



MOBILIZING SUSTAINABLE FINANCE FOR AFRICAN ELEPHANT CONSERVATION

Paper commissioned by the Secretariat of the Convention on International Trade
in Endangered Species of Wild Fauna and Flora



May 2023



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PREFACE

The existence of the African Elephant as a species living in the wild, the largest land mammal and one of the most iconic animal species on the planet, is valued by people all over the world. Yet the required reliable, long-term and robust financing for the conservation of stable populations in its range States and promoting coexistence with humans is still missing, despite increased understanding that while wildlife conservation is a global benefit, the costs are highly localized. Large sums are needed to tackle challenges such as human-elephant conflict, maintenance of habitats and prevention of habitat loss, and combatting poaching and illegal trade.

The [Convention on International Trade in Endangered Species of Wild Fauna and Flora](#), or CITES, regulates more than 40,000 species of animals and plants to ensure that their trade is legal, sustainable and traceable. As agreed by CITES Parties in the [CITES Strategic Vision 2021-2030](#), *“the Convention stands at the intersection between trade, the environment and development, promotes the conservation and sustainable use of biodiversity, should contribute to tangible benefits for indigenous peoples and local communities, and ensure that no species is threatened with extinction by entering into international trade.”* This ambitious vision resonates and complements United Nations Member States’ commitments in [The Future We Want](#) and contributes to the achievement of the [United Nations Sustainable Development Goals](#).

To achieve this vision and meet their international commitments, the world must move beyond the traditional means of ad hoc grants and loans and sole dependence on public funds. This means moving towards nurturing a ‘wildlife economy’, where innovative financial mechanisms are possible, where public and private funds are available, and where the range states and investors can work as partners in the joint effort to address biodiversity and wildlife conservation. This is an opportune moment for the CITES community to explore the various options that are available for sustainable financing for wildlife conservation and what needs to be done to benefit from them.

I am therefore extremely pleased to welcome this publication entitled *Mobilizing Sustainable Finance for African Elephant Conservation*. I would like to express my sincere appreciation to the CITES Management Authorities of the African elephant range states and other stakeholders who have taken part in the study as well as in the CITES roundtable on sustainable wildlife finance for African elephant conservation (Nairobi, October 2022). I am particularly grateful for their willingness to take an active part in this new endeavor, and to share their knowledge, experience/expertise and views in a congenial atmosphere. My appreciation also goes to the European Union for their generous financial support that allowed the study and the roundtable meeting, to the colleagues at the World Bank for their valuable advice, to all the presenters who gave their valuable time to take part in the roundtable and to Dr Randall Kramer for sharing with us his valuable knowledge and inputs on this important issue to produce this document.

We remain committed to continuing our collaboration with the experts and partners in advancing our collective efforts to support CITES Parties to implement the Convention and to ensure the conservation and sustainable use of the world’s wildlife.



Ivonne Higuero
Secretary-General

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MAIN MESSAGES

- *Elephant conservation is complex and costly* and requires mitigating human-elephant conflict, controlling habitat loss, and combatting poaching and illegal trade.
- *The global interest in protecting keystone species like elephants has not translated into sustained financial support*, so most conservation costs are borne by governments and local communities.
- *The wildlife economy has been under-recognized and may present a strong growth opportunity for a number of African economies*, given its importance in local livelihoods and in the macroeconomy.
- *Additional funding for elephant conservation can be mobilized through several financial mechanisms* including payments for ecosystem services, carbon credits, green bonds and wildlife bonds, debt-for-nature swaps, and Conservation Trust Funds. There may be other mechanisms that should be explored as well.
- *Using these financial mechanisms will require the creation of an enabling environment* that comprises involvement of local communities, improved intersectoral coordination, enhanced conservation performance monitoring, and policy reforms to incentivize private sector and donor investment.



1. INTRODUCTION

African elephants play a key role in ecosystems and economies across the continent. As keystone species, they maintain savanna and forest ecosystems by opening up pathways, dispersing seeds, and creating depressions that store water (Hicox, 2020). In forests, they help maintain healthy tree growth and carbon storage in trees and soils, which in turn helps reduce the effects of climate change (Beaune *et al.*, 2013). Also, elephants are a centerpiece for tourism and trophy hunting in many parts of Africa, helping to generate considerable income, employment, and foreign exchange earnings (Blignaut and de Wit, 2008; Naidoo, Weaver, *et al.*, 2016).

