: Total Downgrading, Downsizing, and Degazettement events, by country, 1902–2018. Adapted from: Conservation International & World Wildlife Fund (2019). Adapted from: Conservation International & World Wildlife Fund (2019).

While the reasons for a DDD event is often unknown, the data from 189 DDD events in the region shows that the main causes (accountable for 46% of events) include resource extraction such as the mining and oil and gas activities and conservation and development planning[4] (simultaneous reallocation of lands or regulatory changes to multiple protected areas and rural settlements).

[4]Definition: "Protected area downgrading, downsizing, or degazettement resulting from legal changes that are designed to enhance the conservation efficiency and efficacy of a class, group, or geographically distinct set of protected areas. Involves simultaneous reallocation of lands or regulatory changes to multiple protected areas. Does not include individual instances of degraded protected areas; excision of settlements; or excision of protected area land that no longer serves a conservation purpose. Excludes protected area downgrading, downsizing, and degazettement to attain non-conservation ends or divest from protected areas no longer serving a conservation function." Source: PADDTRACKER [online data base]. Available at: https://www.padddtracker.org/. (Accessed: 13 December 2019).

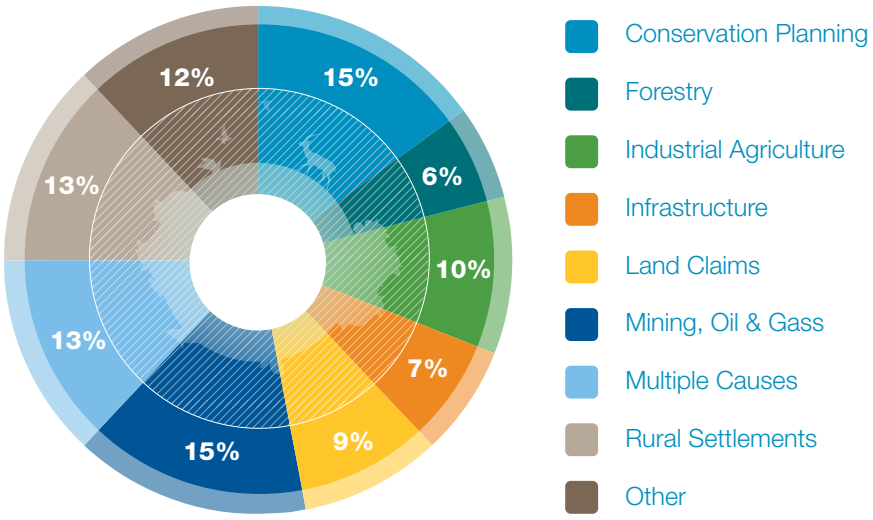


Figure 2: Main causes of DDD events, 1902 – 2018. Adapted from: Conservation International & World Wildlife Fund (2019). Adapted from: Conservation International & World Wildlife Fund (2019).

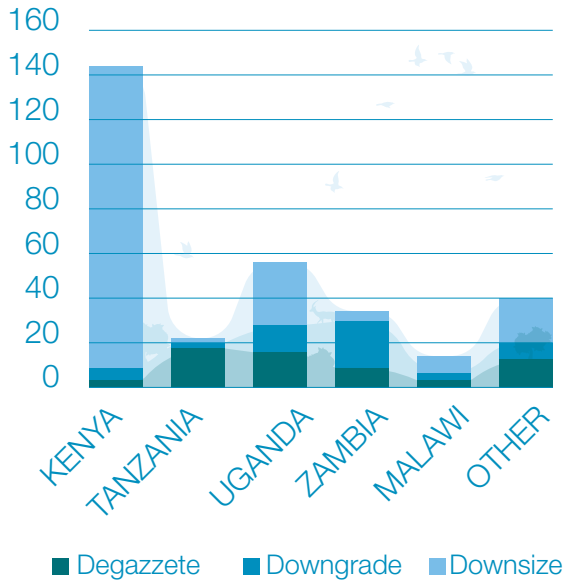


Figure 3: Degazettement, downgrading and downsizing, by country, 1902 – 2018.Adapted from: Conservation International & World Wildlife Fund (2019).

Despite the high number of the DDD events, the total number of DDD activities have been decreasing over the last 20 years. For example, in the period from 2000 to 2009, the total number of DDD in the 24 countries in the scope of the study totalled 56, while in the last 10 years (2009 – 2019), this number decreased to only 11 (eight of which related to downgrading due to infrastructure and industrial development, such as mining, oil and gas). While the scale of the DDD instances may be larger in the latter case, the number of incidences has decreased. Scale is difficult to extrapolate from the DDD database.

A recent study on the current state of human encroachment into PAs in five Eastern African countries (Kenya, Tanzania, Burundi, Uganda and Rwanda) concluded that despite the rapid human population growth of nearly 3% (The United Nations, 2017) per year and the related expected agricultural expansion and settlements in the coming decades, the degree to which habitat within PAs (as of 2015) has been converted for human use is encouragingly low (6.8%) (Riggio, J., et al., 2019).

However, unless protected areas can demonstrate economic, social and ecological value, they will remain under pressure to be converted to lands with more "profitable" economic activities. A recent example of such pressure is the decision of the Government of Tanzania to annul twelve protected areas and seven nature reserves "that have no wildlife and lack trees" (a total area of 707,660 hectares) for use to 920 villages for farming and livestock (PetersonWood, B. & Stein A., 2019; Xinhuanet, 2019).

3.5 Protected area expansion in Eastern and Southern Africa

Despite the DDD events referenced above, PAs have been expanded, established or upgraded throughout the ESA region. For example, in the past two decades Tanzania:

- created four new national parks (Saanane Island (2.2 km2), Jozani-Chwaka Bay (50 km2), Kitulo Plateau (465 km2), and Nyerere National Park in Selous Game Reserve (30,000 km^2)) (Tanzania National Parks Authority (TANAPA), 2019);
- upgraded two game reserves to national parks (Mkomazi (3445 km^2) and Saadani (1062 km^2)), with another five (Biharamuro (1462 km^2), Burigi (2200 km^2), Ibanda (200 km^2), Kimisi (1,026 km^2), and Rumanyika (unclear)) approved for upgrade in 2018); and
- enlarged five existing national parks (Arusha (112 km^2), Lake Manyara (108 km^2), Mikumi (3,233 km^2), Ruaha (14,500 km^2), and Katavi (4207 km^2)) (Riggio, J. et al., 2019).

African Governments are also pledging further support for expansion of the PA estate. Examples include:

- **Uganda:** Mary Goretti Kitutu, the then Ugandan State Minister for the Environment vowed that Uganda would be a conservation leader in Africa, committing to increase the area under protection to 30% by 2030 (NTV Uganda, 2019).
- **South Africa:** South Africa's "National Protected Area Expansion Strategy" identifies the key areas for conservation and protection in each of its provinces, covering 190,109 km.2 According to the strategy the number of "Well Protected Ecosystems" is anticipated to more than double while "Not Protected Ecosystems" will reduce by around 70% in the next 20 years (Department of Environmental Affairs, 2016). South African National Parks (SANParks) has also set a target of expanding the territory under its management by 21,500 hectares from 2015 to 2022 (SANParks, 2019). In 2019, the Tembe Elephant Park, a community-owned park managed by the provincial authority Ezemvelo Kwa Zulu Natal Wildlife Authority, announced their intention to expand by 26,000 hectares to provide space to elephants to breed, almost doubling the current size of the park (29,800 ha) (Hattingh, M. & Mdletshe, M., 2019). Additionally, 20 new Marine Protected Areas (MPA) were gazetted in 2019 increasing the marine area protected around the country's mainland territory from 0.4% to 5% (Save Our Seas Foundation, 2019).
- **Seychelles:** In 2000, the President of the Republic of Seychelles made a commitment to declare 50% of Seychelles terrestrial area under biodiversity conservation by 2020. In 2013, the government announced its intention to proclaim 30% of the marine Exclusive Economic Zone (EEZ), a further 40,000,000 ha (The Government of Seychelles, 2017), to be protected, of which 50% (Seychelles Marine Spatial Plan Initiative (SMSP), 2019) will be managed as 'high biodiversity zones," restricting almost all human activities. This target was realised due to a debt-for-nature swap (developed and finalised in 2016 by the Nature Conservancy (TNC)), that allowed Seychelles to restructure a part of its national debt in exchange for protecting its waters. A Marine Spatial Planning process is currently underway and is expected to be finalised in 2020. As a part this commitment, two new Marine Protected Areas (waters surrounding the Aldabra archipelago, and the stretch of ocean between the Amirantes group of coral islands and Fortune Bank) covering 210 000 km2 of biodiverse ocean waters (size of Great Britain) were established in 2018 (TNC, 2019).
- **Rwanda:** In 2018, the Rwanda Development Board (RDB) expanded Volcanoes National Park for the first time in three decades, through the donation of a 27.8-hectare property from the African Wildlife Foundation (AWF) (RDB, 2018). While this amount of land may seem small compared to other parts of Africa, Rwanda is one of the most densely populated countries in Africa (Sawe, B.E., 2017), making this size significant. This expansion provides additional habitat for the expanding population of the endangered mountain gorilla.
- **Ethiopia:** The Simien Mountain National Park (SMNP) in Ethiopia was expanded from the original size of 136 km2 (in 1976) to 412 km^2 (in 2007) (Ethiopian Wildlife Conservation Authority (EWCA), 2015)–more than doubling the size of the Park. This is a significant increase in a highly fragile and ecologically significant landscape. SMNP was included on the list of the World Heritage Sites in Danger in 2006. The expansion of the Park to provide habitat for endemic and threatened species was listed as one of the criteria for removal from the list. In 2017 the SMNP was removed from this list due to the expansion efforts by the Government of Ethiopia (United Nations Educational, Scientific and Cultural Organization (UNESCO), 2017).
- **Comoros:** The Government of Comoros developed a strategic expansion plan for protected areas from 2017 – 2021. The plan envisages the establishment of five new national parks and creation of the Protected Areas Managing Agency ("Agence des aires protégées") by 2021 (Directorate of Environment and Forestry (DGEF), 2017).

Despite the positive tendency in the increase of PAs, there has not been a correlative increase in financing to cover management and operational costs. In most cases the increase in the number of PAs has meant that the scarce financial resources of the PA authorities are stretched even thinner. A 2017 review of the financing of protected areas by IUCN in Eastern Africa confirmed that proper financing is one of the greatest barriers to adequate conservation performance (EA SOPA, 2017).

3.6 Protected area expenditures and revenue flow

The current expenditures of PA management authorities show that, for the majority of these organisations, funding is mostly (c. 90% on average) spent on operating costs such as staff, marketing, maintenance, trainings, consumables, consulting and audit fees, and insurance, with very few investments into capital expenditures or capacity building.

Staff expenses especially make up a significant part of the overall budget. For example, staff costs constitute 30% of EWCA budget and 50-60% of the budgets of Eswatini National Trust Commission, Kenya Wildlife Services (KWS), SANParks, and Namibian Association of Community Based Natural Resource Management Support Organisations (NACSO). Other major expenses include other administrative costs, depreciation, and amortization expenses.

Some State PAs also share revenue with local communities. For example, in Rwanda, 10% of all revenue generated by the RDB in the national parks goes to local communities (RDB, 2019). This is the highest revenue share for PAs in Africa. Other PA authorities provide financial benefits to communities on an ad-hoc basis. Community conservancies have a much higher revenue share given the natural asset is owned by the community. For example, NACSO conservancy members attribute up to 40% of the revenue to the communities either in the form of the cash revenue, off-take (game meat and other natural products) or community development projects. In Kenya, the communities also own the land; therefore, they can attribute revenue to community development and conservation management of their own natural asset.

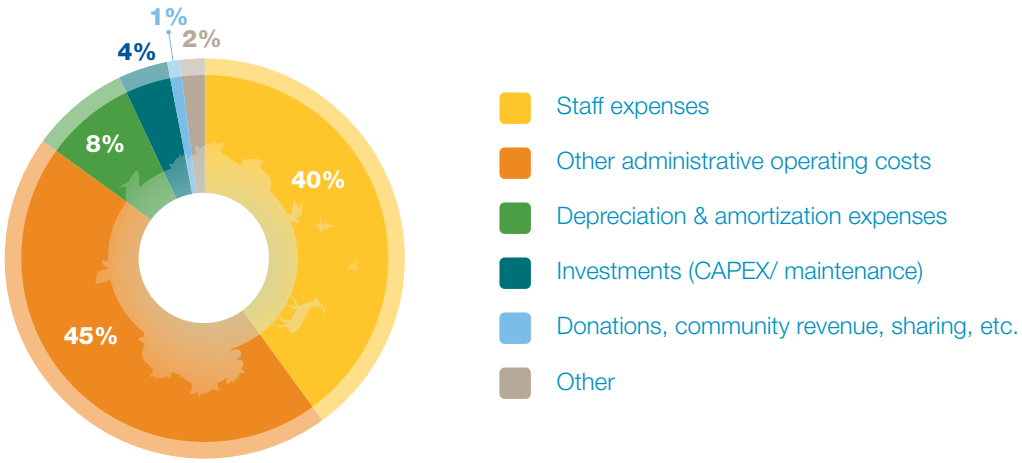


Figure 4: Expense breakdown of 11 community and national Protected Areas in seven ESA countries.

Protected area authorities' budgets generally have limited investments in capital expenditures, maintenance, conservation programmes, or capacity building. These are mostly covered through donor programmes and support (see Chapter 5.2). In cases where authorities do invest in capacity development, for example, these expenses are relatively low. For example, in 2016, KWS's budget for employee training and development was 1.5% of the total budget (Office of the Auditor General, Republic of Kenya, 2016).

Most PA agencies in ESA are required to remit their revenue to central treasury and then apply for their yearly budget, in some cases receiving less than they generated (see Chapter 5.1). Therefore, even if one Park is able to generate sufficient revenue to supports its operations, these profits are used to subsidise less profitable parks. For example, TANAPA manages 506 protected areas in Tanzania, yet only two National Parks, Kilimanjaro and Serengeti, generate 74% of revenue in 2013 (TANAPA, 2013). In South Africa, out of the 19 national parks, Table Mountain and Kruger National Parks hosted 77% of all visitors in 2017- 2018 generating significant revenue from conservation and concession fees (SANParks, 2018). In Rwanda, Volcanoes National Park accounts for 38% of all visits and generates over 90% of all revenues for the Rwanda Development Board, the department in charge of managing Rwanda's protected areas and wildlife (RDB, 2017).

Most funding is directed towards flagship areas, leaving many PAs effectively non-functional. For example, a majority of KWS's budget is directed towards Amboseli, Tsavo and Mt. Kenya National Parks, leaving other parks underfunded and non-operational due to a dearth in finance (EA SOPA, 2017). Revenue expenditure and retention is a key aspect of ensuring effective conservation management. This is not covered fully and in detail in this report but should be guided by PA and PA system business plans to ensure that any increase in funding is managed properly and drives enhanced conservation performance.

3.7 Eastern and Southern Africa's biodiversity financing and resourcing challenge

Eastern and Southern Africa's PAs face a significant financing and resourcing challenge, especially those areas that protect large and wide-ranging mammals such as rhino, elephant, lion and wild dog. It has been estimated that effective elephant conservation requires an annual budget of USD 365-930 per km^2. A study conducted by Packer, C. et al. (2013) found that the annual cost of managing PAs that support lions is approximately USD 2,000 per km^2 in unfenced areas and USD 500 per km^2 in fenced areas. Packer's findings were later confirmed by work done by Lindsey, P. A. et al. (2018) who estimated that effective management of PAs with lion requires USD 1,000 – 2,000 per km^2. However, the majority of protected areas in Africa are managed with less than USD 50 per km^2 (Fitzgerald, K.H., 2017), suggesting that these areas are grossly underfunded by c. 90%.

While the funding, management and associated staffing requirements of individual PAs varies according to factors such as local geographical features, shape, climate, cultural context, species living in the area, adjacent land uses and populations, there is consensus that there is a significant funding gap across ESA.

A 2019 study assessed the management costs, revenue and subsidies of 282 state-owned PAs with lions and concluded that available funding only satisfied 10-20% of management needs. In total, the funding gap of these PAs was estimated at approximately USD 1.5 billion per annum (Lindsey, P.A. et al. 2018).

A review of the financial data from PAs across 15 ESA countries also showed that 12 of these countries face significant funding gaps (correlated from data Lindsey, P.A., 2018). Even though Eastern and Southern African regions generally have similar funding gaps (56% and 64%), some individual countries, such as South Africa, Kenya, and Rwanda, appear to be better funded, suggesting that countries with enabling legislation (such as South Africa wildlife ownership policies) and well-developed nature-based tourism are able to contribute more to the financing of their PAs.

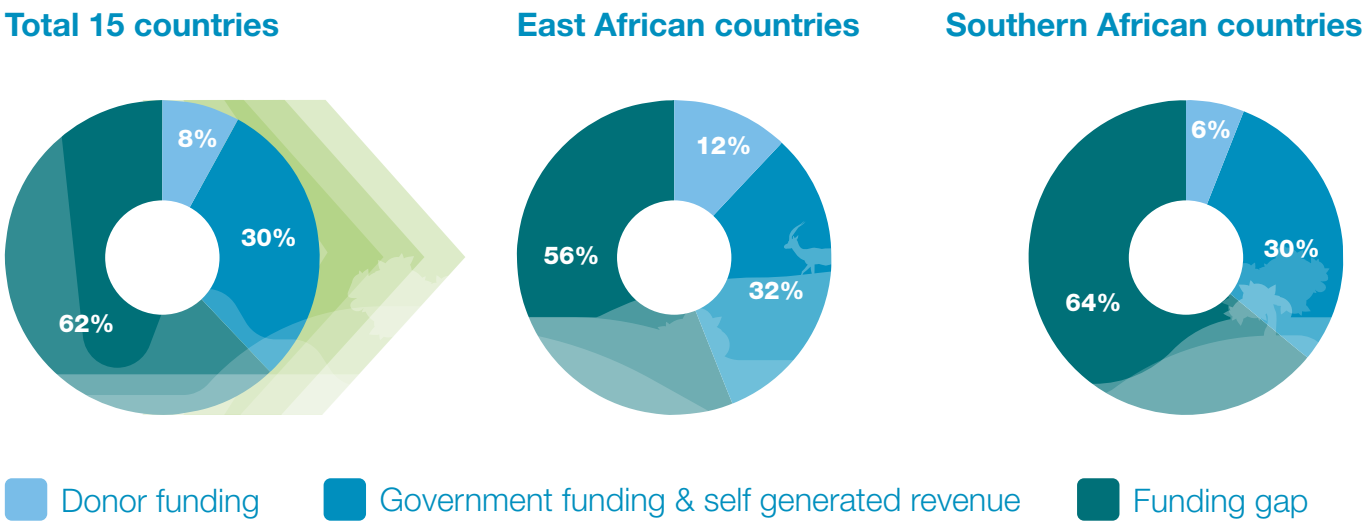


Figure 5: Funding gap and available financing resources in fifteen ESA countries.

Across the ESA region there are a number of examples that highlight the funding gap. Examples include:

- **Kenya:** The Kenyan Wildlife Service manages 66 protected areas covering 4.8 million hectares, over 8% of the country. Their budget deficit in 2016 constituted USD 5.5 million, while its accumulated deficit reached USD 56 million (Office of the Auditor General, Republic of Kenya, 2016). KWS has indicated that 50% of its Parks are non-operational (EA SOPA, 2017) and they are looking at ways to increase revenue.
- **Zimbabwe:** Zimbabwe Parks and Wildlife Management Authority (ZPWMA), which is responsible for managing 13% of Zimbabwe (5 million ha) (ZPWMA, 2017) and the Zimbabwe Forestry Commission (a parastatal responsible for the sustainable utilization of forest resources and management of gazetted forests) incurred deficits of USD 6.3 million and 3.8 million respectively in 2016 (Office of the Auditor-General Zimbabwe, 2018).
- **Zambia:** A 2013 study on the Game Management Areas (GMAs) in Zambia highlighted a huge financing challenge for the Zambia Wildlife Authority (ZAWA) who, at that time, managed Zambia's 20 national parks and 36 GMAs. Reduced government support for ZAWA resulted in a budget deficit of USD 12 million as of 2013. In that same year, ZAWA only generated USD 4.6 million in revenue but had an annual wage bill of at least USD 12 million (Lindsey, P. A. et al., 2013).