IUCN's 2016 African Elephant Status report provides the most recent reliable estimate of the total population of African elephants, approximately 415,000. About 70% are found in southern Africa. About one quarter are forest elephants, found in Central and West Africa. The rest are savanna elephants spread across the continent. There was a precipitous decline of 111,000 elephants between 2005 and 2015, primarily due to a surge in poaching for ivory. Since then, poaching has declined, primarily due to increased efforts to control poaching and to reduce the demand for ivory. Despite the continued continent-wide losses in elephant populations, there have been growing populations in some areas for several decades, particularly in the [Kavango-Zambezi Transfrontier Conservation Area](#) of southern Africa. In 2021, IUCN listed African elephants as two separate species for the first time, and declared the African forest elephant as Critically Endangered and the African savanna elephant as Endangered (IUCN, 2021).¹

Elephant conservation is complex and costly. Threats and challenges facing wildlife management authorities include poaching for ivory and illegal trade, habitat loss and fragmentation, climate change, crop raiding, injuries and deaths to humans caused by elephants, and retaliatory killings of elephants by affected communities (Advani, 2014; CITES, 2010; Muboko, *et al.*, 2014). While there is great global interest in conserving elephant populations, this has failed to translate into sustained financial support, so most of the costs of conservation are borne by local communities and national governments. Wildlife conservation budgets in Africa, already inadequate, have been slashed during the COVID-19 pandemic because of the cost of relief measures and the need for governments to slash non-health related funding. Tourism revenue and donor funding for conservation have been impacted as well (Lindsey *et al.*, 2020). Government budgets are further stretched by rising inflation across the globe.

With conservation funding under more pressure than ever, there is a need to identify new, long-term streams of funding to cover the costs of elephant conservation and share benefits with communities living near elephant populations.

This paper examines several ways to expand conservation funding to support African elephant conservation. It was commissioned by the CITES Secretariat in the implementation of the Conference of Parties [Decision 18.9 on Access to funding](#), which called for an exploration of the potential to scale up financial resources to ensure conservation and sustainable use of wildlife. The paper reviews several existing conservation financial mechanisms including payments for ecosystem services, carbon credits, green bonds, debt-for-nature swaps, and conservation trust funds. We then consider the pros and cons of using each mechanism for elephant conservation, and discuss the enabling conditions necessary to attract more conservation investment from public and private sources.

Another approach to generating new funding for conservation proposed by some elephant range states is a one-time sale of existing ivory stocks. This option is not explored in this paper because it is currently not legally possible under CITES, and the feasibility of stock sales is unknown, given the demand reduction efforts in Asia and other regions.

The review of these mechanisms is intended as a first step in a dialogue among wildlife authorities, donors, investors, and other stakeholders. The aim is to identify ways to establish more reliable, predictable, and steady flow of funds for wildlife conservation. Achieving greater funding success will require alliance building and establishment of enabling conditions that can position wildlife authorities and local communities in the African elephant range states to become business partners, working in concert with donors and investors.

¹ The scientific name used in CITES to describe the species of African elephants covered by the Convention remains *Loxodonta africana*. The practical effect of this is that all African elephants are covered by CITES regulations under the scientific name *Loxodonta africana* - including animals referred to by some as African forest elephant (*Loxodonta cyclotis*).

2. THE WILDLIFE ECONOMY

A recent assessment by the [Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services \(IPBES\)](#) concluded that several billion people worldwide depend on wild species of living organisms for their economic well-being. The report noted that wild plants and animals are particularly important to people in economically vulnerable situations. Nearly 70% of the world's poor are directly dependent on wild species and on businesses supported by them. These living natural resources are an essential ingredient for sustainable development and are utilized for food, energy, medicine, material and other purposes. Many countries derive significant economic value and job creation from sustained use of wild plants and animals. Wildlife is used through fishing, logging, gathering, and hunting activities that contribute hundreds of billions of US dollars to the global economy. In addition, nature-based tourism (non-consumptive wildlife use) generates substantial revenue and employment. Prior to the COVID-19 pandemic, protected area visitation alone generated USD600 billion per year globally, with the greatest tourism visitation growth rates in wildlife-rich countries (IPBES, 2022).

Sustainable utilization of wildlife can contribute both to economic development and conservation (Webb, 2002; Snyman *et al.*, 2021a). This is in keeping with a core objective of the 1992 [Convention on Biological Diversity \(CBD\)](#) that emphasized sustainable utilization of the components of biodiversity. The CBD defined sustainable use as “the use of components of biological diversity in a way and at a rate that does not lead to the long-term decline of biological diversity” (Convention on Biological Diversity, n.d.). Sustainable use of wild plants and animals contributes to the well-being of indigenous peoples and local communities through subsistence, as well as through trade in formal and informal markets (IPBES, 2022). Sustainable use of wildlife is also embedded in the [UN Sustainable Development Goals](#), particularly [SDG 14](#) (sustainable use of marine resources) and [SDG 15](#) (sustainable use of terrestrial resources) (United Nations, n.d.). The Convention on International Trade in Endangered Species of Wild Fauna and Flora also has a related mandate: “CITES stands at the intersection between trade, the environment and development, promotes the conservation and sustainable use of biodiversity, should contribute to tangible benefits for indigenous peoples and local communities, and ensure that no species is threatened with extinction by entering into international trade” (CITES, 2019b).

Not all wild plant and animal economic activity is sustainable. The World Bank published a report in 2019 examining the extent of illegal logging, fishing and wildlife trade (Miranda *et al.*, 2019). This illegal trade includes threatened species such as pangolin (the most traded mammal species) and wood products from rosewood trees. Other illegal trade arises from unauthorized extraction of timber and marine species that depletes resources important to local communities. These activities arise from corruption, organized crime and weak enforcement of laws and regulations. Illegal logging, fishing and wildlife trade deplete natural resources, and erode ecosystem services including water filtration, carbon storage and biodiversity protection.