- **Tanzania:** Wildlife Management Areas (community-based protected areas set aside for wildlife conservation and generation of revenue for the community from economic activities such as tourism, sustainable use and the sale of natural products) in Tanzania face similar funding challenges and are largely donor dependent. In 2016, there were 22 WMAs and 16 more were under development (Community Wildlife Management Areas Consortium, 2019). Together these WMAs covered approximately 7% of Tanzania surface area. A study by United States Agency for International Development (USAID) evaluated five WMAs whose average annual generated revenue, mostly from tourism activities (ranging between USD 2,000 - USD 90,000), does not sufficiently cover the WMA's average operating costs (ranging from USD 150,000 to 250,000) (USAID, 2013). More details are provided in Case study 1.
- **Uganda:** A study commissioned by USAID in 2014 estimated the funding gap for biodiversity-related conservation investments in the country was approximately USD 89 million. The estimate for the funding gap for national parks, wildlife reserves, forest reserves and wetlands was estimated to be between USD 15 and 33 million per year (USAID, 2014).
- **Namibia:** The Namibian Association of Community-Based Natural Resource Management Support Organizations supports 84 community conservancies, covering 163,000 km2 (20% of Namibia terrestrial area). Out of these 84 conservancies, 15 conservancies do not generate any cash-income or any other in-kind benefit (NACSO, 2017).
- **Seychelles:** In 2015, the Seychelles National Parks Authority (SNPA), which has eight PAs (6,100 ha) under management, estimated its annual basic financing needs were double their government budget allocation (USD 1.3 million), and optimal financing needs (USD 4.3 million) were four times the allocation (SNPA, noa date). For the whole PA network, consisting of 25 PAs (terrestrial, marine and combined) totalling 55,769 ha, to achieve an optimal management scenario where biodiversity levels are strengthened, USD 11.8 million annually is required. This amount is almost double the revenue generated collectively by the PA network in 2015 (USD 6.4 million) (Government of Seychelles, United Nations Development Programme, Global Environment Facility (GOS-UNDP-GEF, 2016).
- **Botswana:** The analysis of the revenue between 2005–2012 from the Department of Wildlife and National Parks (DWNP), which has 10.6 million ha under management, and Department of Forestry and Range Resources (DFRR), which has 0.4 million ha under management, showed that on average their self-generated revenue constitutes only 14% of their recurrent expenditures (such as wages, maintenance, and transportation costs) (Department of Environmental Affairs, 2016), which demonstrates a significant financing gap of the biodiversity protection activities.

Case study 1: Economic challenges of Community Wildlife Management Areas in Tanzania.
(Adapted from United State Agency for International Development (USAID) (2013))

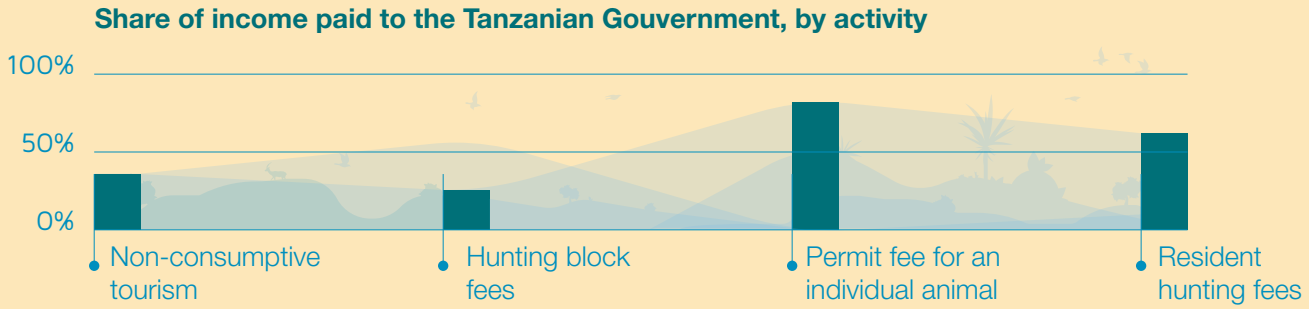
In Tanzania, Wildlife Management Areas are community-based PAs set aside for wildlife conservation and community engagement in conservation. WMAs present an opportunity for communities to generate revenue from conservation-based economic activities. The first WMA was formally created in 2003, following the issuance of the first WMA Regulations in 2002 and after the community-based conservation framework was enshrined in the Wildlife Policy of Tanzania, 1998. By 2016, 32 WMA were established (Community Wildlife Management Areas Consortium, 2020).

In 2013, 17 WMAs were functioning and 22 were in various stages of development. An assessment of five WMAs (Wami-Mbiki, Pawaga-Idodi, Ipole, Burunge, and Enduimet) conducted in 2013 by USAID identified governance and economic challenges that have to be addressed to improve wildlife protection and increase the income and benefits to communities.

The economic challenges identified by USAID include:

Costs of establishing and running WMAs are high: The cost required to establish a WMA is approximately USD 250,000 - USD300,000, which includes land use plans, resource management zone plans, and gazettement. This amount is well beyond what a community can afford and has traditionally been covered by donor organizations, such as USAID, the Danish International Development Agency (Danida), and German Corporation for International Cooperation (GIZ).
High operating costs: Village Patrol Scouts and patrol work alone can cost between USD 60,000 – 100,000 per year per WMA. With administration costs included, annual operational costs can increase to USD 150,000 - 250,000 per WMA. These are high figures considering that most WMAs were earning between USD 2,000 - 90,000 per annum (with the exception of two WMAs that generate higher income, between USD 290,000 – 450,000, due to their location near national parks and in the northern tourist safari circuit).

WMAs which are not able to cover their operational costs and are not supported by external sources are unable to effectively conduct patrolling and other conservation work. A huge drain on WMA income is government taxes that are levied on revenues (not profits) from non-consumptive tourism, hunting block fees, and hunting permit fees (both foreign and resident). The tax level for each of the activities is shown below.



Another cost to communities comes from increased human-wildlife conflict (HWC). Nearly half of community respondents of the USAID study said crop destruction by wildlife has been an outcome of the creation of WMAs. For some of the WMAs the cost of losses exceeded the total annual earnings. The Government of Tanzania has offered compensation to very few individuals, USD 62.5 per acre, which is well below the value of the loss.

Government does not contribute to WMA operational costs: Costs for operating WMAs are currently being met solely by the associations responsible for managing them and support from donor organizations. This in contrast to for example Namibia where the Government provides some support for HWC in community conservancies and allows the community to retain 100% of the profits. Likewise, in Kenya, the community conservancies are not required to pay the Government of Kenya a substantial percentage of revenue.

Lack of diversified revenue streams: Most WMAs are reliant on only one or two income streams, normally photographic or hunting tourism. This lack of diversification exposes the WMAs to significant risk. For example, the Wami-Mbiki WMA in central-eastern Tanzania essentially ceased to exist after its donor support ended in 2011. Some WMAs in northern Tanzania have succeeded in implementing carbon offsets for income generation. Other potential revenue sources, such as fees for livestock grazing, sustainable fuelwood and timber harvesting, eco-charcoal production, and sustainable fishing were not actively pursued, according to USAID.

Poor business planning and marketing: None of the WMAs visited by USAID had had a thorough assessment of business opportunities prior to its formation, simply assuming that tourism businesses would invest in the WMAs and generate ample revenue. However, the investment conditions were quite prohibitive and not attractive to the private sector (short term contacts, high annual investment fee (USD 28,000) in addition to the cost of investments and prohibitive taxation by the Government). Additionally, there is a need to put more resources into marketing of WMAs as destinations.

Chapter 3: Key messages

Protected areas globally are faced with a significant and widening funding gap. This is especially evident in developing regions such as ESA where PAs have significant financial challenges. Key messages from this chapter include:

- **PA funding is grossly inadequate:** Available funding for PA management only satisfies approximately 10-20% of management needs in Africa. While this estimate was based on PAs with lions, which are more expensive to manage, it is a clear indicator of the sheer size of the annual conservation financing gap in Africa (an estimated 80% in countries assessed) (computation based on Lindsey, P.A. et al. 2018)[5].

[5]East African countries: Ethiopia, Kenya, Rwanda, Sudan, South Sudan, Tanzania, Uganda; South African countries: Botswana, Namibia, South Africa, Angola, Mozambique, Malawi, Zambia, Zimbabwe.

- **PA land coverage is also inadequate:** While there are clearly not enough resources for the adequate management of existing PAs, there is also a need to increase the PA estate to ensure the protection of the continent's biological diversity and ecosystem services upon which people and wildlife depend. The current proposal being tabled at the CBD is for 30% of terrestrial areas to be protected (CBD, 2020a). This will put additional pressure on the already stretched budgets of those that traditionally fund conservation (such as governments, donor agencies and conservation organisations).

- **PAs are not fulfilling their potential value proposition, magnifying existential risk:** Underfunded PAs cannot be adequately or effectively managed and are not able to demonstrate their social, economic and ecological value; becoming less politically relevant, and making them vulnerable to downgrading, degazettement and/or downsizing.

Chapter 3: Recommendations

1. **Assessing financial shortfalls and consequences:** Technical and financial support should be provided to PA authorities to assess financial gaps of PAs and systems and to understand the potential direct and indirect consequences of the funding shortfalls. To adequately address PA funding gaps, the gap must first be measured, communicated and understood. Few governments, authorities and organizations have an accurate idea of the funding gap of the PAs under their management. In-depth PA assessments should be undertaken to determine the financial gap, this should ideally be done in concert with the development of a professional protected area business plan (Chapter 5 Recommendations). These plans should be developed and approved by the relevant authority to serve as a blueprint for operations and fundraising. The assessments should include an analysis of the resourcing of PAs (i.e. a review of how and where a funds are being spent to determine efficiency and effectiveness), a review of conservation values, threats and priorities, and the requisite conservation management actions and associated costs. Where such in-depth assessment is not possible, it is suggested that a more standardized approach be used, such as comparing a suggested average management cost per km^2 (similar to the process used in academic studies such as in Lindsey et al, 2018) to the management authority's budget for the area concerned.

2. **Assessing, articulating and communicating PA value propositions:** Technical and financial support should be provided to PA authorities to assess and clearly document the ecological, economic and social values of their PAs. This will help PA authorities create political support for PAs and solidify their political and social relevance with governments and citizens. This may also include a natural capital assessment that quantifies the ecosystem services values and documents the overall ecological and related economic and social importance to society.

3. **Carefully targeted training and capacity building:** Training and capacity building should be provided and prioritised for decision makers and key individuals in government and in PA management organizations (private, public and community) to enhance the knowledge and skills of their employees so that they are able to design and implement strategies and action plans to understand and reduce the financing gap.

4. **Building an enabling policy and legislative environment:** Innovative policy and legislation aimed at supporting strategies for addressing the financing gap should be developed and adopted. PA authorities should clearly document any policy barriers and work with relevant ministries to address these through policy change. A good example of this is the financial autonomy attained by the SNPA under the Global Environment Facility funded Seychelles' PAs Finance Project and approved by the Seychelles Government in 2019. Previously SNPA could not reinvest into its parks due to limited budgets, but since financial autonomy, it has been able to raise park entry fees to fund reinvestments. Other important aspects of the GEF funded project, related to recommendation 1, included a PA System Financing and Investment Plan for Seychelles that sets out the national strategy for increasing revenue capture by all PAs by 50%, training of and development of management, and the development of finance and business plans for PAs. Most countries in ESA have access to GEF funding and could use this to support similar initiatives.

4 | Traditional sources of finance for protected areas

Photo: Kilimanjaro, Marangu route start - Christine Mentzel

Traditional financing options for protected and conserved areas in ESA are generally limited to government funding, donor support and self-generated, market-based finance, such as for example revenue generated from nature-based tourism.

While countries, PAs and their associated funding requirements differ, there are very few protected areas that are able to generate sufficient revenue through internal means, making most dependent on some form of donor or government support. These external sources of finance however remain inadequate.

Despite the funding gap, there are significant opportunities to diversify and increase the revenue generated by PAs. This requires high-level political buy-in and consideration from government regarding how it can sustainably finance its PAs. To optimise revenue opportunities, PA authorities need to develop and implement PA business plans with revenue generation strategies to ensure that the PAs under their management can be sustained and effectively managed.

For example, the Seychelles National Parks Authority manages 20 out of the 40 protected areas in Seychelles, more than any other entity in the country (UNEP-WCMC and IUCN, Protected Planet, 2019a), yet it has the highest financing gap of all management entities nationally (GEF, 2019). Under a GEF funded programme, the SNPA developed a new strategy that focused on the development of revenue streams from PAs and revenue retention in order to reinvest in the PAs. The strategy analysed SNPA's financial gap, estimated at USD 3 million per year based on optimal financial needs compared to actual expenditure, and proposed options to boost revenue generation through the revision of entrance fees, contributions from hotels bordering national parks, and establishing strategic partnerships with the private sector. As a result, SNPA was granted financial autonomy in 2019, and began a significant reinvestment plan to rejuvenate degraded tourism infrastructure (SNPA, no date).

4.1 Government support

Globally, in 2012, Parker et al. found that approximately half of the expenses for biodiversity are covered by national government funding from the host country (Parker, C. et al., 2012). Although there is no new data available on government support for PA finance, the situation is likely to still be very similar. All protected area agencies in ESA receive some level of national government level support. While this is a positive sign of government commitment to conservation, it is not necessarily sustainable and often inadequate as governments have competing needs for other expenses such as infrastructure, health care, education and food security. Thus, diversifying and increasing revenue from self-generating means is critical to ensure the long-term sustainability of protected areas.

Additionally, in some countries, PA budgets are entirely dependent on the government subsidies, even though they generate their own revenue from economic activities. Internally generated revenue is remitted to the central government and redistributed back to the PA system.

In some cases, the revenue generated by the PAs is more than the subsidy received from the government. For example, the EWCA generated USD 4.35 million of revenue in 2018, but only received USD 4.05 million back from government (EWCA, personal communication, 2019).

Government support and size of subsidies for PAs varies significantly across ESA:

- **Kenya:** In 2015, 47% of the Kenya Wildlife Service budget was provided by the Government. In 2016, this was reduced to 10%, however additional support was provided by other state corporations for utilization of parks (Kenya Railways and Kenya National Highways Authority) totalling USD 25.5 million (37% of total funding), demonstrating a strong dependence on the state financing (Office of the Auditor General, Republic of Kenya, 2016).
- **Eswatini:** The Eswatini National Trust Commission, is the parastatal organisation responsible for the conservation of the country's cultural and natural heritage received 55% of its funding from government in 2018/2019.
- **South Africa:** Government subsidies accounted for 22% of SANParks' revenue in 2018 (SANParks, 2018).
- **Namibia:** The community association NACSO in Namibia relies solely on its internally generated revenue and donor support, not Government subsidies. The Government of Namibia does however support a HWC fund to help communities mitigate the impact of HWC.
- **Mauritius:** The Mauritius National Parks and Conservation Service, which manages 11 PAs with a total area of 7,230 hectares, depends entirely on government subventions and donations for its recurrent staff and capital expenses (National Park and Conservation Service, Ministry of Agro Industry and Food Security of Mauritius, 2014).
- **Ethiopia:** The EWCA, which manages 13 national parks and sanctuaries covering 29,500 hectares, is responsible for generating its own revenue. This is collected by the National Treasury and reallocated according to the national state budget, not necessarily the budget submitted by EWCA for park management. The received budget is intended to cover operating and CAPEX expenses. The budget provided by the Government is not adequate for operations and management; thus, is supplemented by donor funding (EWCA, personal communication, 2019).
- **Seychelles:** The government support in Seychelles is limited and restricted to the SNPA (eight PAs under management). SNPA became financially autonomous in 2019 and is thus able to retain the revenue generated from the PAs. For the other PAs, the main source of

funding of the PA network is revenue generated at site level (entrance fees, mooring fees, landing fees, bed levy and sales of souvenirs) representing around 75% of the total finance available for the PA network in 2014 (GOS-UNDP-GEF, 2016).

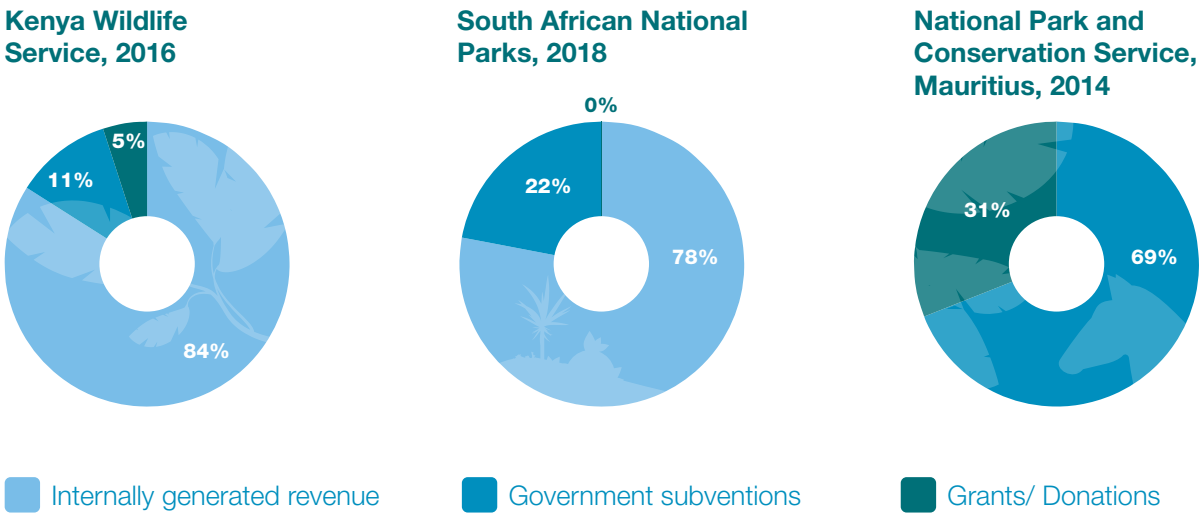


Figure 6: Share of government subsidies in PA budgets in three countries. Source: Computed from the published annual and financial reports of the respective agencies. Note that for South Africa, donor funding is provided for rhino conservation and other species support. This is not adequately captured in the annual report. Likewise, for Kenya Wildlife Service, more than 5% of the budget is provided by donor support. This highlights a challenge of clearly understanding the gaps and current funding.

4.2 Donor support

According to the study done by Emerton, L. et al. (2006), which remains a major reference in the field, external grants, donations and philanthropic support, together with government support remain one of the major sources of funding for conservation and management of protected areas in ESA. A 2012 study by Parker, C. et al. estimated the amount of biodiversity financing by source and found that the amount of international development aid and philanthropy financing constituted almost USD 8 billion in 2012, 15% of total financing (Parket, C. et al., 2012). Data from a later study by Lindsey, P. A. et al. (2018) on PA financing in Africa, showed that donor financing covered 24% of total funding available (USD 443 million for 272 PAs). Local and international conservation organisations play an important role in supporting, financing and resourcing Africa's protected areas. For example, the Frankfurt Zoological Society (FZS) has, in partnership with the Zambian Government's Department of National Parks and Wildlife (DNPW), supported conservation in the North Luangwa National Park and surrounding Game Management Areas for more than 30 years (FZS, 2019). The African Parks Network (APN) supports management of 17 national parks (African Parks, 2020) in Africa bringing substantial external funding for protection and management. Other organizations such as AWF, World Wildlife Fund, Wildlife Conservation Society (WCS) and others raise donor funding to support PA management.

Financial data from 15 countries in Eastern and Southern Africa shows that, on average, donor support represents more than 50% of funding of PAs (Correlated from data: Lindsey, P.A., 2018). However, the percentage of donor financing varies significantly depending on the region (see Figure 7) and country concerned, with some countries being much more dependent on donor funding. For example, in Angola, Malawi, Ethiopia, and South Sudan the share of donor funding is between 70-90% of the total budgets. In Eastern African countries, the percentage of donor support out of the total available funding (donor, state and self-generated revenue) is approximately 27%, whereas in the Southern African countries (Namibia, South Africa and Botswana, Angola, Mozambique, Malawi, Zambia, Zimbabwe), this share is significantly lower, approximately 17 %. Excluding South Africa, the percentage of donor support in the Southern African region increases to 40%.

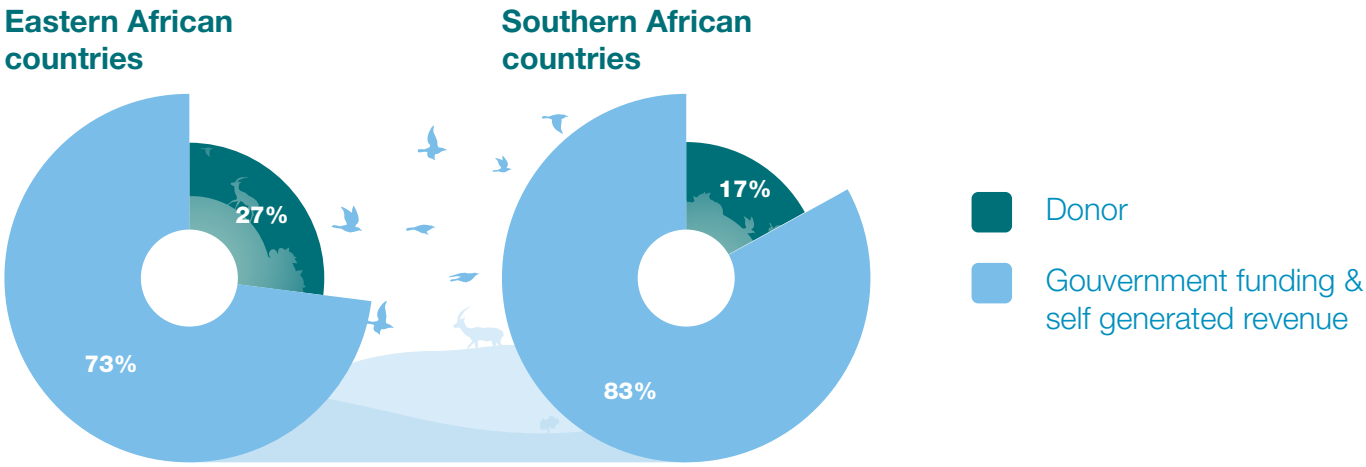


Figure7: Share of donor financing in PA funding comparing the Eastern and Southern Africa regions. Source: Computations based on: Lindsey et al.