The estimated worldwide economic losses total more than USD1 trillion annually. Approximately 90 percent of the losses arise from foregone ecosystem services, currently unpriced by markets. By comparison, these losses are twice or more the combined, annual global losses from piracy and counterfeiting (Miranda *et al.*, 2019). Box 1 summarizes a study of the economic impacts of illegal killing of African elephants on protected area tourism.

Comprehensive work by Snyman and colleagues has documented the potential benefits from sustainable use of Africa's wildlife economy (Snyman *et al.*, 2021a). They define the wildlife economy as the businesses and economic activities that either directly depend on wildlife or contribute to wildlife conservation through their activities. They focus on five categories of activities:

- **Ecotourism** – includes non-consumptive use of wildlife
- **Hunting & fishing** – includes trophy hunting of wildlife, game meat hunting, and artisanal and small-scale fishing
- **Wildlife ranching** – includes breeding of wild animals for meat, hunting, tourism and other uses
- **Carbon market** – includes projects that generate income through REDD+ and other financial mechanisms by protecting or sequestering carbon or by reducing carbon emissions
- **Non-timber forest products** – includes non-timber forest products used for subsistence and commercial purposes.

Box 1. Economic Impacts of Elephant Poaching on Tourism

The poaching of African elephants has a direct economic impact on the economies of African range states. An economic study by Naidoo and colleagues (2016) calculated the impact of poaching on tourist visits to African protected areas and concluded that the annual losses are approximately US\$25 million dollars. They argue that since this lost tourism revenue exceeds the antipoaching costs necessary to stop the illegal killing of elephants, conservation in protected areas “represents a wise investment with immediate and ongoing payback for tourism.” They also find that in Central Africa, elephant-based tourism is less able to contribute substantially to elephant conservation because tourism levels are lower and forest elephants are often harder to see. In these countries, they encourage different economic mechanisms such as carbon credits.

Source: Naidoo, Fisher, *et al.* 2016.

The authors present case studies of the economic importance of wildlife resources in Ghana, Gabon, Rwanda and Kenya. Box 2 presents a summary of their findings for each country. They find that Africa has exceptionally rich wildlife resources, including the largest combination of mammal species in the world, the second-largest rainforest, and some of the most productive marine ecosystems on earth. These natural assets hold large economic value and are providing income, jobs and government revenue. However, this natural capital is rapidly declining, due to a wide range of threats including land use change, climate change, illegal trade, corruption and other causes. There is an urgent need for governments to recognize the value of these living resources and to safeguard them by scaling up their efforts to reduce threats to these valuable wildlife resources (Snyman, 2021b).

Wildlife tourism is a major economic activity in Africa, and elephants are directly and positively related to tourism. Tourism can be grouped into two categories: wildlife watching and trophy hunting. Both approaches are common in the elephant range areas, but their economic importance varies from country to country. The direct contribution of tourism to the economy of select Africa range states is shown in Table 1. In Botswana, tourism accounts for 12.5% of GDP and 9.3% of national employment. In Kenya, comparable numbers are 7.7% of GDP and 8.6% of employment. A much lower proportionate impact is seen in Gabon and Democratic Republic of Congo.

The wildlife economy may present a significant growth opportunity for many economies in Africa given its importance in local livelihoods and in the macroeconomy. Snyman *et al.*, present a roadmap for expanding the wildlife economy.

Step 1 is to strengthen policy, legal, and regulations that govern natural resources in each country, with a particular eye on property rights over forest, wildlife and fisheries. For example, Namibia passed legislation that enables local communities to establish conservancies that manage wildlife resources for community benefit.

Step 2 is to improve the overall business environment, which will attract greater investor interest. Good governance and ease of doing business will encourage investment in nature tourism, carbon markets, and trade of wildlife products. Rwanda has passed legislation to tourism, carbon markets, and trade of wildlife products. incentivize investment in several priority sectors with a goal of making the country a global hub for business and innovation. Several countries have established public-private partnerships for co-managing national parks as a means to attract investment and private sector expertise.

Step 3 for growing the wildlife economy is to promote collaboration and partnerships. Since the wildlife economy is a complex environment, growing it requires collaboration across multiple government departments and engagement with local communities, NGOs, universities and the private sector. An example of a plan for such collaboration is found in South Africa's National Biodiversity Economy Strategy.

Step 4 is to improve transparency and data collection. There is generally a lack of monitoring and evaluation of the wildlife economy including market activity, nature-based tourism, and protected areas across Africa. One example of progress in this area is the work that Gabon has undertaken to establish methods for surveilling and monitoring its biodiversity.

Step 5 is to build capacity of all stakeholders to engage in and manage the wildlife economy. This includes helping local communities, protected area managers, national institutions, and others to better understand wildlife trade, wildlife ranching, carbon markets, and other activities to expand the economic benefits from the wildlife economy (Snyman *et al.*, 2021b). To be most effective, any national strategy to grow the wildlife economy should be inclusive so that local communities benefit, and it should be diversified so there is not undue reliance on one economic activity such as tourism.

Box 2. Wildlife Economy in Gabon, Kenya, Ghana and Rwanda

GABON

- Estimated value of the tourism sector: US\$500 million
- Estimated 10,000 to 11,500 tons of bushmeat is sold annually with an economic value of around US\$22.73 million
- Gabon is the first African country rewarded by the Central African Forest Initiative
- NTFPs have the capacity to create added value of more than US\$180 million

KENYA

- In 2019 tourism to wildlife areas earned Kenya US\$1.08 billion
- Total Tourism in the country contributes 8-14% to GDP
- 160 conservancies host 65% of Kenya's wildlife, they are one of the largest providers of employment in rural Kenya
- Opportunity cost of hunting is estimated between US\$31.5–63 million annually
- Kenya has 15 registered carbon projects in voluntary carbon markets
- 25,000 MT of honey valued at US\$40 million annually

GHANA

- 2018 tourism generated US\$2.5 billion
- Fisheries lands about 400,000 MT of fish valued at over US\$1 billion annually
- First REDD+ project started to pay US\$50 million
- Largest exporter of shea nuts earning over US\$34 million in 2015
- Bushmeat valued at US\$350 million

RWANDA

- Rwanda is the second-fastest growing tourism economy in sub-Saharan Africa
- More than 80% of tourism in Rwanda is nature-based
- 2019 park revenue was US\$28.5 million
- 90% of Rwanda's population depends on natural resources for their livelihood
- 2007 value of firewood and charcoal amounted to US\$122 million

Source: Snyman, *et al.*, 2021b.

Table 1. Tourism Contribution to the Economy of Select Elephant Range States (2019)

GDP (direct contribution)	Direct employment
Botswana = 12.5%	Botswana = 9.3%
Cameroon = 8%	Cameroon = 8.5%
DRC = 1.9%	DRC = 1.7%
Gabon = 2.7%	Gabon = 2.9%
Ghana = 6.0%	Ghana = 6.3%
Kenya = 7.7%	Kenya = 8.6%
Namibia = 14.9%	Namibia = 14.4%
Rwanda = 11.4%	Rwanda = 6.1%
South Africa = 6.4%	South Africa = 9.3%
Tanzania = 10.6%	Tanzania = 6.1%
Zambia = 7.4%	Zambia = 7.4%
Zimbabwe = 6.5%	Zimbabwe = 2.7%

Source: WTTC, 2022.



3. CONSERVATION FINANCE

It has long been recognized that conservation finance, or biodiversity finance, is an essential aspect of conserving nature. It is a broad term that encompasses a wide range of issues, including national budget allocation, tax policy, financial planning for protected areas and other financial aspects of conservation. More recently, discussions about conservation finance have broadened to include investments by the private sector. At the international level, attention has focused on the financial challenges of meeting global biodiversity goals. There is a growing recognition that the amount currently spent on biodiversity conservation falls far short of what is needed to halt the decline in biodiversity loss. The global level of spending on biodiversity conservation in 2019 was USD124-143 billion per year. Compared to the estimated global need, this leaves a biodiversity financing gap of USD598-824 billion per year (Deutz *et al.*, 2020).

Addressing this gap is one of the aims of the **Biodiversity Finance Initiative (BIOFIN)**. BIOFIN is a UNDP-managed global partnership that works with countries to support their financial management for biodiversity conservation using country-level assessments (Arlaud *et al.* 2018). BIOFIN categorizes conservation finance mechanisms into four categories: (1) generating new revenues to support conservation, (2) realigning existing financing to reduce negative impacts on conservation, (3) avoiding future expenditures through policy and investment, and (4) delivering more effective and efficient conservation. (See Figure 1.)

We will focus on the first box – **generating new revenues to support wildlife conservation**. We will not examine other topics such as subsidy reform, fiscal policy, or sustainable supply chains. These are important elements of biodiversity finance, but are not directly related to mobilizing new financial flows to support wildlife conservation and sustainable use.

The largest source of finance for biodiversity conservation globally is domestic government spending, which accounts for USD75-78 billion (57%) (Deutz *et al.*, 2020). Many African countries have seen government allocations for conservation shrink in real terms over time, and this was exacerbated during the COVID-19 pandemic, when revenues fell and funds were shifted to other needs (Lindsey *et al.*, 2020). The decline in government spending for conservation underscores the need to find new funding sources.

Another traditional source of conservation funding is official development assistance (ODA). This is financing provided at concessional rates or terms by development banks and international organizations to promote economic development. A small portion of ODA goes to biodiversity conservation. Deutz *et al.* (2020) estimate this portion to be USD4-10 billion (5%) per year across the developing world.

Philanthropy and conservation NGOs provide another USD2-3 billion (2%) a year of finance for biodiversity conservation (Deutz *et al.*, 2020). The relative importance of this source of funding is much greater in the developing world. For example, in Eastern and Southern Africa, donor support from both ODA and philanthropy provides more than 50% of the funding of protected areas. The share of donor support for protected areas is between 70-90% in Angola, Malawi, Ethiopia and South Africa (IUCN, 2020).