Below are some specific examples of the dependency on donor finance for protected area management and conservation:

- **Kenya:** In 2018, most, approximately 89%, of the operating and capital expenditures of The Northern Rangelands Trust (NRT), a Kenyan organization that supports 39 community conservancies covering 4.2 million hectares, were donor supported (NRT, 2018).
- **Mauritius:** The Mauritius National Parks and Conservation Service received more than 31% (Computations based on National Park and Conservation Service, Ministry of Agro Industry and Food Security of Mauritius, 2004) of its total funding in 2014 from international and private donors, specifically to support programmes that relate to achieving the Aichi Targets.
- **Madagascar:** Madagascar's protected areas have largely been financed by international donors since the implementation of the state environmental plan in 1990. Today the PAs are still supported by international organizations such as WWF, World Bank, WCS, GEF, and others via the Madagascar Biodiversity Fund (see Case study 2)).
- **Comoros:** In 2018, donor funding constituted 93% of the operating budget of the Mohéli National Park in the Comoros (the only national park in the country, covering 372,500 ha). In addition, the donors provided 100% of funding for development programmes such as protection of terrestrial and marine diversity, development of sustainable financing, and reinforcement of biodiversity protection legal framework in the country (Directorate of Environment and Forestry, personal communication, 2020).
- **Botswana:** In 2012, external donor financing represented a significant amount of support for the Ministry of Environment, Wildlife, and Tourism of Botswana (MEWT), which manages approximately 11 million ha (UNEP-WCMC and IUCN, 2019a). While there is no complete list of the financial support amount by international partners, the Botswana National Biodiversity Strategy report estimated that external financing assistance was around USD 15 million in 2013, which amounts to 15% of the total annual MEWT expenditures (Department of Environmental Affairs, 2016). Sources of funding included World Bank, GEF, Japan International Cooperation Agency (JICA), The United Nations (Department of Environmental Affairs, 2016).

Donor funding is therefore an important part of the budget of many PAs. However, donor funding can be unpredictable, fickle and unsustainable (Fitzgerald, K.H., 2017). There are also some aspects of PA management that donors are generally not interested in funding, such as general operational expenditures as they view this as the obligation of the Government for example with state protected areas Donors differ in terms of their policies and priorities, with funding often directed toward specific projects that reflect the donor's interests and timeframe. While supporting the financial sustainability of PAs is recognised as a priority for many donors, their funds traditionally go to other areas of support such as equipment, infrastructure and capacity building.

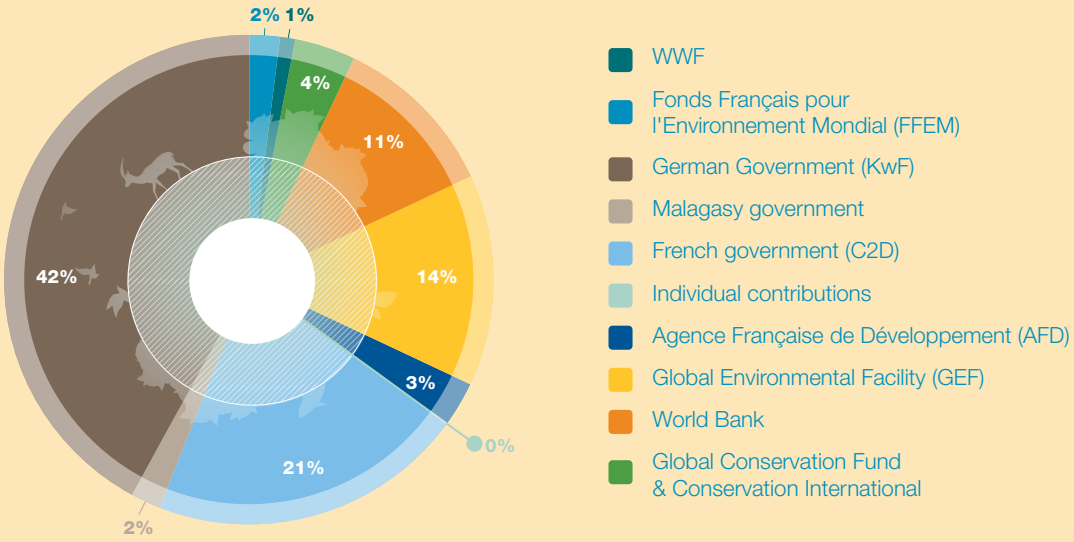
Case study 2: Role of donations in protected area management: Madagascar Biodiversity Fund.
(Adapted from: Fondation pour les Aires Protégées et la Biodiversité de Madagascar (2017))

Madagascar Biodiversity Fund

Since Madagascar implemented its National Environmental Action Plan in 1990, its PAs have mostly been funded by the international donor community. The Government share in total funding since 1990 was 2% during the first phase of the Environmental Action Plan and between 15–20 % during its second phase.

In 2003, the Government made a commitment to triple the PA network from 1.7 million hectares to cover 6 million hectares or 10% of the country's surface area in the following five years (called the "Durban vision"). Due to the associated operating costs and costs of the expansion of the PA network, it was decided that the new PAs would not be managed by the PA management agency ANGAP, now called Madagascar National Parks, but rather by other public authorities and regional offices, non-governmental organizations, community organizations, private sector organizations, or by a combination of these through collaborative management agreements.

The Madagascar Biodiversity Fund (FAPBM) was created in 2005 at the initiative of the Malagasy State, Conservation International and WWF with the objective to raise money from local and international partners to support the PA activities. In 2017, the total assets under management of the FAPBM reached almost USD 70 million, raised mainly from the German and French governments, World Bank (WB) and other international organizations.



FAPBM generates funding for the support of protected areas via two main revenue streams:

- Sinking funds (fund set aside for capital and other expenditures) from international donors; and
- Revenue from external investments: impact equity and debt investments (25% of the capital under management), bonds (40%), and shares (35%).

85% of generated revenue is disbursed to the PAs, and the remaining 15% is used to cover the operating and management costs of the fund.

Today the FAPBM supports 41 PAs by:

- funding conservation activities;
- provision of grants for income-generating activities for the benefit of the communities living around the PAs with objective to reduce the exploitation of resources within the PAs;
- developing and contributing to the compensation scheme for the local population affected by the revenue losses caused by the creation / extension of PAs;
- supporting project management and capacity building of the PAs; and
- developing self-sustainable financing mechanisms (e.g. ecotourism).

4.3 Nature-based tourism

Given its compatibility with conservation as a land-use, nature-based tourism is often the major (and in many cases the only) source of income generated by PAs. Nature-based tourism refers to tourism where the main purpose is viewing or enjoyment of the natural environment, which includes, amongst other activities, hiking, birdwatching, or wildlife drives. An analysis of the seven PA authorities in Kenya, Tanzania, South Africa, Namibia, Eswatini, Uganda and Ethiopia (totalling more than 240 PAs and 40 million hectares under management), shows that tourism generates approximately 80% of all internally generated revenue.

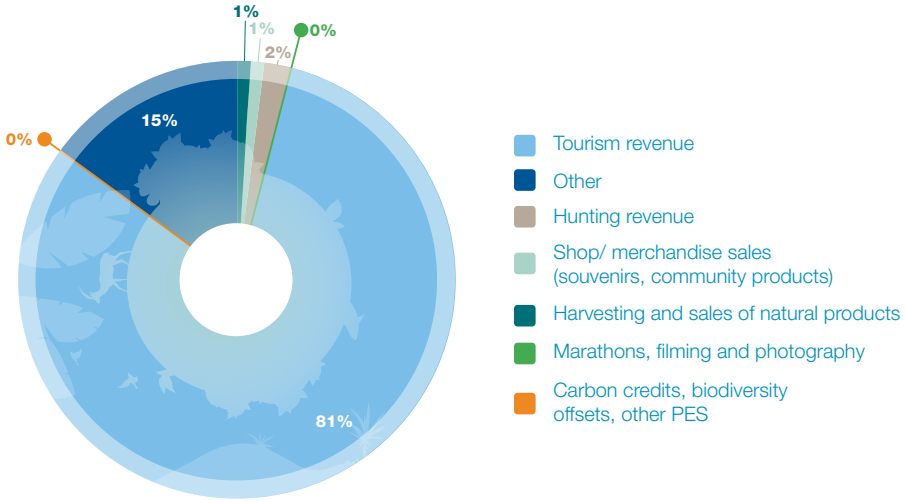


Figure 8: Breakdown of internally generated revenue in ESA region, seven countries: Kenya, Tanzania, South Africa, Namibia, Eswatini, Uganda and Ethiopia.

The main sources of revenue from nature-based tourism are user permits, entrance or daily conservation fees, accommodation revenue (where the tourism facilities are managed by the park management authority), and concession revenue (where the tourism facilities are managed by a third party).

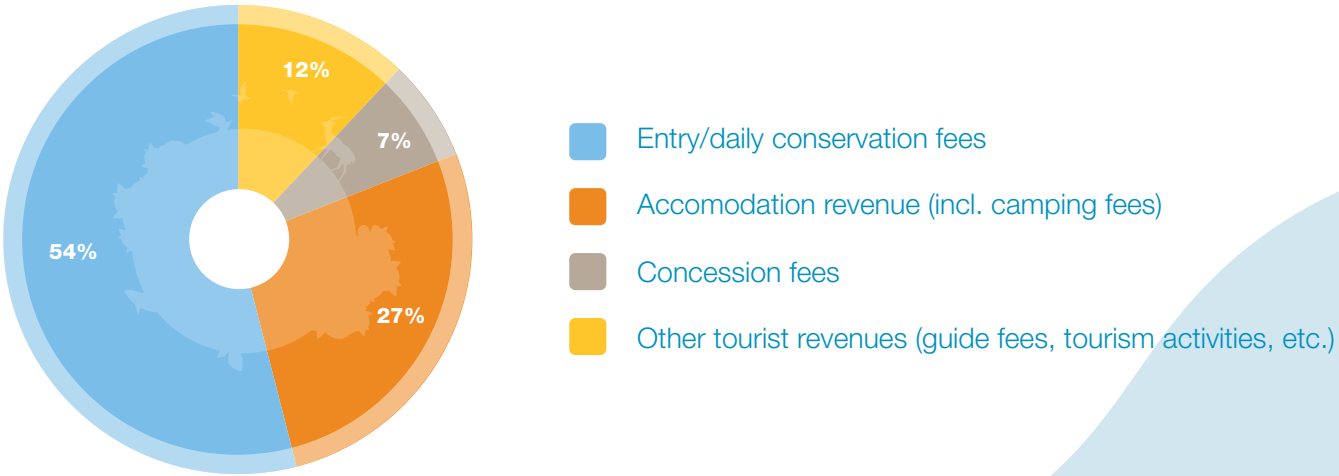


Figure 9: Tourism revenue breakdown, seven ESA countries.

Entrance fees, sometimes referred to as daily conservation fees, are particularly important as a revenue generating mechanism and often represent the largest amount of self-generated revenue (Figure 9).

For example, in 2018, 88% of the revenue generated by Uganda Wildlife Authority (UWA) came from entrance fees (UWA, 2019) and in 2015, 71% of KWS's income generation came from entrance fees (see Figure 10). In 2016, KWS' revenue from park entry fees declined to 37% as a result of the compensation received from Kenya Railways and Kenya National Highway Authority for railways and roads that traverse the national parks. In South Africa's National Park system, conservation fees and accommodation revenue combined constitute 50% of revenue in 2017/2018 (SANParks, 2018). While entrance fees do not comprise the majority of the funding generated by SANParks, it still plays an important role in revenue generation.

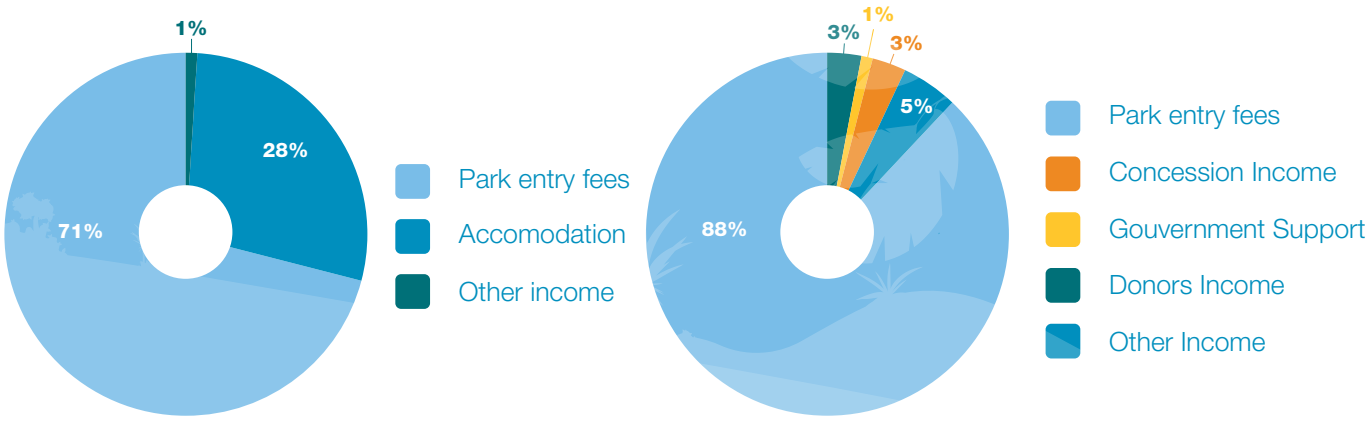


Figure 10: Revenue distribution of Kenya Wildlife Service (left) and Uganda Wildlife Authority (right). KWS and UWA annual reports and financial reports and statements.

While entrance fees will continue to provide a majority of the self-generated revenue in PAs, revenue generated from concessions in PAs can increase if they are structured properly (Conservation Capital, personal communication, 2019). A concession is the right to undertake a commercial or management operation within a PA, usually granted by a government or local community, to another party, in exchange for a fee or some form of revenue. These arrangements are often not structured optimally which reduces the amount of revenue generated for conservation and disincentivises the best tourism operators from investing. Very often, revenue from concession contracts is suboptimal due to a lack of experience within most African PA authorities in structuring best practice concession contracts (Conservation Capital, personal communication, 2019). There is therefore significant opportunity to implement best practice concessioning across ESA to maximise returns for both conservation and investors.

The tourism sector is best leveraged and park management most successful in countries with supportive policy frameworks, and where tourism is valued as important to the economy, such as Kenya, Botswana, South Africa, Tanzania, and Rwanda (see Case study 3). Many other countries in Africa are not yet optimising the economic potential of their PAs as the relevant enabling conditions to do so are not in place, such as safety and security; ease of access; a quality wildlife product; and suitable accommodation (see Chapter 6).

In addition to the direct benefits of employment and revenue, tourism also has significant ancillary benefits. These include: income generation and employment from the overall value chain linked to tourism, such as suppliers of goods and services and provision of food; sales of souvenirs and other park and community products; activities and events that generate revenue; filming fees; and lease of facilities and/or vehicles. While revenue from souvenir sales is often limited (less than 1% of total revenue at KWS and TANAPA and less than 2% at SANParks), it can nevertheless generate revenue and livelihood opportunities for local communities.

While the ESA region has significant potential for nature-based tourism (see Chapter 6), it has not yet been developed to its full potential. The reason for this varies across the region. In some countries tourism has not been optimised because of lack of enabling factors such as road access or price competitive domestic flights. In some countries, political insecurity has presented a challenge to tourism development, whereas in other countries it has just not been prioritised. Across the region an overall lack of tourism development expertise has limited the ability of many PA authorities to properly maximise tourism development (Conservation Capital, personal communication, 2019). In addition, the existing nature-based tourism sector is generally not diversified. Many PAs rely on tourism revenues that focus on a limited range of markets, species or products, leaving the PAs vulnerable to any changes or

shocks, such as political instability and insecurity which is a serious deterrent for visitors, like, for example, in Kenya where tourism earnings declined by 20% after the 2007-2008 presidential election violence (Gachenge, B., 2013).

For example, flagship species are used by many countries and PA authorities to attract tourists (elephants in Botswana, the wildebeest migration in Kenya and Tanzania, and mountain gorillas in Uganda and Rwanda). In Kenya, a visit to Masai Mara National Reserve, which hosts the seasonal wildebeest migration, is a part of the majority of wildlife tourism trips to Kenya (EA SOPA, 2017). Mountain gorilla permits in Uganda are a major source of revenue for UWA. In 2015, permits generated 45% of UWA's revenue (UWA, 2015). In Rwanda, 76% of tourists visiting the Volcanoes National Park participated in gorilla watching, accounting for USD 15.4 m or 86% of all revenues (RDB, personal communication, 2019).

While these flagship species and parks are excellent revenue generators for the respective countries, it poses a significant risk to the long-term viability of the PA system as it is reliant on these places and species. For example, if Ebola impacts a great ape population upon which a country's revenue depends, this not only impacts the species but the economics of the whole PA system. Another example is a dramatic decline of wildlife in the Masai Mara National Reserve (impala, warthog, giraffe, topi and kongoni populations declined by more than 70% over 33 years). The great wildebeest migration, that attracts tourists from all over the world, now involves 64% fewer animals than in the early 1980s (Daily Nation, 2011). The disappearance of this iconic wildlife could put the financial viability of the Reserve at a great risk and have a devastating impact on the country's overall tourism economy. Therefore, countries should prioritise the protection of wildlife and wild lands as a base for nature-based tourism. Investment must be made to ensure the sustainability of Africa's natural assets to maintain the existing nature-based industry and to attract investment in the industry. Tourism operators will want assurance that their asset is protected and that the attraction, wildlife and natural areas, will be protected.

Given the significant opportunity nature-based tourism presents for increasing revenue in the ESA region, this is addressed further in Chapter 6.

Photo: Ngorongoro crater - Christine Mentzel

Case study 3: Rwanda's robust tourism economy.
(Adapted from: Rwanda Development Board (2017))

Rwanda has a strong and growing leisure travel market, with most of its 1.4 million visitors coming from neighbouring countries (43% came from the East African Community (EAC) and 45% from other parts of Africa) (RDB, 2017), and 80,000 visitors coming from abroad (most notably Europe and India).

Business and conference tourism are becoming ever more important and generate the highest revenue share (RDB, 2017). For example, among air arrivals (excluding transit, returning residents and visit of friend and family), more than 50% of arrivals came for business and conferences; with holidays accounting for 35% (National Institute of Statistics of Rwanda, 2017).

Tourism is Rwanda's top foreign exchange earner and is mainly driven by ecotourism, which has been prioritised by the Government of Rwanda as it recognises the social and economic benefits which tourism provides. Total leisure travel revenues increased to USD 438 million in 2017 from USD 390 million in 2016 and represent 14% of the Gross Domestic Product (GDP) (KNOEMA, 2018).

Tourism in Rwanda supports 98,000 direct employees (or 5% of total off-farm jobs), with total (direct and indirect) employment of 250,000 (14% of all off-farm jobs, (RDB, personal communication, 2019). Visitation to National Parks has increased by 54% since 2012 from 61,000 to almost 94,000 visits in 2017 (RDB, personal communication, 2019). The increase has resulted in a significant increase in revenues – USD 18.6 M in 2017, an increase of almost 50% from 2012 (RDB, personal communication, 2019).

The majority of Rwanda's ecotourism income is generated through gorilla trekking permits, which currently cost USD 1,500 per permit. Rwanda also has the highest community revenue share model in Africa, providing 10% of all park revenue to communities and an additional 5% to a HWC fund for communities. Given the over-reliance on mountain gorilla revenue, which generated USD 18.3 million in 2017 (RDB, 2017), Rwanda has started to broaden and diversify its nature-based tourism through developing and attracting investments into its other protected areas, such as Akagera National Park in the eastern part of the country, which offers a different tourism product, a savannah landscape. By diversifying the product, the Government aims to keep people in-country longer, thereby increasing revenue generation (RDB, personal communication, 2019). Akagera National Park is co-managed with African Parks, a non-profit organization headquartered in South Africa (See Chapter 7.5 on co-management).

4.4 Utilisation

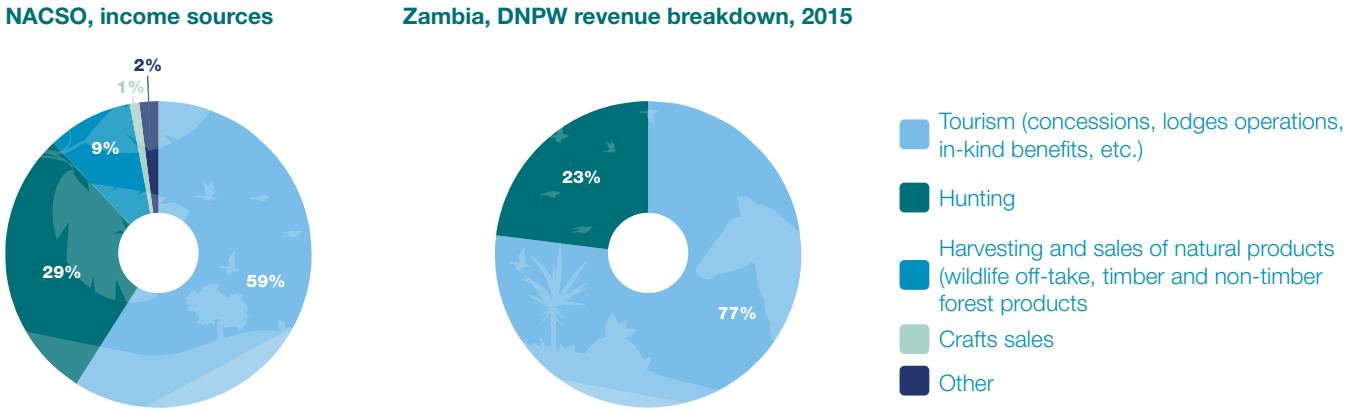
While nature-based tourism has significant potential in ESA's PAs, not all areas can generate revenue through tourism (especially areas that are remote, inhospitable, located in conflict zones, and/or do not have developed infrastructure to support the tourism industry). In Tanzania, for example, where the tourism industry generates 12% of GDP (World Travel and Tourism Council (WTTC), 2019), most revenue is from the Northern Tanzania safari circuit (Serengeti NP, Ngorongoro Crater and Tarangire NP), despite the southern circuit hosting some of the most extraordinary parks and wildlife. The southern circuit is expensive to access, takes longer to reach – a flight from Dar Es Salaam to Ruaha is three hours – and the region is less known to tourists.

For those areas not well suited for tourism, sustainable utilization of wildlife can provide a revenue opportunity for local communities and conservation management. Utilization, if well managed and designed properly, can also be used in combination with photographic tourism. There are examples of both private (Taylor, A., Lindsey, P., and Davies-Mostert, H., 2016). and public (Eastern Cape Parks and Tourism Agency, personal communication, 2019), protected areas in Southern Africa that utilise wildlife on an annual basis, raising finance through the sale of hunts, live sales of wildlife or culling for meat and skins, often alongside nature-based tourism.

While there is a global debate about the role of trophy hunting, questions about where revenue is directed, concerns about unsustainable offtakes and the impact on wildlife, if designed properly, hunting can play an important role in generating revenue for conservation and keeping wildlife areas open for conservation management. However, this requires a good understanding of wildlife numbers, establishing quotas based on sound data, using best practices for hunting, having transparency on wildlife and permit numbers, and establishing a solid framework for benefit sharing.

In Zambia, approximately a quarter of DNPW's revenue is generated through hunting (DNPW, 2019). This number was higher (c. 50%) 10 years ago, which is likely due to a decline in wildlife numbers, a temporary ban placed by the President

on hunting large cats due to a decline in numbers, and global limitations on trophy imports. Similarly, 29% of revenue from 84 conservancies in Namibia, covering approximately 16 million hectares, 20% of Namibia, came from hunting in 2017. Hunting in Namibian conservancies varies significantly from one conservancy to another. For example, the hunting revenue of four different conservancies (Torra, Kasika, Nyae, and Muduva Nyangana) range between 10 to 75% of total income (NACSO, 2017).



igure 11: Hunting revenue from community conservancies in Namibia and state protected areas in Zambia. Adapted from: NACSO (2017).

There is also significant scope for the development of commercial wildlife ranching in ESA given the availability of land, low potential for livestock or agriculture in some areas and high diversity of wildlife. Ranching, if designed properly, can support conservation efforts, avoid land conversion and provide protein and economic benefits to a growing population. Furthermore, the size of the illegal bushmeat trade (Nasi, R., Taber, A., Van Vliet, N., 2011) indicates the significant demand for bushmeat and the potential size of a legal market. Effective wildlife ranching has the potential to restock many of the understocked or depleted PAs.

Wildlife ranching as an industry is most developed in Southern Africa and in particular South Africa (see Case study 4), Namibia and Zimbabwe. It is an economically attractive land use option and has the ability to be viable in areas with low rainfall and/or the occurrence of certain diseases. However, lack of ownership over wildlife resources as well as a lack of clear government policy in many ESA countries are a significant barrier to the investment in and development of wildlife-based commercial opportunities such as ranching. While wildlife ranching has significant conservation and socio-economic potential, care should be taken to ensure that sustainable, conservation-based ranching is encouraged through effective policy frameworks and regulation.

Photo: Interviewing local communities in Malawi, Sue Snyman

Case study 4: The Wildlife Ranching Industry in South Africa.
(Adapted from: Endangered Wildlife Trust (EWT))

Wildlife ranching is conducted on a large scale in South Africa across an area 2.2 times greater than the state PA network of the country. The majority of these ranches have been converted from livestock farms after it became more economically viable to keep and use wildlife for commercial purposes. Decentralizing wildlife rights and ownership has been critical to the success of the industry. Major benefits of wildlife ranching include:

- **Diversification:** Wildlife ranching typically covers four main subsectors, including live game sales, hunting, game meat production and ecotourism. Most ranchers conduct more than one land use practice to diversify and make their operations more profitable. This can be done properly by zoning a conservation area for the different uses.
- **Economic impact**: In 2014, live game sales generated c. ZAR 4.3 billion (USD 300 million), hunting generated c. ZAR 2.6 billion (USD 180 million) and game meat production generated c. ZAR 610 million (USD 43 million) in South Africa alone. No formal assessment has been conducted on the income associated with ecotourism on wildlife ranches, but it is considered significant.
- **Social impact:** Wildlife ranching supported 65,170 direct, permanent jobs during 2014 and c. 21 million kilograms of meat was produced during 2014, providing a source of protein to the public at large. This figure excludes meat for personal use by hunters.

Chapter 4: Key messages

Most PAs in ESA have traditionally been funded through a combination of donor finance, self-generated revenue and government support (in the case of state and some community protected areas).

- Government funding: All PA agencies in ESA receive some form of national government level support. However, this support is facing downward pressure in the face of other developmental needs. Many PAs need to remit their internally generated revenue to central Treasury, receiving less than what they generated, which can erode long term sustainability and erode motivation to generate more funds.
- Donor funding: Donor support remains a significant source of funding for conservation. Some estimates suggest that donor support provides more than 50% of the finance of PAs in ESA (although this differs from country to country). Donor funding is especially relevant to support specific conservation projects, such as the development of infrastructure, management plans or specific species. While donor funding has and continues to play an important role in PA management, it is unpredictable and not necessarily sustainable.
- Self-generated revenue: While donor finance and government support are important sources of finance for PAs, it is unlikely that these will increase in the near term to meet the funding gap. Self-generated revenue will likely therefore become increasingly critical for the long-term financial sustainability of PAs. PAs in ESA have significant potential for revenue generation through the further development and diversification of sustainable nature-based tourism. Wildlife utilisation, where appropriate and if structured correctly, can also be a significant revenue earner for conservation. Wildlife ranching in particular presents a conservation-compatible land use option that can generate revenue for conservation while contributing to broader social issues such as food security. It does however require an enabling policy environment and effective regulation for successful development.

Chapter 4: Recommendations

1. **Developing business plans:** Funding and technical support should be provided to PA authorities to develop professional and practical business plans (referenced in Chapter 4 Recommendations). Business plans should be developed and executed for individual PAs and nested under an agency business plan. These business plans must focus on maximizing and diversifying revenue and propose adequate conservation management goals and activities to increase financial sustainability at an area level. The collection and flow of money must be part of the business plan, this includes reviewing the current fee structures of concessions to ensure that these are maximised, implementing more efficient revenue collections processes and procedures, and enabling PAs and PA authorities to retain and reinvest adequate revenue at PA level in order to maximise long term economic and ecological returns.
2. **Developing and applying portfolio theory:** Where applicable, mixed-use revenue generation approaches must be sought to maximise revenue and reduce risk. Examples of such market-based revenue sources include tourism, carbon offsets, payment for ecosystem services, and biodiversity offsets. Reliance on one form of revenue is risky.
3. **Building an enabling policy and legislative environment:** Enabling policy and legislation should be developed that support the managers, owners and communities of PAs to maximise internally generated revenue. For example, in the 1990s the Namibian government gave the ownership of wildlife to the people and encouraged community-based wildlife management to the benefit of communities and conservation. This has since resulted in the development of conservancies across the country and enabled communities to generate significant economic value from wildlife and conservation.
4. **Securing and stabilising base public funding platforms:** Governments should continue to provide financial support to their PA estates. Mechanisms should be developed to ensure a fixed amount is provided annually, which is adequate and predictable, providing the PA authorities with the ability to plan properly. In the long-term the amount allocated by the Government could be based on the natural capital value.

Recommendations specific to nature based tourism are covered in Chapter 6.

Photo: Serengeti National Park - Christine Mentzel

5 | Maximising self-generated revenue through nature-based tourism

Photo: Victoria Falls National Park - Christine Mentzel

The significant current and potential value of nature-based tourism in the ESA is described in Chapter 5.3. While nature-based tourism is not suitable in all areas of the region, it does represent one of the most substantial opportunities to further develop and maximise self-generated revenue streams for conservation and benefits for communities (through employment, fees (where applicable), and enterprise opportunities along the tourism value chain).

This chapter is not meant to be a 'how to' guide to developing nature-based tourism in ESA. There are a number of toolkits available to support governments in developing suitable and sustainable tourism development. Some of these are referenced in the Literature Overview in Chapter 13. This chapter highlights the opportunity and presents some case studies that illustrate success within the ESA region.

5.1 The nature-based tourism market

Nature-based tourism already generates billions of dollars in revenue across ESA. Travel and tourism spending contributed directly and indirectly to 8.9% of GDP in ESA, equivalent to around USD 78 billion (computation based on WTTC, 2018). The contribution of tourism to each countries' GDP is depicted in Figure 12 below. In addition, a 2017 European Commission study (European Commission, 2017) estimated that PAs across Africa attract about 69 million recreational visitors annually, while its been estimated that 80% of tourists buying holidays to Africa come for wildlife-watching (World Tourism Organisation, 2014). Africa already represents about half of all wildlife watching tourism trips booked worldwide (World Tourism Organisation, 2014).

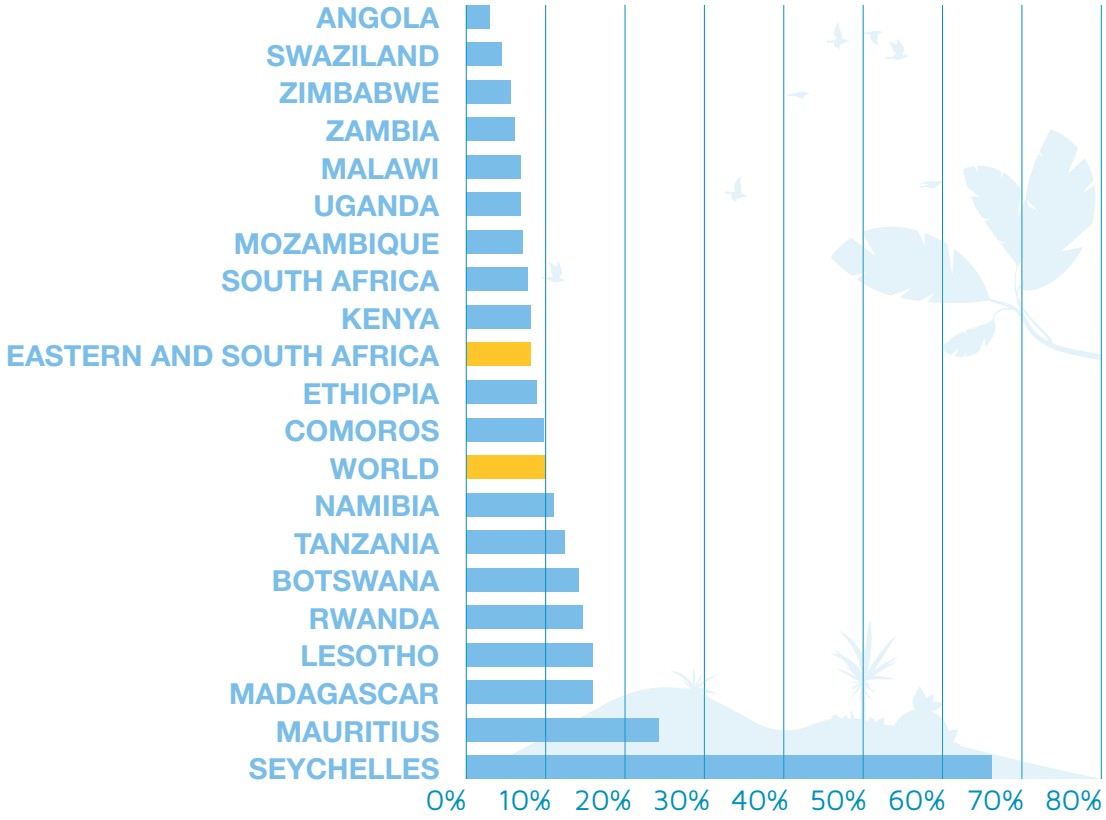


Figure 12: Contribution of travel and tourism to Gross Domestic Product, in % of country Gross Domestic Product. Adapted from: World Travel & Tourism Council (WTTC), 'Country reports', (2018

Nature-based tourism was estimated to be growing at 10% to 12% per annum in 2004 (The International Ecotourism Society (TIES), 2004) globally and at "about 10%" in 2015 (World Tourism Organisation, 2014). Growth data for nature-based tourism in each country is lacking, but growth rates for tourism spending as a whole can arguably serve as a proxy. For instance, in 2018, travel and tourism GDP grew by 5% across the region (11% excluding South Africa, where tourism spending dropped by 2%) (WTTC, 2018).

The contribution of tourism to GDP in countries throughout ESA varies significantly. Just four countries account for two-thirds of total leisure tourism expenditures in the region: South Africa, Ethiopia, Kenya and Tanzania–presenting an opportunity to develop tourism in those that currently attract less spending. (Figure 13). There is opportunity to expand and build upon existing tourism in countries that already support a strong industry and in countries with limited to no tourism, there is significant potential to develop tourism assuming the right enabling conditions are in place.

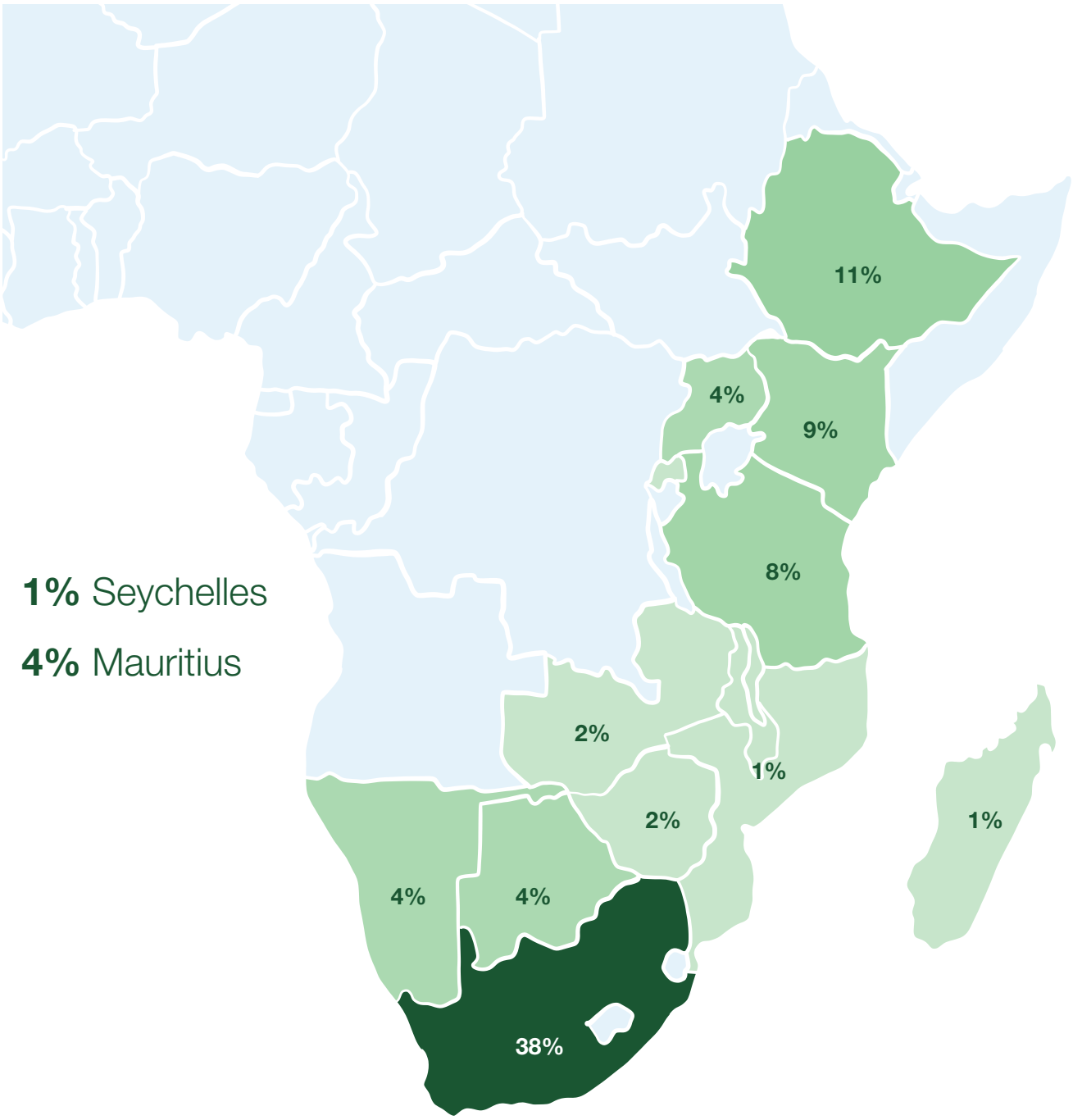


Figure 13: Breakdown of leisure tourism expenditures by country (in % of the region total). Adapted from: World Travel & Tourism Council, 'Country reports', (2018

5.2 The benefits of nature-based tourism

Nature-based tourism can generate sustainable benefits for conservation, if funds generated are reinvested in conservation management, (most notably through entrance fees, accommodation and activity revenue and concessions) and for local communities living in or around PAs. Over the long term, tourism often proves to be a more sustainable development strategy than other land uses such as logging, grazing, mining, or agriculture. This is due to fact that tourism is less extractive than these other industries and incentivises long term protection as opposed to exploitation, increasing its long-term benefits and value. However, if tourism is not designed or managed properly, there can be severe negative impacts such as too many vehicles in ecologically sensitive areas and crowding around wildlife endangering certain species, and lodge development in unsuitable areas such as in close proximity to rivers causing erosion and siltation, litter, pollution and habitat destruction. In addition, compared to the same investment in agriculture, tourism provides 40% more formal full-time employment and creates twice as many jobs as the automotive, telecommunications and financial industries (Conservation Capital et al., 2019). Tourism also employs more women than most other sectors: in Sub-Saharan Africa, 31% of tourism jobs are held by women compared to 20% of general employment (Conservation Capital et al., 2019).

Nature-based tourism therefore has the ability to drive rural economic development in a sustainable manner in poor and remote areas where other economic opportunities are limited. A strong and resilient rural nature-based economy has the ability, if designed, structured and managed properly, to not only uplift local communities, but also to contribute to the social and political relevance of nature.

Nature-based tourism can also provide an economic opportunity and strong incentive for the development of community conservancies. Community conservancies have significantly increased the land under conservation throughout ESA, engaging communities directly and incentivising conservation outcomes. In Kenya, for example, there are over 160 conservancies, protecting approximately 6.5 million hectares (Kenya Wildlife Conservancies Association (KWCA), 2020). There are approximately 86 conservancies in Namibia, covering 166,045 km^2 and involving approximately nine percent of the Namibian population (NASCO, 2020).

Tourism development in community conservancies presents a growth opportunity in the region, which directly benefits local communities through employment, revenue, security and capacity development, diversifies the tourism experience by providing different experiences and complements state protected areas ecologically. Tourism in community areas is often best developed through a properly designed partnership with an experienced professional third-party tourism operator with the adequate capacity and experience. Case studies 5 and 6 provide examples of the benefits of tourism development in community conservancies in Namibia and Kenya.

Photo: Elephants - free domain

Case study 5: Communal conservancies in Namibia.
(Adapted from: Namibian Ministry of Environment and Tourism [website], (2020))

Communal conservancies in Namibia

In 1998 the concept of communal conservancies was introduced in Namibia by the Ministry of Environment and Tourism (MET), as a model for economic survival and growth in challenging rural settings.

Communal conservancies are managed under committees elected by their members, with fixed boundaries that are agreed with neighbouring conservancies, communities or landowners. They must conduct annual general meetings, prepare financial reports and have wildlife management plans. The management plans enable different land uses within the conservancy area, such as livestock grazing, agriculture and hunting. All of this is guided by zonation of the area, which rationalises the different land uses. Because of the latter, they are allowed to hunt.

Hunting on conservancy land is governed by quotas, set by the MET, and falls into two areas: trophy hunting, which brings income to pay for conservation operations, which might include game guards and anti-poaching activities, and meat harvesting, which provides a valuable dietary supplement.

For conservancies with tourism potential, the right to establish tourism enterprises was realised through partnerships with the private sector. As wildlife numbers grew and were sustained by conservation measures, lodges found a sure footing in some conservancies, bringing revenue and generating local employment.

Initially, in 1998, four communal conservancies were gazetted by MET. As of 2019 there are 86 of them, covering 19.6% of the country (slightly more than half the total protected area in the country).

Within those, there are 42 joint venture lodges in Namibian conservancies (joint ventures are business arrangements in which two or more parties agree to pool their resources for the purpose of accomplishing a specific task, such as in this case operating a lodge (Hargrave, M., 2020)). In some of them, tourism is becoming the key source of income, complementing trophy hunting. The two activities are strictly separated by zoning conservancies into different land use areas, including agriculture.

However, not all conservancies have the potential to earn strong incomes from trophy hunting or tourism. Many are on marginal land with little wildlife, but with a strong conservation value to Namibia.

Case study 6: Il Ngwesi conservancy, Kenya.
(Adapted from: Il Ngwesi Conservancy (2019))

Il Ngwesi Conservancy, Kenya

Situated at the eastern border of Laikipia County in central Kenya and north of the Borana and Lewa wildlife conservancies, Il Ngwesi conservancy encompasses 16,500 hectares and is home to the Il Laikipia Maasai ('people of wildlife').