Figure 1. The Four Main Outcomes of Conservation/ Biodiversity Finance

Generate revenues	Generate or leverage financial resources
Realign expenditures	Re-orient existing financial flows
Avoid expenditures	Prevent or reduce future expenditures
Deliver better	Reduce costs through efficiency & synergies

Source: Arlaud *et al.*, 2018.

4. FINANCIAL MECHANISMS FOR WILDLIFE CONSERVATION AND SUSTAINABLE USE

In this section we discuss some of the more innovative ways to generate revenue for wildlife conservation and sustainable use. This provides an overview of emerging practice and identifies areas of promise for mobilizing additional conservation finance in the future.

Payments for Ecosystem Services

Payments for ecosystem services (PES) is a widely used mechanism to generate revenue to compensate landowners or communities for the management of natural resources needed to maintain natural resource stocks and the resultant flows of ecosystem services (King, 2021). Most widely applied to the protection of watersheds that provide water for human consumption, PES programs have been extended to a wide variety of other services including flood protection, water purification, carbon storage and biodiversity protection (Tobin and Mitchell, 2021).

PES programs usually include a contractual agreement that ties cash payments or other forms of compensation to the delivery of services on an annual basis. Most programs are operated by national governments, although nongovernmental agencies often serve as intermediaries. Over the past two decades, there has been an explosion in PES programs, with more than 500 PES programs worldwide in 2018, accounting for over USD36 billion in annual payments (Salzman *et al.*, 2018). Most PES programs have been implemented in developing countries that have not had a long history of environmental incentive programs. Following the rising international political and scientific attention to ecosystem services that occurred in the late 1990s, the PES concept was rapidly adopted by governments in the developing world, particularly in Latin America (Schomers and Matzdorf, 2013).

The best-known example of this approach is **Costa Rica's Pago por Servicios Ambientales** (Payments for Environmental Services), which has operated since 1996. Using funds from donors, special taxes and buyers of environmental services, the program pays for forest conservation through contracts on approximately a half million hectares. The program compensates land owners for lost income, and the payments are based on the type of forest protection, reforestation, or agroforestry activity undertaken (Pattanayak *et al.*, 2010). The largest PES is **China's Sloping Lands Conservation Program**, established in 1999 in response to a series of floods and droughts. This program focuses on enhancing soil conservation through converting steep croplands to forests and grasslands, as well as reforestation. The program has some 12 million hectares of land under contract (Salzman *et al.*, 2018).

Some concerns have been raised about the effectiveness of the PES approach. First, PES programs are intended to replace missing markets for environmental services by providing direct incentives to commodify those services. PES may not work well in settings without strong governments and institutions, including technical assistance, land tenure, credit, and full information. In addition, the programs are often implemented without follow up evaluation of their effectiveness (Pattanayak, 2010).

Some PES programs operate collectively, i.e. they provide incentives to groups or communities to provide ecosystem services on their land. These collective contracts have been particularly attractive in rural communities in low-income tropical countries. This is because collective PES approaches are more suited for communal tenure arrangement or community-based management resources systems. Hayes *et al.* reviewed a number of these collective PES arrangements and found that while these approaches are also sensitive to governance conditions, they can increase collective land management activities that provide environmental and economic benefits (Hayes *et al.*, 2019).

While most PES are area-based, there are several examples of PES applied to species-based conservation using a performance-based approach. One such program is **Wildlife Credits in Namibia**, which makes payments related to rhino sightings in communal conservancies and for protecting an elephant corridor. In one community, bonus payments are made every day a conservancy takes a proof-of-life photo of a rhino (Box 3). In Tanzania, the **Ruaha Carnivore Project** makes payments to communities based on camera-trap evidence of the presence of predators (Roe et al, 2020). Table 2 summarizes four wildlife PES programs in Africa including funding sources and whether payments are made to individual households or to communities.

Box 3. Namibia's Wildlife Credits

Wildlife Credits are a type of PES that pays communities for wildlife conservation based on performance. The underlying premise of the program is that Namibia's ecosystems and wildlife have global economic value, and this value should be realized by people who are living at the front line of protecting these resources, and who bear a large proportion of the costs that accompany living with wildlife. The Wildlife Credits payments are tied to measurable conservation results. Wildlife Credits operates under the auspices of the Community Conservation Fund of Namibia, a trust fund. Wildlife Credits has several components in different communities.

One example is the payments received by the Sobbe Conservancy in the Zambezi region, where there is a well-used elephant pathway that runs close to local communities. Members of the conservancy have traditionally protected the corridor by avoiding crop planting and erecting wooden fencing. The corridor is crucial to the movement of elephants between Botswana, Namibia, Angola and Zambia. In 2018, Amarula/Distell Namibia, a company which makes a liqueur whose branding is closely linked to elephants, formed a partnership with Wildlife Credits and the Sobbe Conservancy. They invested N\$130,000 to provide payments over a three-year period. The members decided to use the funds to pay for a village electrification project. Satellite imagery is being used to confirm that the communities have continued their long-standing tradition of preventing development in the corridor. Camera traps show that the corridor is being used by many animal species including elephants, lions, antelopes, leopards and spotted hyenas.

Source: Katjingisiua and Mauney, 2020; CCFN, (n.d.).

Table 2. Example PES for Wildlife Conservation in Africa

Name of Program	Species	Collective or Individual	Funding Source	Description
Wildlife Credits (Namibia)	Lions, elephants, rhinos	Collective	Local businesses, government, international NGOs	Payments to local conservancies based on predator sightings by tourist lodges and for performance of elephant corridors
Ruaha Carnivore Project (Tanzania)	Lions	Collective	International NGOs, bilateral aid agencies, other donors	Communities living near lions are provided non-lethal means to protect their livestock. Community benefits are tied to camera-trap monitoring of wildlife in adjacent areas
Wildlife Conservation Lease Program (Kenya)	Various	Individual	International donors, local NGOs and World Bank	Landowners adjacent to Nairobi National Park are provided annual payments for not fencing or selling their land
Simanjiro Conservation Easement (Tanzania)	Various	Collective	Tour operators and international NGOs	Payments are made to a community concession adjacent to Tarangire National Park to control cultivation, charcoal production and illegal hunting

Source: Roe et al., 2020; USAID, 2018.

Carbon Credits

The United Nations Framework Convention on Climate Change (UNFCCC) established the Reducing Emissions from Deforestation and Forest Degradation (REDD) program in 2005 to provide compensation to countries that engaged in forest conservation efforts. The focus was on tropical forests, which have been heavily impacted by human activity. REDD was changed to REDD+ in 2013 under the Warsaw Framework, when the UNFCCC decided to include conservation, restoration and sustainable forestry goals into the program in addition to emissions reduction goals. REDD+ includes the development of a national strategy, implementation of national policies and demonstration activities, and results-based actions that can be fully measured (UNFCCC, n.d.). A number of countries have undertaken national and sub-national projects to reduce carbon emissions in recent years. These efforts are primarily supported by various multilateral funds such as the Green Climate Fund, Global Environment Facility, and others (Watson, *et al.*, 2022).

While these national REDD+ activities have been underway, NGOs and for-profit companies have implemented hundreds of local REDD+ projects largely funded through the sale of carbon credits in voluntary carbon markets (Atmadja *et al.* 2022). Carbon credits or carbon offset credits are quantified reductions in emissions of carbon dioxide or greenhouse gases made in order to compensate for or to offset an emission made elsewhere. When a company buys carbon credits, that provides monetary incentives for local entities to improve carbon stocks or halt deforestation. These projects have provided a proving ground for delivering forest conservation results through the carbon market (UNFCCC, n.d.).

To date, local REDD+ projects have had modest, positive impacts on forests and people, and the projects have provided an avenue for multiple actors to participate in forest conservation activities. However, there is a lack of uniform carbon accounting methods, which complicates the question of how much these projects are contributing to achieving national and international climate objectives (Atmadja *et al.* 2022). Box 4 describes a carbon offset project in Tanzania, that has been designed to support local communities and provide biodiversity benefits in addition to generating saleable carbon credits. Many of the credits sold on behalf of the communities have been bought by travel companies to offset their customers' carbon emissions.

There is strong potential for using carbon offset payments to finance forest elephant conservation, according to research by Berzaghi and colleagues (2019). Forest elephants contribute to above-ground carbon storage by reducing small tree density via trampling and consumption, and by dispersing seeds of especially large trees. The resulting change in forest structure means that forests with elephants store 3-15% more carbon than those forests without elephants (Berzaghi *et al.*, 2019). Valued at an average 2019 carbon price of USD25 per ton, this would translate into a total present value of more than USD20 billion over the next ten years for the forest elephants' carbon-capture services. The authors argue that the magnitude of these benefits is large enough to attract investors looking for carbon offset opportunities, and "facilitate financing of conservation programs and local communities and broaden the portfolio of nature-based solutions to mitigate climate change" (Berzaghi *et al.*, 2020). (See Box 5 for additional details.)



Box 4. Carbon Tanzania

Carbon Tanzania is a social enterprise using a business model to capture the value of selling carbon credits through voluntary carbon markets. It works with a number of partnerships on land and forest restoration activities.

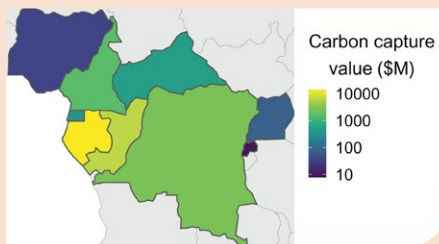
The organization has contracted with indigenous and forest communities who have committed to forest and rangeland sustainable management, and authorized Carbon Tanzania to sell carbon credits on their behalf. Sixty percent of the proceeds from the sales are returned to the community.

Sale of carbon offset credits on behalf of Hazda hunter-gatherer communities is through a voluntary market. Many of the credits have been bought by travel companies, including Africa-based nature-based tourism companies seeking to offset the emissions produced by their customers. In the first seven years of the project, independent auditors estimated an annual average capture of 22,000 tons of carbon dioxide and nearly US\$500,000 in revenue going to communities. This became the basis for a new REDD+ project launched in 2022 that is expected to prevent deforestation near the Ngorongoro Conservation Area and to generate US\$450,000. The primary buyer of these credits is a German offsets company.