Following an approach by Lewa Wildlife Conservancy in the mid 1990s, community elders of Il Ngwesi decided to set aside 8,675 ha of their grazing land for conservation. In 1996, Il Ngwesi Eco-Lodge was built, with funding from USAID through the Kenya Wildlife Service. Eighty community members worked to build the lodge and 10 were trained to run the lodge and host tourists. A team of rangers (now totalling 16) was also trained at Lewa to oversee security and monitor and protect people and wildlife.

Constructed entirely out of local materials, the lodge is owned and run by the Maasai community, offering visitors a full wildlife and cultural experience. The product is also exclusive as there are currently no other tourist facilities in the conservancy.

Profits from the lodge, donations and partnerships with local and international NGOs all support a range of community projects while at the same time ensuring that the environment is managed sustainably. The model encourages communities to value wildlife. As a result, wildlife numbers steadily increased. More elephants were evident almost immediately, and within five years, numbers had grown significantly. Lion, white rhino, leopard, cheetah, hyena and jackal are now roaming the conservancy.

Engaging local communities in conservation and tourism can also significantly contribute to local sustainable development. One innovative example is Sabyinyo Silverback Lodge, the first community-owned luxury lodge in Rwanda (see Case study 7).

Case study 7: Sabyinyo Silverback Lodge in Rwanda.
(Adapted from: Governors' Camp Collection (2019). 'Sabyinyo Silverback Lodge', [website])

Sabyinyo Silverback Lodge, Rwanda

Sabyinyo Silverback Lodge was the first community-owned luxury lodge in Rwanda. Located on the edge of Volcanoes National Park, Sabinyo was constructed through a partnership facilitated by the AWF, the International Gorilla Conservation Programme, Conservation Capital, the SOCOLA community and the government department then in charge of conservation, ORTPN, now the RDB. Capital was raised on behalf of the community from USAID and other investors, including the management partner Governor's Camp, a leading tourism company headquartered in Kenya. Debt finance was also utilised and paid back within a three-year period.

The tourism product is based on gorilla tourism. Sabinyo celebrated its 10-year anniversary in 2018. The lodge has generated USD 3.2 million to the SOCOLA community and the community has used these resources for education, community development, social infrastructure, micro-finance and other social needs.

In addition to the direct financial benefits, the lodge employs members of the SOCOLA community and spin-off enterprises such as the professional cultural dancing also employs community members. Sabinyo has demonstrated that if structured properly and if governance within the community is transparent and equitable, tourism can improve the lives of communities living with wildlife. The structure of the agreement between community members and private sector operators is vital to ensuring revenue goes to local communities.

Today, the SOCOLA community are ambassadors for gorilla conservation and advocates for Volcanoes National Park. Other lodges with similar models include: Satao Elerai, Kenya; Clouds Mountain Lodge, Uganda; Ngoma, Botswana; and the Sanctuary at Ol Lentille, Kenya.

5.3 Opportunities for further development of nature-based tourism in ESA

The ESA region has a wide range of natural values and assets important for successful nature-based tourism development: iconic and endemic wildlife, mountains, rivers, waterfalls, forests, endemic bird populations, beaches and coral reefs. ESA also has more land protected as a percentage of land surface (17%) than many other major nature-tourism destinations such as for example the USA (13%) (UNEP-WCMC and IUCN, Protected Planet, 2019a). In addition, many countries in ESA have some or all of the enabling conditions necessary for successful tourism development, including enabling policy, suitable accommodation, ease of access and entry, security and safety and stability.

In addition, the ESA region has very successful private sector tourism developers and operators that specialise in nature-based tourism. Through well designed agreements, the experience of these operators can be brought to bear to successfully develop tourism enterprises in PAs, thereby contributing to and maximising internally generated revenue.

Major opportunities for further development of nature-based tourism and the maximisation of related revenue in ESA include targeting various source markets. A blending of the different source markets is the most optimal for a country as it helps create stability and resiliency in the

tourism industry. Incidences such as volatile elections may deter traditional markets, but not necessarily domestic markets. Countries should assess market demands, products suitable for each market, and access and determine how these markets overlap or conflict to ensure proper planning of suitable tourism experiences for each market.

- **Traditional source markets:** Nature-based tourism in ESA has historically been built around source markets in Europe, North America and Australasia/Japan, with a strong emphasis on viewing wildlife, particularly iconic African mammals. Whilst these markets still account for the most significant share of tourism in most countries across the region, ESA as a tourism destination still accounts for a small share of the global market. Clear opportunities exist for countries across the region to increase their market share in traditional source markets while exploring new market opportunities.
- **New international source markets:** New markets in Asia, for example, are increasingly important and account for an expanding share of leisure tourism in some ESA countries, with a large proportion choosing to visit to experience nature (Conservation Capital et al., 2019). For example, Case study 8 outlines the growth potential from tourists visiting Africa from China.

Case study 8: Chinese tourism in Eastern and Southern Africa.
(Adapted from: Dragon Trail Interactive (2019). 'CTA: Annual Report on China Outbound Tourism Development 2019'.)

Chinese Tourism in the ESA Region

In 2017, there were 130 million Chinese tourists globally, spending a total of USD 258 billion (Dragon Trail Interactive, 2019). While Europe welcomed more than 12.4 million of them, Africa received only about 800,000 tourists from China. Within the continent, countries with the largest number of Chinese tourists were Egypt, Kenya, Morocco, Tunisia, South Africa, Mauritius and Zimbabwe.

Kenya in particular welcomed 60,000 Chinese tourists the same year, and 82,000 in 2018 (+38%), the year when the Kenya Tourism Board unveiled a video campaign targeting the Chinese outbound tourists. The video sought to create awareness of Kenya's tourism products and was hosted on Chinese popular social media sites WeChat, Weibo and Youku (New China, 2019).

As Chinese citizens have increasingly become aware of the continent's offerings, in part due to the Forum on China-Africa Cooperation, other countries in ESA are targeting the Chinese tourism market as well.

In May 2019, Uganda launched a training campaign on how tour operators can attract Chinese tourists (Nakaweesi, D., 2019).

In 2019, South Africa announced that it had signed an agreement with China for 10-year multiple entry visas that will pave the way for an e-visa system.

The same year, the Tanzania Tourist Board signed an agreement with Chinese Touchroad International Holdings Group to market the country in China.

In addition, in 2019, Zimbabwe has joined the China Ready Training Program (a certification program of c. 50 countries that aims at guaranteeing memorable experiences for Chinese visitors and tourists) in order to boost tourist arrivals from China.

While it is difficult to measure the number of Chinese nature tourists in ESA, feedback from local tour operators and travel agencies suggest that the typical Chinese tourist in the region seeks a mix of wildlife, luxury and adventure. According to the Kenya Tourism Board, the majority of Chinese tourists visit Kenya between July and September to see the wildebeest migration. In the Masai Mara National Reserve, there were more Chinese tourists than any other nationality during the wildebeest migration in 2013. (Sayagie, G., 2013)

The growth in Chinese visitors for nature-based tourism presents a significant opportunity, if structured properly, to increase revenue for PAs by tapping into this new source market. Those countries that position their natural values and PAs to attract Chinese visitors will likely increase visitor numbers significantly over the coming years, resulting in more self-generated revenue for the ESA protected areas.

- **Domestic markets:** Nature-based tourism in ESA has historically targeted international visitors and in particular visitors from outside Africa. Factors such as increased wealth and mobility among a growing African middle class as well as a growing pan-African consciousness and an interest in regional travel are however driving significant growth in domestic tourism which now accounts for 49% of total travel and tourism spending in the region (WTTC, 2018). This presents a significant opportunity to develop new and innovative tourism products and to inspire and educate Africans about their own natural and cultural heritage. This could have significant consequences not only for conservation engagement but broader society, increasing the social and therefore political relevance of PAs. There is therefore a need and a significant opportunity to diversify nature-based tourism by creating new products that appeal to a more diverse audience.

Case study 9: How to support a domestic nature-based tourism: lessons from South Africa.
(Source: Republic of South Africa – Ministry of Tourism (2012)' Domestic Tourism Growth Strategy 2012-2020'.)

Domestic nature-based tourism: lessons from South Africa

In 2011, research undertaken by South African Tourism showed that most South African nationals have not had an opportunity to travel in South Africa.

A number of reasons were indicated in that survey, ranging from, "cannot afford to travel (32%), no reason to take a trip (20%), time constraints (17%), no income/unemployment (11%), and dislike travelling (10%)."

Conscious that there was a lack of a travel culture amongst South Africans (especially amongst the previously disadvantaged communities as a result of limited marketing and information provision to all segments of the population), the Ministry of Tourism released a domestic tourism strategy covering the 2012-2020 period (Republic of South Africa—Ministry of Tourism, 2012).

The main objective of the domestic tourism strategy is to increase domestic tourism volume (from 30 million overnight trips in 2009 to 54 million in 2020) and revenue (from a total tourism contribution to GDP of 55% in 2009 to 60% in 2020).

It is likely that these targets will not be reached. In 2017, the number of domestic trips had declined to 17 million (Republic of South Africa—Department of Tourism, no date) (due to unfavourable economic conditions) and the contribution of domestic tourism to overall tourism GDP in 2018 was 56% (WTTC, 2019).

One of the two major obstacles to the rise in domestic tourism (failing to see a reason to take a trip) had remained constant, with 20.5% of South Africans still mentioning they had no reason to travel in 2018 (African News Agency, 2019).

Against that backdrop, the strong growth in domestic nature-based tourism in the country is impressive. The number of domestic black visitors to South African National Parks rose from 389,624 in 2012 to 572,734 in 2018, a 47% increase, just 2% less than the growth in the total number of visitors (even as the South African Rand almost halved against the US dollar) (computation based on SANParks, 2018).

Continued emphasis on marketing and promoting national parks to domestic and in particular black markets explain that success. For example, as part of the annual South African National Parks Week, entrance to the parks is free for a week in September for South Africans. The objective of the week is to cultivate a culture of pride in all South Africans in their relationship with the country's natural, cultural and historical heritage.

Chapter 5: Key messages

There is significant potential to develop and diversify self-generated revenue streams from PAs in ESA that can support conservation and socio-economic development. Nature-based tourism in particular presents a significant opportunity for various reasons, including:

- **Growth markets:** The global nature-based tourism industry is experiencing significant growth. ESA has the natural values, assets and often the enabling conditions, in many countries, to develop nature-based tourism products and services for this growing market. Tourism already plays a very important role in the region's economy and is especially reliant on intact natural areas and wildlife;
- **Wider socio-economic strategic potential:** The development of nature-based tourism does not only generate finance for conservation but can (and should where feasible) also contribute to socio-economic development through employment opportunities–especially in poor, marginalised local communities–and enterprise development opportunities along the tourism value chain. Creative arrangements, such as community-owned but privately operated tourism lodges, can also create important incentives for conservation; and
- **Significant unfulfilled opportunity:** There are various untapped opportunities for the further development and diversification of tourism products in ESA that serve different markets (including a growing domestic market). A blend of diverse markets is optimal for countries to reduce risk and maximise financial returns. Opportunities to develop tourism in PAs are often best served through lease or concession agreements with specialist private tourism operators. These operators have significant private sector experience, knowledge of tourism products, access to markets, and available capital, all of which increases the likelihood of success of the various tourism enterprise opportunities. The lease agreement must be well structured to benefit both parties and the tender and concession process transparent and consistent to attract the best operators and to ensure that revenues for the PA is maximised.

Chapter 5: Recommendations

1. **Disciplined application of proven nature-based tourism development processes:** Nature-based tourism should be strategically developed to its full potential in PAs across the region. This requires proper planning, zonation and market analysis to increase the likelihood of maximum economic impact and to ensure sustainability. A sequential process is described in some of the toolkits that have been developed to guide such development (see Chapter 13 for references to toolkits). This process must be supported by the relevant government and should be guided by professional tourism experts.
2. **Supported by targeted technical and financial support:** Technical and financial support should be provided to PA authorities to develop professional tourism plans that guide sustainable development in a way that drives revenue back to PA authorities for proper management and community development. A professionally developed tourism plan is critical to the long-term success of tourism in ESA. Plans should be developed at four levels: protected area; PA Authority; country; and regional.
3. **Proactive exploration of diversification potential:** Opportunities must be sought to diversify revenue streams through complementing tourism products that serve different markets, thereby reducing overreliance and risk while optimizing revenue generation.
4. **Decentralisation of stewardship rights and responsibilities:** Policies should support decentralization of natural resources. This enables communities living with wildlife to engage directly in natural resource management and associated benefits; thereby, incentivising conservation.
5. **Technical support for local communities:** Technical support should be provided to communities to facilitate the brokering of tourism concessions to ensure the appropriate structure is adopted to benefit the community and the private sector partner.

6 | Emerging sources of finance for protected areas

Photo: Victoria Falls National Parl - free domain

This chapter provides an overview of more innovative sources of finances for PAs, as opposed to traditional ways of revenue generation discussed in the previous chapters (see Chapter 5 and 6). Although these financing mechanisms have existed for the last two decades, they have not been widely considered and implemented at scale. This is due to a number of factors, including a lack of capacity and technical expertise within the relevant PA agencies to design, develop and execute these models. In some countries, policies are not in place to support the development of financing models. This chapter provides a list alternative financing mechanism with the focus on their implementation in ESA region, while the Annex section of this report provides more insights into advantages, challenges as well as necessary enabling conditions for their successful implementation.

6.1 Conservation Trust Funds

Conservation Trust Funds (CTFs), sometimes called environmental funds, are defined as "private, legally independent grant-making institutions that provide sustainable financing for biodiversity conservation and often finance part of the long-term management costs of a country's protected area system (Spergel, B. & Taïeb, B., 2008). or a specific PA." There are close to 100 CTFs across c. 60 countries globally (whether in operation or development), which manage USD 1.1 billion in combined invested assets (Mathias, K. & Victurine. R., 2018).

CTFs are financing mechanisms, not implementing agencies, where donors, national governments and the private sector commit to fund biodiversity through grants to NGOs, community based-organizations and governmental agencies (e.g. national parks agencies).

In practice, many CTFs are hybrids, serving as umbrella funds to manage separate fund accounts for different purposes under a single legal and institutional structure. These can be:

- **Grants funds:** which channel resources to target groups (NGOs, protected area authorities or CBOs) for a broad range of conservation projects, not limited to PAs;
- **Green funds:** which primarily finance activities related to biodiversity conservation (often green funds are grant funds);
- **Brown funds:** which are funded by pollution charges and fines, finance pollution control or waste treatment and often allocate a small proportion of their grants for biodiversity conservation and PAs; and
- **Parks funds:** which finance the management costs and sometimes also the establishment costs of specific PAs, or of a country's entire PA system.

The structure of CTFs can be any of the following (or a combination of):

- **Endowment fund:** capital is invested in perpetuity and only the resulting investment income is used to finance grants and activities;
- **Sinking fund:** the principal and investment income are disbursed over a relatively long period (10 to 20 years typically) until they "sink" to zero; and
- **Revolving fund:** a fund is replenished or augmented on a continuous basis, for example through earmarked taxes, fees, payment for ecosystem services, or a biodiversity offset fund.

Many CTFs begin by managing one single endowment or sinking fund and then diversify their programmes and their funding mechanisms (EA SOPA, 2017). Often, this involves the creation of additional funds dedicated to conservation interventions that are distinct from the CTF's initial activities. As CTFs evolve into multi-fund entities, they may manage a combination of endowments, sinking funds, or revolving funds.

CTFs in Eastern and Southern Africa

Most CTFs in the ESA region were initially created in Anglophone Africa and covered specific PAs as opposed to entire PA systems. A recent trend has been a shift towards financing an entire PA system and creation of more CTFs in Francophone Africa as well.

There are at least 14 CTFs in Southern and Eastern Africa (see Table 4).

Photo: free domain

Table 4: CTFs in Eastern and Southern Africa Areas. Source:: Mathias, K. & Victurine. R., 2018; Consortium of African Funds for the Environment, 2018.

Country	Conservation Trust Fund	Note
Botswana	Forest Conservation Botswana	Created in 2006 with support of USAID, the Botswana government, and several NGOs.
	61	242,738
Madagascar	Fondation pour les Aires Protégées et la Biodiversité de Madagascar	Created in 2005 with support from Kreditanstalt für Wiederaufbau (KfW), World Bank, GEF and Agence Française de Développment (AFD).
	Fondation Tany Meva	Created in 1996 and significantly contributed to the expansion of the protected area system in Madagascar.
Malawi	20	115,935
	Malawi Environmental Endowment Trust	Created in 1999 and initially capitalised with USD 4.5 million from USAID.
	Mulanje Mountain Conservation Trust	Created in 2004 and funded by the World Bank (c. USD 3million), aims at providing long-term support for biodiversity research and conservation of biological diversity and sustainable utilization of natural resources of the Mulanje Mountain Forest Reserve.
Mozambique	Fundação para a Conservação da Biodiversidade (Biofund)	Created in 2011 and funded by the Global Conservation Fund, Conservation International, AFD, KfW, WWF and GEF via UNDP.
Namibia	Community Conservation Fund of Namibia	Background work has been undertaken to initiate the fund, which will be operational in 3 years.
Seychelles	Seychelles Islands Foundation	Created in 1979, manages and protects the UNESCO World Heritage Sites of Aldabra Atoll and the Vallée de Mai.
South Africa	Table Mountain Fund	Created in 1998 with support from WWF and the World Bank, has invested more than USD 5 million in 300 projects to date.
Tanzania	Eastern Arc Mountains Conservation Endowment Fund	Created in 2001 with initial funding of USD 2 million from the World Bank to support community development, and biodiversity conservation projects, which promote the biological diversity, ecological functions and sustainable use of natural resources in the Eastern Arc Mountains of Tanzania.
Tanzania	Tanzania Forest Fund	Created in 2010 to provide financial support to forest conservation and sustainable forest management in Tanzania.
Uganda	Bwindi Mgahinga Conservation Trust	Established in 1994 to conserve Mgahinga Gorilla and Bwindi Impenetrable National Parks.
Uganda	Uganda Biodiversity Trust Fund	Created in 2016, went into contractual agreement with WCS for programme funding support, from USAID, during 2017-2019.

Case study 10: BioFund, Mozambique's national Conservation Trust Fund.
(Adapted from: BioFund (2019), 'BioFund', [website])

BioFund

Mozambique's national CTF, BioFund, was theorised in 2007 during a meeting on Sustainable Funding for Conservation in order to support the country's severely underfunded protected areas. It took four years for the fund to be officially created, and another four years before it was launched. That time was spent to acquire the necessary technical capacity and the institutional solidity to correctly carry out the functions of a CTF.

Specifically, the founders' committee of BioFund was created in 2008, and its conservation policy approved in 2009. In 2011, BioFund was officially created and the fund obtained the status of a public utility one year later.

Between 2012 and 2015, the fund was capitalised through several grants to the value of c. USD 24 million by KfW, World Bank, ProFin (UNDP/GEF) and Conservation International.

6.2 Debt for Nature Swaps

A Debt-For-Nature Swap is an agreement that reduces a developing country's debt stock or service in exchange for a commitment to protect nature from the debtor government. Since the first agreement signed in 1987 between Bolivia and Conservation International, more than USD 1 billion of conservation funding has been generated through DNS globally (UNDP, 2019).

DNS are voluntary transactions whereby the donor(s) cancels part or all of the debt owned by a developing country's government. In exchange, the debtor government commits to invest the accrued savings in biodiversity conservation, climate mitigation and landscape conservation.

- In a **commercial DNS** (or three-party debt-for-nature swap), a non-governmental organization acts as the funder/donor and purchases debt titles from commercial banks on the secondary market. The NGO transfers the debt title to the debtor country, and in exchange the country agrees to either enact certain environmental policies or endow a government bond in the name of a conservation organization, with the aim of funding conservation programmes.
- **Bilateral DNS** take place between two governments. In a bilateral swap, a creditor country forgives a portion of the public bilateral debt of a debtor nation in exchange for environmental commitments from that country.
- **Multilateral DNS** are similar to bilateral swaps but involve international transactions of more than two national governments (sometimes involving an international organisation).

Debt for Nature Swaps in ESA

Debt for Nature Swap have accounted for more than USD 100 million in funding in the region (Pervaze A. S., 2010). The first DNS in Madagascar in 1989 was also the first in Africa (Melissa, M. & Paddack, J-P., 2003).

Since then, Madagascar has been the primary beneficiary of funds in the area, with money from debt relief being used to train, equip and support rangers, develop new parks, promote environmental education programmes and support rural development projects. Tanzania, Zambia (Case study 12) and Botswana also had their debt reduced through DNS (Pervaze A. S., 2010). The recent Seychelles debt swap (Case study 11) amounted to USD 21 million.

Case study 11: Seychelles Debt for Nature Swap.
(Adapted from: Kennedy, M. 'Seychelles Finds a Novel Way to Swap Its Debt for Marine Protections'. NPR [website], (23 February 2018))

Seychelles Debt-for-Nature Swap

The Seychelles Debt-for-Nature Swap was a deal between the Seychelles Government, The Nature Conservancy, and a number of charities, including the Leonardo Di Caprio Foundation. Under the terms of the USD 21 million deal, the charities and the investors paid for a portion of the Seychelles national debt and the country agreed to direct future national debt payments into a new trust, the Seychelles Conservation and Climate Adaptation Trust (SeyCCAT).

This trust offers lower interest rates on debt repayments, and any savings goes to fund new projects designed to protect marine life and handle the effects of climate change, through conservation management initiatives for two new MPAs

collectively the size of Great Britain (400,000 km2). USD 5 million of the deal stemmed from private philanthropic funding with USD 15.1 million being provided via a loan from The Nature Conservancy.

These two marine special reserves (MSR) cover the biodiverse Aldabra Islands (11,080 km2, "Aldabra Group MSP1") and the seas around the Seychelles' main islands ("Amirantes to Fortune Bank MSP 2") limiting fishing and tourism activity in the area (20,070 km2). The primary purpose of this swap was to protect this area's biodiversity from unrestricted oil and gas exploration, deep sea mining, and controversial fishing techniques, as well as to better prepare the region for the effects of climate change.

Small-scale fishermen in the area reportedly hope that such protection will allow fish stocks to repopulate to their former numbers.

This DNS also established the SeyCCAT, which is where the future repayments will be directed. The trust will offer lower interest rates on debt repayments with savings going to fund new projects designed to protect marine life and adapt to the effects of climate change.

For this project, over 100 stakeholders were consulted during the first phase of the plan. These interviews informed which activities would be allowed in the protected areas, where the areas should be, and the structure of the plan. The development process also included 24 committee meetings, 9 public workshops, and 60 consultations with experts in the marine sector, local areas, and government agencies over several years.

This deal was particularly attractive to Seychelles as it had defaulted on its debt in 2008. Although its economy was sustained by assistance from the IMF, the tiny nation's debt is still USD 406 million.

Case study 12: Debt for Nature Swap in Zambia.
(Adapted from: Resor, J.P. 'Debt-for-nature swaps: a decade of experience and new directions for the future'. FAO [website], (1997))

Zambia Debt for Nature Swap

In Zambia, WWF executed a USD 2.2 million DNS in 1989. This swap appeared very successful since the debt was purchased at a face value of only 20%. However, the rapid devaluation of the Zambian Kwacha forced WWF to spend the local currency proceeds of the swap in less than a year. This greatly weakened the expected conservation impact of the swap, especially as WWF and other organizations did not include sufficient investment and technical assistance to meet these organizational challenges in the original design and budgeting of the programme.

By contrast, after lengthy negotiations, in 1993 the Government of Zambia established a debt conversion programme which permitted an orderly conversion of external debt by many NGOs. This programme was funded by a World Bank International Development Association debt buyback and facilitated by the Debt-for-Development Coalition, a non-profit institution that executed debt-for-nature swaps on behalf of single NGOs. Through this programme, NGOs purchased Zambian debt at a face value of 11% and received a dollar-denominated note with a face value of 16.5%, thus generating funds equivalent to 50% of the amount swapped (16.5/11=1.5), which were used for different charitable purposes including conservation. By managing the currency risk, this programme enabled NGOs to finance development activities in Zambia with a high degree of certainty and reliability.

To illustrate the potential of DNS in ESA, Figure 14 below compares total external debt (in USD million) as of 2018 (and change vs 2010) and debt to GDP ratios for each country in ESA, ranked by increasing debt-to-GDP ratio. In many cases, the strong rise in external debt (in absolute terms and as a % of GDP) over 2010-2018 means that governments might be required to think about how to reduce their external commitments. Debt for nature swaps could be a component of an overall strategy to reduce indebtment.

Table 5: Total external debt, change in external debt and debt-to-GDP ratio of ESA countries. Adapted from: World Bank. 'World Bank Database'. World Bank [online database], (2019).

Country	External debt as of 2018, current USD mn	Change 2010-18 in %	Debt-to-GDP ration in %
eSwatini	509	-27	11
Botswana	1.794	-3	13
Eritrea	791	-24	20
Comoros	191	-31	31
Madagascar	3.716	35	35
Tanzania	18.585	109	37
Uganda	12.331	314	40
Lesotho	915	16	41
Rwanda	5.488	345	41
Namibia	2.198	265	45
South Africa	179.306	65	56
Seychelles	2.729	14	57
Kenya	3.155	256	57
Zambia	19.116	336	59
Ethiopia	28.017	285	60
Malawi	2.266	122	62
Somalia	2.932	-4	62
Mauritius	11.208	41	63
Zimbabwe	12.286	81	78
Angola	1,186	105	81
Djibouti	54.563	80	104
Mozambique	15.218	147	113

6.3 Payment for Ecosystem Services

Payments for Ecosystem Services (PES) occur when a beneficiary or user of an ecosystem service makes a direct or indirect payment to the provider of that service. Ecosystem services are usually grouped into four main categories (UNDP, 2020b):

- Provisioning services (the products obtained from ecosystems such as food and fresh water);
- Regulating services (the benefits obtained from the regulation of ecosystem processes such as air quality and pollination);
- Cultural services (the non-material benefits that people obtain such as spiritual enrichment, recreation and aesthetic experiences) that directly affect people; and
- The supporting services needed to maintain the other services (such as photosynthesis and nutrient recycling).

Establishing a PES agreement involves the following steps:

- Identification of the ecosystem services and geographical boundaries;
- Identification of the sellers/providers and buyers/beneficiaries;
- Definition of the market and of the price;
- Determination of the governance, institutional and legal arrangements;
- Collection of the biophysical baseline data for the monitoring system; and
- Actual legal structuring, financing and implementation.

The value of global annual transactions of PES is estimated between USD 36–42 billion (Salzman, J. et al., 2018). Of these, PES programmes designed to protect watersheds have seen the largest volume of global transactions and have spread the farthest worldwide, with USD 25 billion in transactions across 62 countries in 2015.

For instance, through its Sloping Land Conversion Program, China paid 32 million farmers and 120 million households to convert steep croplands to forest and grassland. Also, in China, the Natural Forest Conservation Program focuses on reforestation efforts and logging bans and has resulted in 1.6% of China's territory seeing a significant gain in tree cover (Nichols, S., 2016). These two initiatives are now the largest PES programmes in the world.

PES in ESA

Unlike many of the schemes operational in other parts of the world, PES in the ESA region tend to depend substantially on external subsidies, either from central government or from development donors and international NGOs (Land Trees and Sustainability Africa (LTSA, 2018). This means many of the PES schemes in this region lack the commercial angle, which actually places value and demand for natural resources and makes these schemes unsustainable given their reliance on donor funding.

In ESA, the main application of PES has been in watershed protection, biodiversity, habitat and carbon services, mainly from forests and grassland savannahs, and the primary focus has been on directing payments to smallholder farmers and pastoralists (LTSA, 2018). This is as a result of the abundance of these ecosystems, as well as the presence of high demands and well-developed markets for water, wildlife tourism and carbon both within and outside the continent. In contrast, there are very few instances of PES in marine, coastal and non-watershed freshwater wetland ecosystems in the region.

In 2005, 45 PES projects were reported in Kenya, South Africa, Tanzania and Uganda, including 18 biodiversity projects, 17 carbon projects, Reducing Emissions from Deforestation and Forest Degradation (REDD+), and carbon tax are addressed below in the section) and 10 water projects. By 2008, almost 70 PES initiatives had been identified in ESA, of which 27 focused on carbon, 19 on biodiversity and 16 on water services (LTSA, 2018). A review of studies on ecosystem services published in 2016 found out that 47 out of the 52 identified in Africa were in ESA, with more than half of the region's total (24) in Kenya and South Africa (Waweru Wangai, P. et al. 2016).

Few schemes however have actually taken root and continue to be operational. For instance, a review of PES schemes in ESA carried out in 2006 found that only a fifth of those developed had reached the point of implementation. Reasons behind this apparent failure vary (e.g. lack of participation from farmers in the case of the "Equitable Payments for Watershed Services" Programme in Uluguru Mountains, lack of implementation of the envisaged structure in the case of "Payment for Ecosystem Services in the Amboseli Ecosystem") (LTSA, 2018).

This does not mean that most PES completely failed; rather they evolved over time to take a different form from that originally envisaged, usually due to a combination of technical, political and market factors (see Case study 13).

Case study 13: Changing designs for water-related PES in Kenya.
(Adapted from: Maasai Wilderness Conservation Trust (2019))

Water-related PES in Kenya

TThe UNDP/GEF project "Enhancing Wildlife Conservation in the Productive Southern Kenya Rangelands through a Landscape Approach" started in 2014 and was due to run until 2018. The project documentation includes a series of activities to be carried out in collaboration with the Maasai Wilderness Conservation Trust (MWCT) on the development of green water credits. These are envisaged as a PES mechanism to provide incentives for landholders in the Chyulu Hills to restore key water catchments.

Whilst no water-based PES scheme emerged, the MWCT and other partner organisations developed at least two PES-like schemes in the Chyulu landscape over the last few years.

One is the MWCT Wildlife Pays project, which compensates herders for livestock lost to predators with funds provided by surcharges of between USD 100-150 per bed night levied on tourists at the trust's ecotourism partner, Campi ya Kanzi. The MCWT employs four verifying officers to attend to the claims made by the local community. Their role is to talk with the owners and neighbours, take photographic and video evidence, and analyse the authenticity of the verbal testimonies and physical evidence of the claim.

The other PES scheme is a forest carbon project developed by AWF, Kenya Wildlife Service, Kenya Forest Service, MWCT, Big Life Foundation, David Sheldrick Wildlife Trust and Conservation International, called Chyulu Hills REDD+ Project. These organisations created the Chyulu Hills Conservation Trust (CHCT), of which many are trustees.
The revenue from the sale of carbon credits generates sustainable financing for conservation projects, as well as provide payments to local households. CHCT reports that the impact of that project, which is certified by the Verified Carbon Standard (VCS), is as follows:

- Preserving 1,000,000 acres of land
- Conserving three national parks and a dispersal area for Amboseli National Park
- Helping 70,000 Maasai people
- Preserving a watershed that feeds water to Mombasa

PES carbon projects in ESA Region

REDD+ programme. One example of a PES carbon project is the REDD+ programme, a climate-change-mitigation mechanism that seeks to compensate carbon owners for sustainable development that reduces carbon emissions.

In 2010, REDD became REDD+, meaning REDD in addition to applying conservation, sustainable management of forests and enhancing forest carbon stocks. REDD+ now includes:

- Reducing emissions from deforestation;
- Reducing emissions from forest degradation;
- Conservation of forest carbon stocks;
- Sustainable management of forests; and
- Enhancement of forest carbon stocks.

In ESA, Ethiopia, Tanzania, Uganda and Zambia have anchored their REDD+ strategies on a rights-based approach, including mitigation measures for environmental and social risks as well as how benefits can be shared (Attafuah, E., Shah, W., 2018) In Zambia for instance, REDD+ readiness laid the foundations for an investment plan for REDD+, as well as initiatives such as the Zambia Integrated Forest Landscape Programme (Attafuah, E., Shah, W., 2018).
Whilst most countries in the area have useful laws relating to forest and environmental management that could be developed further to address REDD+, issues with complex or insecure tenure arrangements have often delayed or frustrated the development of a consistent approach to forest carbon in a country.

Other challenges encountered by REDD+ projects include:

- **Costs:** It is expensive to set up a project and get it verified.
- **Volatility:** The price of carbon credits can vary significantly and is perceived to be too low.
- **Clarity and regulation:** In some countries, a more solid legal framework needs to be implemented on carbon rights and land tenure.

Examples of active REDD+ projects include the work done by Carbon Tanzania in Tanzania, which includes:

- On a 32,000-ha area where three village communities of 2,500 people live (mostly hunter-gatherers), the Yaeda Valley project is preventing 18,700 trees from

being cut every year and has generated approximately USD 215,000 for local communities over the first five years of the project;
- On a 104,065-ha area where five village communities of 15,000 people live (mostly pastoralists), the Makame Savannah project is preventing 258,000 trees from being cut every year and has led to the issuance of 99,000 Verified Emissions Reductions as of end 2019 (total finance invested: USD 350,000); and
- On a 216,000-ha area where eight village communities of 17,000 people live (mostly farmers), the Ntakata Mountains project is preventing 1,250,000 trees from being cut every year (Baker, M., 2018).

Case study 14: Rukinga, the first REDD+ project in the world, Kenya.
(Source: Wildlife Works [website], (2019))

Rukinga REDD+ Project, Kenya

Wildlife Works was founded in 1997 as a Kenyan-based company using market-based solutions for wildlife conservation that provide benefits to local communities. It has now become the world's leading REDD+ programme development and management company.

The company's first project was in Rukinga, a wildlife sanctuary and important migration corridor (in particular for elephants) located between Tsavo West and Tsavo East National Parks in Kenya. At the time, intense human-wildlife conflict and forest clearing was a threat to wildlife in the area.

In 1998, in partnership with the local community, Wildlife Works started to build an eco-cotton factory and created an unarmed ranger troop to patrol the wildlife corridor and raise conservation awareness. The model proved to be effective: wildlife densities started to recover quickly and much of the local community (mostly women) were offered a living wage and full health benefits.

Building on that success, Wildlife Works launched the Wildlife Works Kasigau Corridor REDD+ Project, that was successfully validated and verified under VCS and the Climate, Community and Biodiversity Standard (CCB) in 2011. Protecting over 500,000 acres of forest, this was the world's first REDD+ project to receive issuance of carbon credits. It will result in the avoidance of over 1.5 million tonnes of CO2-e emissions per year for a period of 30 years.

The revenue from the credits allowed Wildlife Works to expand their reach and employ over 300 local people and serve over 116,000 community members through various social, educational, health and economic programmes.

The company now directly employs more than 300 locally hired full time employees and has since replicated the model in the Democratic Republic of Congo launched through the Mai Ndombe REDD+ project to protect over 740,000 acres of critical bonobo and forest elephant habitat.

Case study 15: The Kariba REDD+ Project in Zimbabwe.
(Adapted from: Carbon Green Africa' [website], (2019))

Kariba REDD+, Zimbabwe

Limited economic opportunities in many parts of Zimbabwe have led communities to resort to forest clearing for subsistence farming and fuelwood. In that context, the Kariba REDD+ project started in 2011. Developed by Carbon Green Africa, it is a community-based project managed by four local Rural District Councils. Kariba REDD+ aims to generate almost 52 million carbon credits from reduced deforestation over 30 years. It protects almost 785,000 hectares of forests and wildlife on the southern shores of Lake Kariba, near the Zimbabwe-Zambia border, meaning it is one of the largest registered REDD+ projects by area.

Kariba is located between the Chizarira, Matusadona and Mana Pools National Parks in Zimbabwe, and Lower Zambezi National Park in Zambia. The project connects these four national parks and eight safari areas, forming a biodiversity corridor that protects expansive forest habitat and numerous vulnerable and endangered species – including the African elephant, lion, hippo, lappet-faced vulture and southern ground hornbill.

Whilst the Kariba REDD+ project raised USD 2 million in carbon credits in two years through the sale of 1.5 million carbon credits, it has reportedly since put the sale of a further 3.5 million carbon credits on hold due to low prices.

Carbon tax. While carbon offsets can generate finance for conservation, it can only do so if there is a buyer willing to offset their carbon emissions by purchasing carbon credits from a PA or conservation project. Carbon laws can overcome this hurdle by compelling polluters to purchase carbon credits.

For example, South Africa recently introduced a carbon tax, effective from June 2019. It is the only African country and one of only 57 globally to have done so.

The carbon tax will be levied on the sum of greenhouse gas emissions from fuel combustion, industrial processes, and fugitive emissions of individual polluters such as large industrial companies and will be determined in accordance with a reporting methodology approved by the Department of Environmental Affairs (now the Department of Environment, Forestry and Fisheries) (Swart, I., 2019).

The law also allows taxpayers to reduce their effective carbon tax rates through various rebates and deductions, including offsets (up to 10% of the carbon tax). This provides PAs with an opportunity to develop, for example, verified reforestation projects and offer the resultant credits to taxpayers.

6.4 Mitigation measures/ Biodiversity offsets

Biodiversity offsets compensate for the net impacts of a development project after other mitigation measures have been implemented. Offsets should aim to achieve no net loss and preferably a net gain of biodiversity.

Offsets can, for example, deliver biodiversity benefits (e.g. reforestation) through a transaction, where offset sellers (e.g. a conservation NGO or government) sell offsets to developers (e.g. a mining company or property developer) who seek to compensate the net biodiversity loss resulting from their activities (e.g. mining). Biodiversity offsets are also sometimes called wetland, species, and habitat banking. Offsets are part of the mitigation hierarchy, the framework by which biodiversity is incorporated into the lifecycle of development projects. Offsets should only be considered after all other mitigation measures have been exhausted (see Figure 15).

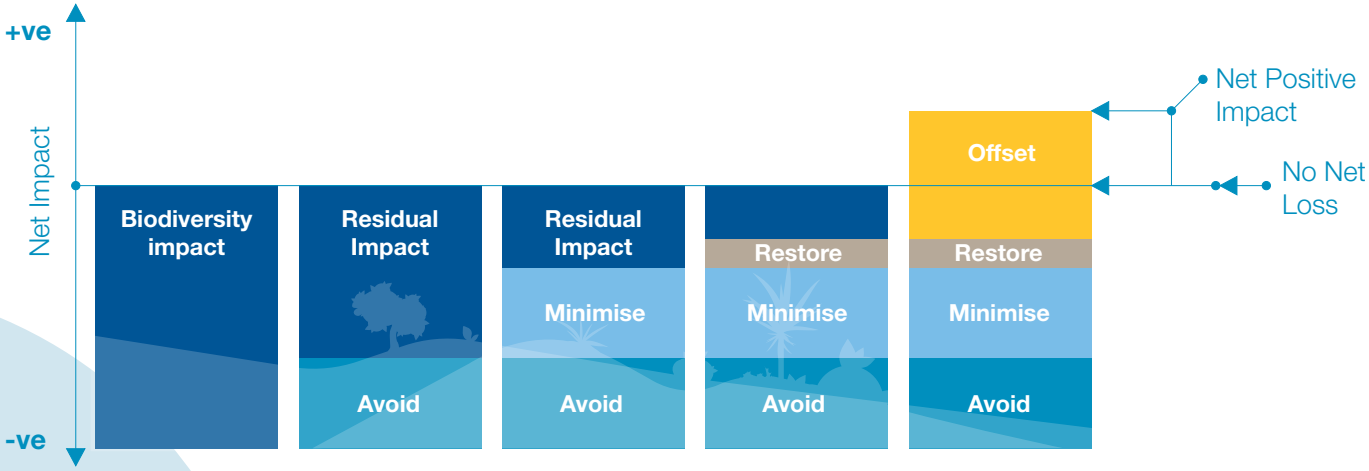


Figure 14: The mitigation hierarchy.

As with carbon credits, offsets work best in regulated markets. For example, regulation can enable the establishment of mitigation banks. Such a bank can be established for a certain piece of land with a particular biodiversity value, which will be valued in terms of credits. Companies can then mitigate the environmental damage caused by their development project by purchasing these credits (as long as the companies' activities are impacting a similar environment, habitant or creature).

Mitigation measures pose several challenges, summarised as follows (Bull, J.W. et al., 2013):

- **Currency:** Choosing metrics for measuring biodiversity is a much more difficult task than for e.g. carbon offsets, measured in CO_2e, since there is no single metric that objectively captures the full extent of biodiversity, which in turn has no universally agreed and unambiguous definition;
- **No net loss:** The requirements for achieving no net loss are often unspecified. Especially, the baseline against which to measure no net loss is rarely specified. The implicit assumption often made is that the biodiversity baseline is fixed at the point of the development project. However, as ecosystems are dynamic, no net loss should be defined against prevailing trends rather than against a specific point in time;
- **Equivalence:** Demonstrating equivalence between biodiversity losses and gains is tricky. For instance, a man-made wetland is not equivalent to a naturally established wetland, although equivalence is often implied;
- **Longevity:** Defining how long offset schemes should endure and ensuring that offsets will last as long as necessary in a dynamic environment. Often the question of longevity is intertwined with the issue of equivalence, with typically immediate losses and slow-building gains;
- **Time lag:** There can be a gap in time between development impacts occurring and the benefits associated with the offset scheme materialising. As a result, whilst biodiversity losses are certain, future gains may be realised late or not at all;
- **Uncertainty:** As a result of the previous challenges, the outcomes of many offset schemes are uncertain. The solution often used is to increase the amount of compensation required to compensate for losses, using multipliers. For instance, in the Western Cape in South Africa, compensation of 30 ha of land is required for every hectare of land affected;
- **Threshold:** Defining threshold biodiversity values beyond which offsets are not acceptable. This involves making value judgments which is fraught with issues;
- Financial sustainability: Ensuring that biodiversity offsets are covered by a mechanism securing their continued funding (e.g. in case of financial difficulty); and
- **Irreplaceability:** Some habitats and critical natural capital are non-replaceable.

Biodiversity offsets in ESA

Generally, the biodiversity offsets in the ESA region include individual voluntary examples supported by specific projects, rather than a legislative obligatory framework, which is yet, to be developed.

Examples include:

- **Mozambique.** In Mozambique, biodiversity offsets have been recognised as a prioritised finance solution for the country by the BIOFIN initiative. The work currently being conducted is aimed at developing a functional mechanism for biodiversity offsets in Mozambique, along with the development of relevant regulations, in partnership with the National Directorate of Environment (BIOFIN, 2017b).
  In practice, Mozambique's "Biodiversity Offset programme" is a partnership between BIOFUND (Mozambique's CTF), COMBO (an initiative involving the WCS, Biotope and Forest Trends) and BIOFIN to implement the National Roadmap on No Net Loss and Biodiversity Offsets. Its three main objectives are to:
  - strengthen the technical and institutional capacity of BIOFUND to undertake effective advocacy;
  - strengthen the participation of civil society in the creation of the biodiversity offset mechanism; and
  - ensure the correct inclusion of the concept of biodiversity offsets into legal instruments.
- **Madagascar.** In Madagascar, the construction of the QIT Madagascar Minerals (QMM) mine and port were offset by on- and off-site conservation of littoral forest, a range of livelihood initiatives, and the expansion of the PA system through conservation of priority sites and alleviation of pressure on important biodiversity for livelihoods (Business and Biodiversity Offsets Programme (BBOP), 2009). Comprehensive baseline studies, the advice of a panel of experts, and an integrated approach to social, cultural and environmental issues has resulted in a composite programme of compensatory conservation activities.
- **South Africa.** In South Africa, the building of Pulp United Pulp Mill, a bleached chemical thermos mechanical pulp mill on land within an Industrial Development Zone in KwaZulu Natal province was offset by setting aside three priority areas for nature conservation as formal PAs, and the protection from development of remaining areas of this vegetation type within the municipality. The offset was conducted using a ratio of ten hectares for every hectare impacted. Eight hectares of habitat were impacted by the proposed development (BBOP, 2019).