Source: Pearce, 2022; Roe, 2020.

Box 5. Financing Forest Elephant Conservation by Valuing Carbon Services

The forest elephants of Central and West Africa browse on small trees in the rainforest canopy. Berzaghi *et al.* (2019) hypothesized that this constant thinning of trees reduces competition for resources and allows surviving trees to reach larger sizes. They tested this hypothesis with an ecological model for two sites in the Congo basin and found that forest disturbance by elephants increases above-ground biomass, impacts rainforest ecosystem functioning, and enhances carbon stocks over time.



In a follow-up study, they estimated the economic value of these carbon services and argued that investing in elephant carbon services could provide added value to the usual REDD+ approaches to forest protection that may not provide sufficient incentives for conservation of wildlife. Using current carbon prices, they developed a model to value the carbon in 79 tropical rainforest protected areas in nine Central and West African countries under three different conservation scenarios using a range of different carbon prices. They found that with

protection of elephants, the resulting carbon capture services would be worth US\$20.8 billion over the next 10 years. The geographic distribution of this carbon value is shown in the figure below. The authors acknowledge that it may be challenging to convince nations to participate in carbon markets, but they are convinced that carbon finance has the potential to deliver larger and more dependable benefits than other sources of conservation finance.

Source: Berzaghi *et al.*, 2019, Berzaghi, *et al.*, 2020.



Green Bonds and Wildlife Conservation Bonds

Green bonds have recently emerged as a new way to generate funding for environmental activities. These bonds are issued by various public and private entities including intergovernmental institutions, corporations, financial institutions, government agencies and development agencies. The bonds are categorized as green, based on agreed-upon standards, with certification most often provided by the [Climate Bonds Initiative](#) and [Green Bond Principles](#) of the International Capital Market Association (Tobin and Mitchell, 2021). Green bonds are debt instruments that can be traded on capital markets such as the London Stock Exchange. The first green bond was issued in 2007, and since then, they have generated hundreds of billions of US dollars for environmental projects, primarily for renewable energy (Meyers et al 2020). In spite of this growth, green bonds have been used modestly for biodiversity projects. In 2019, out of a total market size of USD271 billion, only 0.5-1.0% was allocated to biodiversity (Deutz et al (2020).

The markets for green bonds are not as well developed in Sub-Saharan Africa, despite large opportunities in infrastructure, renewable energy and climate-smart agriculture. South Africa, on the other hand, has been a regional leader in green bond issuance. Kenya and Nigeria have taken steps recently to establish policies to promote green finance opportunities (Amundi Asset and IFC, 2021).

One example of a bond directed to biodiversity conservation and sustainable use is the Republic of [Seychelles Blue Bond](#), issued by the government with help from the World Bank and The Nature Conservancy. The USD15 million bond, sold to private investors, will generate USD430,000 annually to support sustainable fisheries. The bond was supported by World Bank credit guarantees and a concessional loan that lowers the interest rate that the government has to pay investors to 2.8% (Tobin and Mitchell, 2020). This is an example of blended finance, where capital from public or philanthropic sources is used to encourage private sector investment by improving the risk-return profile.

Another example of a bond to promote biodiversity protection is the [Wildlife Conservation Bond](#) (sometimes referred to as “The Rhino Bond”), issued by the World Bank in March 2022. This USD150 million bond was designed to support the conservation of black rhinos in two protected areas in South Africa. The bond was structured to blend private capital and a GEF grant to generate funding for conservation activity.² The bond offers a payout to investors that is directly linked to success in protecting and growing the rhino populations. During the life of the bond, park authorities will receive an investment of ZAR152 million (equivalent to approximately USD10 million at time of issuance) to manage rhino populations. An advanced conservation monitoring system will trace key conservation performance indicators. (Box 6 provides additional details on how the bond works.)

The bond represents a major change in the way wildlife conservation is financed. In a sector that historically has been dominated by donors and philanthropic investors, the bond creates an opportunity to attract private investment for protecting a particular wildlife species. The WCB has the potential to be replicated for other species and for ecosystem services such as provision of drinking water.

Debt-for-Nature Swaps

Debt-for-nature (DFN) swaps are financial transactions in which a portion of a country's foreign debt is cancelled or restructured in exchange for the recipient country agreeing to invest in conservation activities. This arises in situations where the external debt of the country has little chance of being fully repaid. The savings arising from the reduced debt service are devoted to conservation initiatives (King, 2020).

Many of the early debt swaps were three-part agreements involving NGOs purchasing debts from commercial banks well below market value, thereby providing debt relief for the debtor nation. Participating international NGOs included [The Nature Conservancy](#), [WWF](#) and [Conservation International](#). After the debt purchase, the NGO would transfer title to the debtor country in exchange for the country agreeing to meet environmental goals. This was often done by setting up a national environmental fund. The first debt swap was between the Bolivian government and Conservation International in 1987, and many similar swaps took place in the 1990s (Kramer and Sharma, 1997).