Case study 16: The Kalagala Biodiversity Offset agreement.
(Adapted from: Jones, I. and Bull, J. (2009))

Biodiversity Offsets Uganda

In Uganda, biodiversity offsets gained traction during negotiations for the construction of the Bujagali hydro-power plant on the Victoria Nile River. One of the funders of the project, the World Bank, signed an agreement that resulted in the Kalagala Biodiversity Offset agreement: it had emerged that the leakage of environmental impact was likely to lead to deforestation of the Kalagala Central Forest Reserve (CFR) and impacts on Mabira CFR. Approximately 70 ha of three CFRs would be converted by the transmission line component of the project. In the initial impact assessment, two properties of 234 ha and 162 ha next to Mabira CFR were evaluated as a potential offset for these impacts.

The Kalagala Biodiversity Offset agreement was set up to manage the residual impacts which were unlikely to be covered in the environmental management and mitigation plan.

Five years post the construction of the dam and implementation of associated mitigation measures, preliminary findings suggest mixed stakeholder perceptions on the desirability of mitigation measures and though offset measures have been put in place an assessment of ecological outcomes has yet to be completed. In addition, the on the ground actions to compensate for impacts on the three CFRs were not considered further. Instead, the value of biodiversity (primarily its use value) was converted to monetary values and compensation was paid to the department responsible for managing the PAs. The Kalagala offset agreement has faced considerable opposition by local communities, since much of the land on which they traditionally farmed was made off-limits to them.

6.5. Collaborative management / Public-Private Partnerships

Collaborative management occurs when a non-profit organisation or a private sector entity partners with a state wildlife authority, and the authority either outsources aspects of management or specific conservation activities (e.g. ecological monitoring, education, community engagement, ecosystem restoration) to the partner organization or enters into an agreement with the private partner that covers the full spectrum of management.

This is increasingly taking the form of a public-private partnership (PPP). There are four main types of partnerships emerging (Baghaia, M., et al., 2018):

- **Delegated management:** where a non-profit shares governance responsibility with the state and is delegated full management authority, generally a joint entity and special purpose vehicle (e.g., foundation, non-profit company) is created in the host country, and management is 'delegated' to that entity, and the private sector partner represents the majority, such as the partnership between APN and RDB for management of Akagera National Park in Rwanda;
- **Integrated co-management:** where a non-profit shares governance responsibility with the state, but unlike delegated management above, this structure is characterised by a 50-50 power sharing arrangement, rather than being led by the private sector partner, such as the partnership between Frankfurt Zoological Society and the ZPWMA for management of Gonarezou National Park in Zimbabwe;
- **Bilateral co-management:** where a non-profit shares governance and management responsibility with the state, and generally a separate structure is not created, such as the partnership between the AWF and the EWCA for enhancing management of Simien Mountains National Park in Ethiopia; and
- **Financial and technical support** (advisor or implementer): where a non-profit assists the state with aspects of management without formal decision-making authority, this is the traditional method of working with protected area authorities and may not even be classified as a co-management model, such as the funding and technical support provided by WCS to Ruaha National Park in Tanzania.

Partnerships models are often able to attract donor funding given the perceived capacity and expertise of the private partner. In addition, most partners, non-profits and/or private sector, have a track record in attracting funding and have the accounting systems in place to meet donor requirements. The tenure of a co-management agreement is critical in terms of attracting donor funding as well as investment capital. A fifteen-year agreement is generally recommended to attract capital and demonstrate results. Private partners also have a focus on developing the self-generated revenues of the PA, if given the mandate, and are incentivised to decrease the reliance on donor funding over time. Delegated or integrated co-management models are usually associated with higher funding than bilateral co-management and financial-technical support partnerships

because the special purpose vehicle in these models have greater independence and responsibilities, which gives donors confidence in fiduciary management and ability to achieve targets without interference often experienced with the other models (Baghaia, M., et al., 2018).

Collaborative management in ESA

Across Africa, collaborative agreements are becoming increasingly popular tools to increase financial and capacity support for PAs given that many of them are severely underfunded. In addition, some donors require collaborative agreements for financing.

The map below highlights some of the protected areas across the continent covered by a collaborative management model.

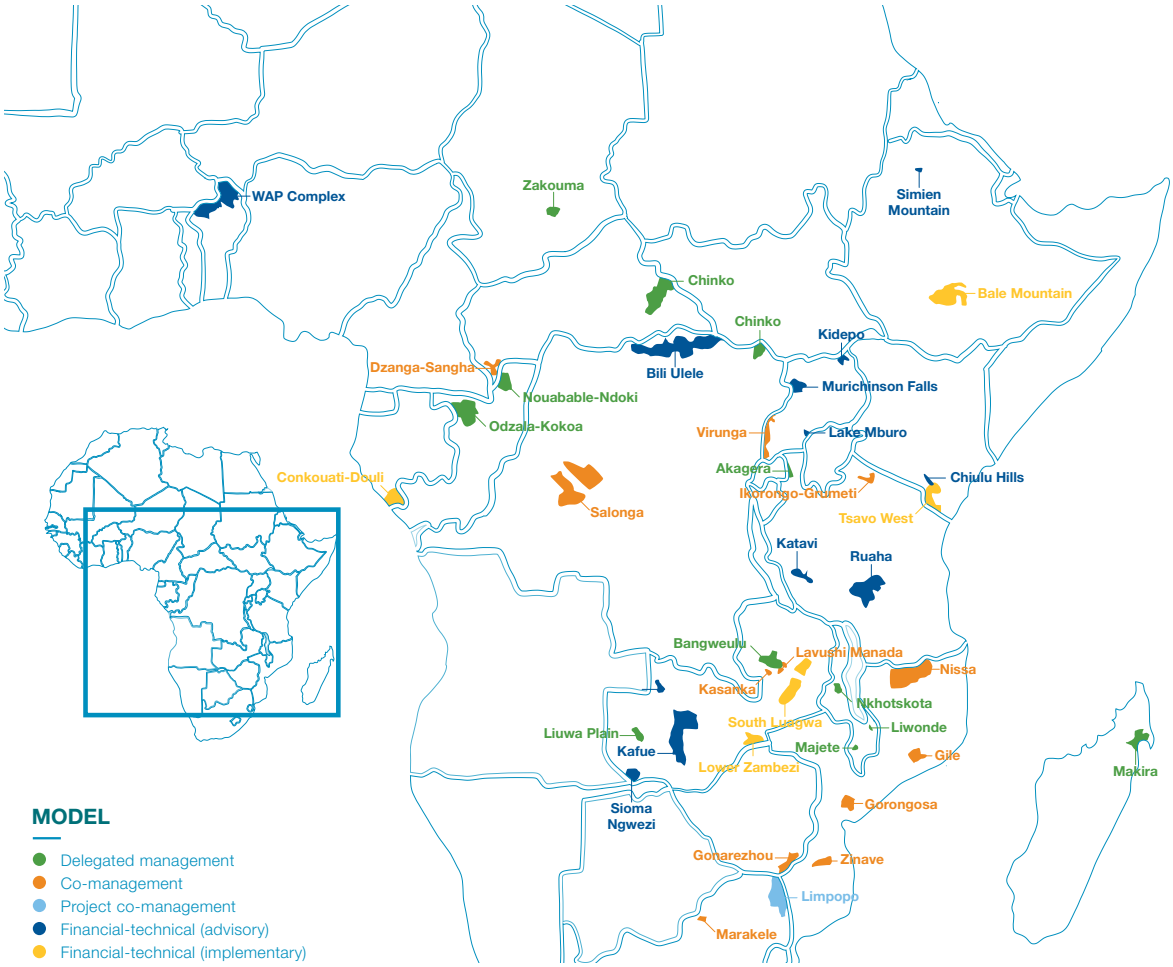


Figure 15: African protected areas covered by a collaborative management model (non-exhaustive list)

Below are a few examples of co-management models:

- In **Ethiopia**, the Frankfurt Zoological Society - Bale Mountains Conservation Project (FZS-BMCP) was set up in 2005 to provide all aspects of management support to the Bale Mountains National Park (covering ecotourism development, community outreach, sustainable natural resource use, operations and ecological management). In 2007 a 10- year General Management Plan (GMP) for the Park was ratified by the President of the Oromia region. FZS-BMCP is currently working in partnership with BMNP and other authorities towards implementing this GMP (Bale Mountains National Park, 2020). With new funding support from KfW, FZS has updated its co-management agreement with the EWCA to enhance the management and governance of the Park. AWF entered into a similar agreement for the support of Simien Mountain National Park.
- In **Rwanda**, the Rwanda Development Board entered into a delegated management agreement with APN for the management of Akagera National Park. Since the agreement was entered into, APN and RDB have reintroduced wildlife and developed commercially viable tourism facilities. RDB hopes that the development of Akagera will help Rwanda diversify its tourism product from gorilla tourism alone and keep tourists in Rwanda longer.

- In **Mozambique**, an integrated co-management arrangement was established after the civil war for the management of the Niassa National Reserve between the Government and a Mozambican company chiefly representing a high net worth individual. This PPP, Sociedade para a Gestão e Desenvolvimento da Reserva do Niassa, was principally supported by Fauna & Flora International and came to an end in 2012. As of end 2019, WCS was trying to enter a bilateral co-management agreement for the Reserve. In addition, different private sector partners and NGOs have management agreements for concessions across the Reserve. The Carr Foundation signed a management agreement with the Mozambican government in 2008 to restore and protect Gorongosa National Park as a source of tourist income for the local population. Two agreements were signed in 2019 with the Peace Parks Foundation to provide technical and financial assistance in the Maputo Special Reserve for tourism development, and to support the Banhine National Park in Gaza Province to combat poaching (Wright, E., 2018). In addition, APN has a delegated agreement over Bazaruto National Park.
- In **Zimbabwe**, the Gonarezhou National Park is governed by the Gonarezhou Conservation Trust, whose trustees are nominees from the ZPWMA and FZS in equal numbers. Built on the back of a strong relationship developed over nine years of support by FZS for Gonarezhou, the Trust is directly responsible for management of the Park for a period of 20 years and became fully responsible in 2017 (Gonarezhou National Park, 2019).
- Across **Africa**. APN is a non-profit conservation organisation created in 2000 that takes on the complete responsibility for the rehabilitation and long-term management of national parks in partnership with governments and local communities. It currently manages 17 national parks and PAs (of which 10 are in ESA) in 11 countries covering c. 14 million hectares. APN aims to manage 20 parks by 2020.

Governments that have entered into these management agreements are strategically optimising partner relations. By selecting appropriate and capable partners, PA authorities can increase revenue for PAs and the system as a whole by leveraging the skills, experience and capital of partners and blending the different expertise brought by each partner. In addition, this helps decrease the risk by engaging other partners and is appealing to a number of large bi-lateral and multi-lateral funders.

Case study 17: Kasanka National Park Management Agreement.
(Adapted from: Kasanka National Park [website], (2019), Kasanka Trust [website], (2019))

Kasanka National Park, Zambia

Kasanka National Park in Zambia hosts the world's largest mammal migration. Between October and December each year, about 10 million straw coloured fruit bats descend into a tiny patch of evergreen swamp forest inside the Park. This natural spectacle attracts numerous tourists each year, generating revenue for conservation management, community education and tourism development activities.

In 1985, the Park was under threat from significant poaching. The Park had no roads for management and was not visited by tourists. A local farmer and British expatriate teamed up to protect its wildlife, which includes other species like sitatunga, wattled crane, Ross's Lourie and blue monkeys.

Together, with their own resources, they employed staff and built bridges, roads and temporary camps. To formalise their activity and raise funds, they formed the Kasanka Trust in 1987. Three years later, recognizing the extent of the progress realised, ZAWA (now DPNW) signed an agreement with the Kasanka Trust allowing it to manage the Park and develop tourism to fund conservation. Under the Memorandum of Understanding, the Trust is responsible for infrastructure and habitat management, community outreach and tourism. Kasanka National Park thus became Zambia's first privately managed park.

Since then, significant progress has been made: a road network, tourism infrastructure and community conservation centre were created and anti-poaching measures have been successfully implemented. The Trust employs approximately 60 local staff and has an ongoing community outreach programme within the surrounding communities including amongst other things: sponsorship of secondary school students, promotion of conservation farming techniques, a human/elephant conflict programme and promotion of the conservation message to local villages.

Chapter 6: Key messages

While alternative financing mechanisms do exist, these have not yet been sufficiently taken up due to:

- **Technical expertise:** Innovative, alternative financing mechanisms require expert knowledge and experience for successful implementation. Governments often lack the in-house expertise to design and implement these mechanisms, nor has it designed policy to be supportive of these mechanisms;
- **Collaboration and capital needed:** Given the limited capacity and lack of enabling policy environment, these mechanisms often require significant collaboration between government and other conservation stakeholders as well as upfront investment to facilitate the necessary expertise. Often a dedicated party, such as a conservation organisation, is required to support the design and execution of these mechanisms and provide the expertise, often external, and capital as required; and
- **Wider political buy-in:** As these mechanisms tend to stretch beyond the realm of the protected area, the management authority or even the relevant ministry, broader political buy-in, often at the highest level, is required. Incorporating the conservation imperative in the wider political agenda is therefore important.

Chapter 6: Recommendations

1. **Supporting the technical development of an enabling policy and legislative environment:** Support should be provided to governments to create the right enabling conditions and policies that promote the development of innovative finance mechanisms, such as:
   a. Require industries with negative impacts to mitigate and offset their impact with carbon and biodiversity offsets;
   b. Clarify ownership around carbon credits and rights of sale;
   c. Ensure PPP legislation provides for beneficial partnership with co-management entities; and
   d. Decentralise rights over natural resources to incentivise conservation by communities at local level.
2. **Fund and conduct feasibility studies:** Funding and technical support should be provided to PA Authorities to conduct feasibility assessments on innovative finance mechanisms to determine which are appropriate for each PA and/or PA system and to develop an investment prospectus to attract funding to develop the most suitable mechanisms.
3. **Integrate PAs (and their value proposition) into national development plans:** Governments should include state PAs in national development plans to ensure adequate finance is allocated toward the development of PAs. This will require a thorough understanding of the economic value of these areas through natural capital assessments, ensuring that they are recognised as ecologically and socially (and therefore as politically) relevant. Similarly, developing the biodiversity economy must become a focus and be driven by government. For example, in South Africa, the Department of Environment, Forestry and Fisheries have a programme specifically focused on developing the country's biodiversity economy (Department of Environmental Affairs, 2019). Under this programme, a series of performance indicators were defined to help measure the progress towards attaining the objectives of "fair access and equitable sharing of benefits arising from bio prospecting involving indigenous biological resources promoted" and "biological resources sustainably utilised and regulated," supporting the vision of "communities that support, uphold and thrive from conservation of biodiversity."

7 | New sources of finance for protected areas

Photo: Isalo National Park Madagascar, BIOPAMA

7.1. Outcomes-based financing mechanisms

Outcomes-based financing mechanisms are innovative financing instruments that attract investment capital to address issues traditionally funded by the public sector (Jeffries, G. et al., 2018- 2019).

Species bonds or protected area bonds are an example of such mechanisms. They are investment instruments with a set maturity, whose aim is to grow a sample of the population of a selected species at key sites. Investors in the bond receive a financial return only on the completion of the objective, with that return being funded by outcome payers. The world's first outcomes-based mechanism focused on an endangered species, the Rhino Impact Bond (RIB) (Balfour, D. et al., 2019), is being developed in ESA. The goal of RIB is to increase the population of black rhinos at five sites in Kenya and South Africa and simultaneously to link conservation performance to financial performance.

In partnership with the five sites, collectively responsible for managing 12% of the world's entire black rhino population, the team behind the RIB has designed and costed 5-year black rhino management strategies designed to deliver on an ambitious but achievable population growth target. Impact investors pay upfront for the implementation of these strategies, with "outcome-payers" committing at the outset to reimburse investors their capital plus a coupon if the targeted number of black rhinos is achieved.

Still under development, the RIB aims to catalyse USD 50 million to support black rhino conservation at the five sites over the period of the bond. If successful, this model could be scaled and applied to other species, individual protected areas or PA systems. RIB was designed to address the underlying issues around conservation funding and management. RIB aims to change how conservation finance is raised and deployed. By introducing for example clear indicators that are linked to conservation performance it demands rigor around monitoring, explicit conservation outcomes, proper planning and clear theories of change and a level of risk that commands engagement by all parties (UNDP Ecosystems and Biodiversity, 2018).

7.2. Green and blue bonds

A green or blue bond is a debt instrument issued by governments, development banks or others to raise capital from investors to finance projects with positive environmental, economic and climate benefits (World Bank, 2018b).

Green bonds

Green bonds can be used to fund a broad range of projects, which includes renewable energy, energy efficiency, sustainable waste management, sustainable land use, biodiversity conservation, clean transportation, and clean water (DuPont C.M., Levitt, J.N., and Bilmes, L.J., 2016). However, green bonds have not yet been used to fund conservation at scale. In 2017 it was estimated that only 2% of bond proceeds went to land conservation and 4% to biodiversity conservation (CBD, 2017).

In order to develop green bonds into more promising sources of finance for conservation, it necessary to consider how the conservation work that will be funded will generate financial returns for the investors. Green bonds are therefore only applicable if the PAs earmarked for funding are able to use that funding to generate revenue. Examples of revenue sources include nature-based tourism, tax revenues, PES, sustainable utilization and harvesting, and risk mitigation and avoided costs (DuPont C.M. et al., 2016).

Blue bonds

When a country's government commits to protect part of their near-shore ocean areas and engage in conservation work (e.g. improving fisheries management, reducing pollution, etc.), the cost of such a transition is often high, especially for small island states.

Blue bonds help finance this transition: a government issues a bond, often with the assistance/guarantee of an NGO and/or an agency such as the World Bank, leading to potentially lower interest rates and longer repayment periods. A portion of those savings fund the new marine PAs and the conservation activities to which the country has committed. The total estimated amount of active blue bonds globally is around USD5 billion (World Bank, 2018b).

Blue bonds provide the opportunity to consider the marine sector/economy of one country as a whole (i.e. including its environmental component) and fund it adequately. It is also a strong signal from the government to investors and other stakeholders that it sees the value of intact marine ecosystems. For the investor, lending to a government through a blue bond can be an interesting, Environmental, Social, and Governance (ESG)-friendly diversification opportunity.

Blue bonds however do not necessarily attract lower interest rates compared to 'normal' bonds. In addition, the combination of promises to spend a certain amount on conservation and to limit overall spending at the same time can have unintended consequences, such as budget cuts in the education or health sector.

It is therefore important for governments to ensure that blue bonds remain a small proportion of total financing, to only issue them with full commitment and buy-in within the country's administration and to be alert to the evolution of this market, which may present further opportunities.

Case study 18: The world's first blue bond in the Seychelles.
(Adapted from: World Bank. 'Seychelles launches World's First Sovereign Blue Bond']. World Bank [website], (2018))

First World's Blue Bond, Seychelles

The Seychelles was the first country to issue a blue bond, in October 2018. After tourism, the fisheries sector is the country's most important industry, employing 17% of the population and accounting for 95% of domestic exports in value terms. As fisheries became more exploited, the Seychelles recognised the need to rebuild and sustainably utilise fish stocks through improved governance and management of the sector.

The sovereign blue bond was thus issued with a ceiling value of USD 15 million, with a maturity of 10 years. A partial World Bank guarantee (USD 5 million) and a concessional loan from the Global Environment Facility (USD 5 million) will partially subsidise payment of the bond coupons. The anticipated outcome of the Blue Bond is restocked fisheries and a replicable, revenue-generating model proving that investing in sustainable marine conservation and industry makes sense. The project will hopefully also strengthen Seychelles' resilience to the impacts of climate change, through the expansion of the marine PA network to 30% of their Exclusive Economic Zone (EEZ) and the promotion of sustainable fisheries through proper control and management. The project complements the DNS that Seychelles executed in 2015 with The Nature Conservancy in exchange for greater ocean protection and climate change adaptation (World Bank, 2018a).

7.3. Tax incentives

There are various tax incentives that can be used as a source of conservation finance. Examples include tax deductions for donations (e.g. to conservation NGOs), tax deductions for certain land uses (e.g. for land turned into a nature reserve), or tax exemptions and reductions for certain organizations (e.g. exemption of estate duty for conservation NGOs).

Among those, the mechanism with the most direct potential impact is arguably tax deduction for land use, whereby landowners get a financial reward for their conservation commitment when declaring nature reserves on privately owned land (see Case study 19). It is however unlikely that the governments of less developed countries would adopt such tax incentives due to lack of capacity and national government debts, which would make it difficult to justify a perceived reduction in tax revenue. In addition, there might be an outcry for tax deductions for conservation and not for other social services such as education. Support should be provided to PA authorities to assess the overall value to society of tax incentives for conservation that should be presented to government decision makers.

Case study 19: Tax incentives in South Africa.
(Adapted from: Stevens, C. 'Biodiversity Tax Incentives for South Africa's Protected Area Network'. Panorama [online platform], (29 July 2019))

Tax incentives in South Africa

The Seychelles was the first country to issue a blue bond, in October 2018. After tourism, the fisheries sector is the With 75% of South Africa held in private ownership, the country identified PA expansion as a key tool to ensuring the persistence of its biodiversity and ecosystems. Landowners bear the responsibility and the financial cost of managing PAs.

The Fiscal Benefits Project was launched to test biodiversity tax incentives as a financial benefit for landowners declaring PAs. This began with the introduction of a new tax incentive into legislation. The impact of the incentive was tested at pilot sites across the country, resulting in the successful inclusion of the tax break in a tax return.

In practice, the so called "Section 37D" allows for a 4% straight line deduction on the value of the land declared. This means that a landowner who declares their land as a Nature Reserve or National Park may deduct 4% of the value of that declared land from their taxable income each year for 25 years. The value of the land is based on one of two possible calculations: the cost of acquiring the land and its improvements or its municipal or market value as based on a prescribed formula.

7.4 Project Finance for Permanence

Project Finance for Permanence (PFP) uses a project finance technique to facilitate full and upfront funding of large-scale conservation projects or areas by bringing together funders in one closing. Examples of PFP deals include a USD 57 million deal to protect 2 million hectares in Costa Rica and a USD 215 million project to conserve 60 million hectares of the Brazilian Amazon (Seol, M., 2016).

By addressing piecemeal or insufficient funding upfront, it ensures that conservation interventions are properly planned and permanent and fully funded. To be successful, PFP projects need political commitment, a strong investment strategy and rigorous financial plans, and collaboration between governments, NGOs, and public and private funders.

The development of a PFP initiative involves the following:

- First, conservation goals, are established and comprehensive conservation plans to achieve the goals are developed;
- A rigorous financial plan for the funding of the conservation plans is created, to ensure full understanding of the costs involved. This plans normally also develops strategies to shift the funding from donor sources to government and generated revenue over time;
- Donors commit funds to bring the plan to life. However, their funds are held back until the total fundraising goal is reached and all key legal and financial conditions that have been agreed upon in advance are met (this is the key defining characteristic of PFP). This provides donors with an up-front guarantee that their support will be put to best use;
- Everyone involved comes together to sign an agreement. At this closing, all donations are put into a fund, the governance of which is defined by the donors;
- Money within the fund is distributed over a set period of time and in accordance with the agreed financial plan; and
- The relevant government enables various revenue generation activities (through for example increasing tourism revenues or levying certain environmental taxes) and increases its total spending until it fully assumes the costs of the conservation intervention.

No PFP project has been developed in Africa, but several of them exist in Latin America (Brazil, Costa Rica) and Asia (Bhutan). The Bhutan for Life project will for instance leverage funding from donors, government, trust funds, as well as a green tax on vehicle imports, ecotourism revenue, and PES for hydropower to ensures the long-term financial sustainability of the countries' PAs (Bhutan for Life, 2019).

Photo: Zanzibar - Sara Giovannini

Case study 20: Asia's first PFP project: Bhutan for Life.
(Adapted from: Bhutan for Life [website], (2019))

Project Finance for Performance: Bhutan

National Happiness philosophy upholds environmental protection as fundamental to national wellbeing, its constitution mandates that a minimum of 60% of the country remain under forest cover, and the country has a network of PAs that spans 5 million acres, covering 51% of the country. These parks however are quite young, with most having been established in the 1990s. Due to resource shortages, Bhutan's PAs lack infrastructure and adequate numbers of trained staff.

To address these issues, the Bhutan for Life was developed by WWF and the government of Bhutan, mostly on the model of the Amazon Region Protected Area for Life—the largest PFP to date, that created a USD 215 million fund to permanently protect 150 million acres of Brazilian Amazon rainforest in 2014.

Bhutan presents favourable conditions for the PFP model: high levels of government transparency, political stability, a leadership deeply committed to conservation, an economy that will directly benefit from the ecosystem services protected areas provide, and a fast-developing ecotourism industry.

In practice, the Bhutan for Life transition fund has a USD 40 million target, of which USD 25 million comes from new funding by the Bhutan government. Like other PFP projects, the transition fund was only launched when the total fundraising commitment target was reached and all key legal and financial conditions necessary to secure the deal were in place (in 2017).

A board consisting of donors, WWF, government, and other partners oversees the transition fund and disburses funds each year, as long as predetermined conditions, including conservation milestones and financial transparency, continue to be met. This ensures that all financial needs to cover activities are committed from the start and creates financial incentives to minimise the risk of partners not meeting their obligations throughout implementation. At the end of the transition fund (in 2030) the Government of Bhutan will assume full responsibility for financing the PA system in perpetuity.

The Bhutan for Life transition fund is expected to increase populations of two flagship species by 2022, including increasing tiger numbers by 20% over 2015 levels. It also aims at seeing significant improvements in the management of PAs, with conservation plans developed for 10 additional priority species. Among other projected impacts, Bhutan for Life will also ensure that 80% of households living within PAs benefit from reduced HWC by the end of 2020 as a result of adoption of HWC prevention strategies.

7.5 Other

There are various new and innovative financing options, either already in use or in development, that can be developed to supplement nature-based tourism revenues in the ESA and increase conservation management funding. Examples include:

- **Lotteries:** Lotteries are popular in most countries and can generate substantial income, often for socially beneficial purposes such as nature conservation (World Wild Fund (WWF), 2009). For example, in South Africa, the National Lotteries Commission distributes funds to a series of causes, including environmental charities (South African National Lotteries Commission, no date).
- **Branding:** The Lion's Share (The Lion's Share, 2019) is a conservation finance initiative launched in September 2018 where a small levy is charged on the use of animals in ad campaigns and distributed to conservation NGOs via The Lion's Share fund, with co-funding from the UNDP. The Lion's Share targets to raise more than USD 100 million per year. Examples of private enterprises who have signed up include Mars Inc, Nielsen, International Airline Group (IAG), JCDecaux, The Economist and Batten, Barton, Durstine & Osborn (BBDO). In ESA, the Lion's Share is funding an African Elephant Economics Study to catalyse government investment in elephant conservation and the promotion of the nature-based economy. In Mozambique, the upgrade of the digital radio communication system of the Niassa National Reserve was also completed using funds from the Lion's Share.
- **Other Financial Instruments:** BIOFIN worked with nine countries in ESA to identify the priority conservation finance instruments for each respective country (BIOFIN, 2017a). For example, the instruments identified for Botswana are:

- Increased commercial use of invasive plants;
- Review and appropriately adjust PA entrance fees;
- Introduction of a sustainability standard and certification (Eco-label) system for beef products;
- Increased retention of self-generated revenues by the PA management authority;
- Establishment of a national parastatal to improve management of PAs;
- Enhanced benefit sharing from concessions in PAs;
- Enhancement and expansion of the Botswana Ecotourism Certification system;
- Introduction and formal integration of biodiversity offsets into the Environmental Assessment policy and practice;
- Accessing global climate change funds for biodiversity;
- Ensuring adequate financial provisions/guarantees are set aside for unexpected mine closures; and
- Re-orientation of subsidies and support for agriculture to make it more conditional on biodiversity conservation practices.

Chapter 7: Key messages

- **Innovative finance is a rapidly evolving space:** There are various new and innovative financing mechanisms and initiatives being designed, developed or implemented in an attempt to increase the available finance for conservation globally. The focus of these range from single PAs to entire countries to very specific conservation interventions.
- **Requires the collation of specialist skill sets, stakeholders and enabling conditions:** Designing and executing these mechanisms require an in-depth understanding of the mechanisms and significant technical support, resources and the relevant enabling environment. Notably it also requires cooperation between various stakeholders, including government, civil society, communities and the private sector.
- **Specialisms exist and should be leveraged:** The work of initiatives like BIOFIN is especially useful in this regard, assisting governments to determine which mechanisms are most relevant and achievable.

Chapter 7: Recommendations

1. **Support the development of requisite enabling conditions at public sector level:** Support should be provided to governments to create the right enabling conditions and policies that promote the development of innovative finance mechanisms, such as a tax system that benefits conservation management or a policy that incentivises investment in green bonds.
2. **Support feasibility assessments:** Funding and technical support should be provided to PA Authorities to conduct feasibility assessments on innovative finance mechanisms to determine which are appropriate for each PA and/or PA system and to develop an investment prospectus to attract funding to develop the most suitable mechanisms. These assessments should include a review of the policy framework to identify any barriers, which can be addressed in recommendation 1 above.

8 | Conclusion

Photo: Lion portrait - Christine Mentzel

The protected area estate of Eastern and Southern Africa protects globally significant biodiversity and valuable ecosystem services upon which people, wildlife and economies depend. However, these natural assets are not adequately funded, putting them and the services they provide at great risk. A 2018 study estimates that approximately USD 1.5 billion per annum is needed to support PAs with lions in Africa, a clear indicator of the scale of the problem (Lindsey, P.A. et al. 2018).

While there is a clear lack of financial resources for the effective management of the existing protected areas, there is a global call to increase the PA estate, which is putting further pressure on the already strained PA budgets, especially in developing regions such as the ESA region.

Protected area authorities in ESA generally lack a clear understanding of the actual funding gap and revenue allocation. In addition, many PA authorities do not have proper business plans to guide and address the sustainable development of PAs in a way that will increase sustainable revenue for effective management. Technical and financial support should be provided to PA authorities to develop professional business plans for PAs and the PA network.

Traditional funding for PA management in the ESA has been provided by donors, government and some self-generated revenue (in considerably varying degrees) such as nature-based tourism and wildlife utilisation. While donor support has and will continue to play an important role in PA management, it is unpredictable and will not fill the funding gap. In addition, dependency on external parties can disempower management agencies and PA managers and does not incentivise improved management as funding support is not necessarily linked to conservation performance. Government subsidies have also played a key role for PA funding in the ESA region, however, this funding, like donor funding, is unpredictable and is under increasing pressure from competing priorities such as education, food and water security, and healthcare. Protected area authorities should focus on increasing self-generated revenue, followed by exploring the various innovative finance options that are described in this report. In most cases this will require support from third party experts who can advise on the development of self-generated revenue and innovative financing mechanisms and help attract investment capital for the development and execution of these mechanisms.

Nature-based tourism in particular presents a significant and immediate opportunity to generate revenue for conservation throughout the ESA region given its natural values and assets, brand recognition, accessibility and relative stability within Africa. While nature-based tourism is already contributing significantly to GDPs in the region, there is scope to increase, diversify and maximise revenue generated through tourism. To adequately optimise tourism revenues throughout the region professional tourism business plans are needed at multiple levels: PA, PA authority, country and region. Professional tourism experts should be engaged to work with the PA authorities to develop these plans, support the execution of the plan and build the capacity of the PA authority. Tourism is, however, not a panacea and should also not be relied on too heavily as it too can be a volatile industry, susceptible to various economic and health shocks, requires ease of access, unique attractions to gain market share and specific skills to ensure the delivery of a quality product and service.

In addition to the traditional sources of funding, there are also various other financing options, either already in use or in development across the Eastern and Southern African region. These include emerging finance mechanisms such as DNS and biodiversity offsets as well as more creative mechanisms such as outcomes-based financing, green or blue bonds and tax incentives. There is significant opportunity to scale these mechanisms across the region. Development of these mechanisms requires proper commercial due diligence, an in-depth understanding and significant technical support. A blend of revenue streams is ideal to reduce risk and avoid reliance on one mechanism.

PA authorities should identify policy barriers and work with relevant ministries, government authorities and partners to develop a supportive policy framework that helps attract investment and incentivise conservation outcomes. In that respect, identifying general enabling conditions to increase financing is often a pre-requisite. Those conditions vary but typically include policy that enable and attract investment into conservation and/or conservation-based business, good governance, aligning conservation goals with economic goals and ensuring adequate benefit flow.

While this report highlights a significant funding gap in the ESA region, it also points to the real and immediate opportunities available for starting to address these gaps and generate sustainable revenue. Most of the recommendations made throughout this report at the end of each chapter address how best to optimise revenue and will require significant support to government and PA authorities as well as external and professional expertise.

Donors and conservation organisations should prioritise and design programmes and activities that will improve, support and develop the financial sustainability of PAs. Specifically, donors should initially support the development of professional PA business plans, to be used as a blueprint for development and further fundraising. Within this process it is critical that existing best practice is cross-pollinated across PAs, countries and regions so that there is not duplication of error and best practice can be replicated.

Developing sustainable revenue streams is critical for the long term maintenance of the ESA region protected area estate and protection of key related ecosystem services. Importantly, maximizing revenues also increases tax returns to the country and can provide meaningful opportunities to poor and marginalised communities living in or adjacent

to protected areas, creating socio-economic prospects, employment and skill sets that can be used in other sectors. All these aspects culminate in creating the platform needed to ensure the political and economic relevance of protected areas in Africa–an increasingly crucial dynamic. By creating a clear understanding of the social, economic and ecological benefit of protected areas to the region and by sustaining them through self-generated revenue, innovative finance mechanisms and carefully targeted donor support, political leaders will be more inclined to support these ecologically, economically and socially vital natural assets.

Photo: Okavango Delta, Botswana - Bastian Bertzky

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Photo: Protea - IUCN

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Annexes

Photo: Victoria Falls National Park - Christine Mentzel

1 Conservation Trust Funds

Advantages and benefits

- **Planning:** CTFs can facilitate long-term planning, support goal setting and the development of programmatic strategies and can plan for the long-term because they are, if set up properly, independent of changes in government and shifts in political priorities.
- **Transparency:** Broad stakeholder participation at set-up means that CTFs typically lead to more transparent decision-making than some private organizations and they can strengthen civil society. Also, CTFs offer a transparent option to ring-fence financial allocations for environmental purposes if the governance structure is set up properly.
- **Accountability and Risk management:** the structure of CTFs (typical structure would involve a board evenly split between the national government and international donors) increase accountability in project execution and orientation to results and reduce political, fiduciary and corruption risks through robust fiduciary management systems.
- **Efficiency:** If structured adequately, CTFs are more capable than donor organizations of working flexibly and with attention to small-scale details and creating better coordination between donors, government and civil society if these entities pool into one fund. This assumes the CTF structure is simple and less bureaucratic than NGOs and a consortium of large donors (Spergel, B. & Taïeb, B., 2008).

Constraints and challenges

- **Planning:** The announcement of the creation of a CTF can generate unrealistic expectations over resource mobilization targets, particularly in the short term if not planned well, and the start-up phase is a long and often politically charged process given the parties typically involved (national governments and international donors).
- **Market risk:** CTFs are exposed to market volatility and possible loss of capital.
- **Structure:** the absence of performance incentives (e.g. linked to returns) could lead to a sense of complacency once capital has been built. In addition, without a clear roadmap on capital building, there can be a pressure to distribute grants before the targeted amount of capital has been reached.
- **Nationalism:** A desire for local/national investment can limit the range of possible investments (e.g. a CTF in Madagascar might encounter difficulties in investing only in Madagascar-based assets or securities).

Necessary and supportive factors for success

CTFs may be an appropriate tool for sites in ESA. For CTFs to be appropriate, feasible and successful, key conditions need to be met ((Spergel, B. & Taïeb, B., 2008; Bladon, A., Essam, M. and Milner-Gulland, E., 2014):

- **Solid strategic and financial planning:** CTFs lend themselves to situations where the issues to be addressed are long term (at least 10 to 15 years) and require a sustained response over many years, rather than to those where threats are strong and imminent. At the onset, a long-term strategic and financial plan is required to ensure the fund will address needs and for efficient implementation and spending. This plan should have a review and adaptive management process.
- **Independent, professional, transparent and participatory governance:** Successful CTFs have independent boards with relevant expertise. Board members should have a high level of autonomy, competency, stakeholder representation, and commitment to achieving the CTF's mission. The most critical factor for good governance is for a CTF to have a non-governmental majority on its board of directors.
- **Critical mass:** There need to be enough people from diverse sectors of society, diverse professional backgrounds (and the attached differences in mentality) that can work together to achieve biodiversity conservation and sustainable development. The fund's endowment needs to be large enough to cover administrative costs.
- **Governmental and institutional support:** While the CTF is independent, it is vital to have active government support for a public-private sector mechanism outside direct government control. The CTF needs robust and transparent legal and financial policies and supporting institutions (including banking, auditing and contracting) in which people have confidence in the target country/region.
- **Diversified financing:** The right combination between long term capital and short-term funding and the best use of use of earmarked taxes and charges needs to be adequately thought through.
- **Strategic partnerships:** A CTF should develop relationships with a diversity of stakeholders such as national and international policy-makers, grantees, NGOs, and other CTFs and institutions with financial expertise.
- **Efficient management:** Establishment and management costs of a CTF can be high and must be compared to the expected conservation outcomes. This should be assessed in a feasibility assessment.
- **Adequate use:** There are many contexts where conservation costs cannot be funded sustainably, and this is where CTFs are the most useful. In many cases CTFs should act more as a 'bridge' – temporarily funding activity over a period of time while more financially

sustainable conservation management methodologies are developed for a particular context which can take over once the bridge has been crossed.

2 Debt for Nature Swaps

Advantages and benefits

- DNS can leverage funds for conservation. They can be used as co-¬financing or matching funds for larger conservation endeavours. Similarly, a successfully implemented debt swap may generate interest among other donors.
- As a long-term funding mechanism for conservation, DNS stimulate the creation of CTFs given that the right framework is already in place and that stakeholders have already worked together, which dispenses proceeds over a long period of time.
- DNS can promote participation by civil society, particularly when local NGOs or CTFs are among the beneficiaries (UNDP, 2019).

Constraints and challenges

- Transaction costs might be high compared to other instruments; negotiations can be time-consuming, spanning several years and might result in limited debt reduction.
- Grants may be disbursed according to donors' preferences, which might or might not mirror local conservation needs.
- As a result of these constraints, and also because of some mistakes made (e.g. some early debt-for-nature swaps tended to overlook local communities living on the land set aside for conservation), DNS have only resulted in relatively small amounts of debt relief: the total external debt of developing countries is c. USD 4 trillion whilst total debt relieved through DNS as of 2010 equals to more than USD 1 billion, i.e. 0.03% of the total (Pervaze, A. S., 2010).

Necessary and supportive factors for success

For DNS to be appropriate, feasible and successful, key conditions need to be met:

- **Conservation goals aligned with economic goals:** Resources should be invested in projects that can generate positive economic returns along with environmental benefits, for example adaptation to climate change or the expansion of protected areas with potential for eco¬tourism.
- **Solid strategic and financial planning:** Like CTFs, DNS lend themselves to situations where the issues to be addressed are long term, there are clear conservation plans in place, a business case and long term sustainable models.
- **Governmental support:** There needs to be active government support for involving an NGO or another donor government agency (e.g. USAID) in the conservation strategy of the country, especially if this is facilitated by an NGO.
- **Buy-in from local communities:** Qualitative assessments of social benefits of DNS (e.g. in Bangladesh) show that they can result in higher annual income for local communities (Arannayk Foundation, 2016). but this is not always the case. Identifying projects that can deliver multiple benefits and that respect social safeguards is critical.
- **Management of inflation and exchange rate fluctuations:** The currency risk can be mitigated, for example, by making payments in local currency at the spot rate on the day payments are due. Mitigation strategies to inflation risks are similar to the ones for currency risks.

3 Payment for Ecosystem Services

Advantages and benefits

- PES can help to correct market failures by pricing conservation value.
- They are more flexible than command-and-control regulation, making customization to local circumstances possible: the detailed structure of each PES is by definition adapted to the local context since outcomes, revenue streams and initial upfront costs need to match the reality on the ground.
- Behavioural changes are promoted with positive incentives rather than coercion: for instance, rather than being fined for releasing pollutants in a river, farmers are rewarded for adopting more environmentally friendly practices.
- They provide opportunities for cash income in rural areas where poverty might be concentrated, and also increased knowledge of sustainable resource use practices through the provision of training and technical assistance (UNDP, 2020a).
- Payment for ecosystem services increases the value of natural resources thereby motivating the conservation of these natural assets.

Challenges and constraints

- The economic valuation of ecosystem services can be difficult and costly process, depending on the ES being valued.
- The implementation of PES might be costly due to the specifics of design, negotiation implementation and monitoring of the programme.

- The efficacy of PES implementation is partially connected to the availability of data on land property, which is a known challenge in many developing countries.
- PES might result in limiting the flexibility of local government and communities in making decisions on their own development particularly where easements or long-term contracts specify a narrow range of alternatives.
- Because ecosystem services are public goods, capturing them for monetisation through private sector transactions is difficult if the underlying valuation of the PES scheme is not underpinned by government policy or at least requirements placed on businesses by creditors.

Necessary and supportive factors for success

For PES to work, the following conditions need to be met:

- A buyer / user must be identified and willing to pay (often this is the key blocking factor).
- The market conditions must be understood by the scheme designer(s).
- The cost for the provision of the service by the provider needs to be priced accurately, providing a "win–win" opportunity for both the supplier and the buyer(s) of the service: the buyer covers the cost of provision, which generally should be lower than any alternative method by which the buyer might secure the same service, and sufficient to ensure that the alternatives are less economically attractive.
- A robust baseline and supporting information need to be available, as basic requirements for economic valuation of ecosystem services.
- Clearly identifiable actions that can increase the supply of a service need to be identified and the funding providing needs to be used to secure and enhance the ES.

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