² The WCB differs from a green bond, which is a “use of proceeds bond” to support environmental projects. The WCB is a structured bond, which is a type of bond that is designed to attract a certain type of investor, in this case, investors willing to support rhino conservation.



Box 6. Wildlife Conservation Bond for Black Rhinos

Private investors are largely absent from investment in wildlife because of uncertainties, perceptions of unprofitability, and lack of products in the market that channel financing to conservation. As a result, the **Wildlife Conservation Bond** was structured to provide a product to investors that uses a blended finance approach. The bond was issued by the World Bank with a AAA credit rating and paired with a GEF non-grant instrument that is performance-based to directly support wildlife conservation.

At the end of the 5-year life of the bond, investors will receive back their principle plus a potential conservation success payment that is tied to rhino population growth. The conservation success payment is financed by the GEF. If there is no population growth, the bond holders will receive their principal back but will not receive a conservation success payment. With annual growth in population, from 0-4%, the investors will also receive a conservation success payment which increases in a stepped-up amount over the bond's life. In every case, the investors will be financially supporting conservation since they have agreed to forego the normal semi-annual coupon payments associated with a traditional World Bank-issued bond. Why would they give up coupon payments? They would do so both because of the opportunity to engage in the conservation effort, and the prospect of a performance payment that could potentially exceed the foregone coupon values.

The coupon funds that would ordinarily go to investors will flow to the reserves to finance conservation activities. These include improved management of more than 150,000 hectares of habitat contained within the protected areas, poaching reduction activities, and a jobs program to provide employment for more than 2000 beneficiaries of project interventions.

Source: Dominguez, 2022; World Bank, 2022.

Bilateral debt swaps also emerged in which governments holding debt forgave a portion of a debtor nation's bilateral debt in exchange for commitments to spending for environmental goals. In the early 2000s, the US government engaged in a number of bilateral exchanges following passage of the 1998 **Tropical Forest and Coral Reef Conservation Act**. Between 1985 and 2000, USD2 billion of debt swaps occurred, with the US, Switzerland, and Germany as the largest contributors to debt relief. After the early 2000s, there was a lull in DFN activity due to the emergence of the **Heavily Indebted Poor Countries Initiative** and **Multilateral Debt Relief Initiative** operated by the World Bank and International Monetary Fund. These initiatives provided much-needed debt relief to 39 countries, mostly in Africa, but without a tie to meeting environmental goals (Steele and Patel, 2020).

Box 7. Seychelles Debt-for-Climate Swap

In 2018, the government of Seychelles entered into an agreement to protect one third of its coastal and marine area in exchange for a reduction of its sovereign debt. (Sovereign debt is the amount of money that a nation's government has borrowed.). The government partnered with GEF, UNDP, and The Nature Conservancy to swap US\$21 million of official debt in the first debt for climate swap. The debt that was bought back at a reduced rate was paid into the Seychelles Conservation and Climate Adaptation Trust, a new entity set up to manage the funds and invest them in coastal protection and adaptation activities including new marine park areas, fisheries management, biodiversity conservation, and ecotourism.

Source: Blended Finance Task Force, n.d.

In recent years, the concept of debt-for-climate relief emerged with the Seychelles government working with GEF, **UNDP** and The Nature Conservancy to develop a debt swap to establish large marine protected areas (see Box 7). Following this success, the International Institute for Environment and Development issued a report introducing the concept of "debt for climate and nature swaps" to address the "triple threat" of growing indebtedness, climate vulnerability and biodiversity loss. The already burdensome USD8 trillion debt load for developing countries was worsened by the economic collapse associated with COVID-19. In 2020 and 2021, debt servicing alone was estimated to be more than USD3 trillion in developing countries. The authors argued that swapping debt for nature and climate protection will provide a bridge to greater debt sustainability. They focused particular attention on China, the largest bilateral holder of developing country debt. They also developed

metrics for prioritizing recipients of debt relief based on a combination of climate vulnerability, biodiversity assets, indebtedness and creditworthiness. Their list of 15 prioritized countries include six in Africa: Cabo Verde, Kenya, Madagascar, Mozambique, Senegal, and Uganda (Steele and Patel, 2020).

Conservation Trust Funds

Conservation Trust Funds (CTFs) are private, legally established institutions that provide a long-term, income stream for conservation activities, often through a local, flexible grant making process. In addition to providing sustainable financing, the trust funds often benefit various stakeholders by providing capacity building and other activities. CTFs can take on several forms including (a) an endowment fund -- where the earned interest is spent but not the capital, (b) a sinking fund -- where the income from the fund and part of the capital is spent each year until the fund reaches zero, and (c) a revolving fund -- which continually receives new contributions and some is spent each year. The trust funds receive investments from a variety of sources, including public funds, earmarked taxes and fees, philanthropy, and debt-for-nature swaps. The funds can be paid out in several ways, including grants and payments for ecosystem services (WWF, 2009).

Carlos Manuel Rodriguez, CEO of the Global Environment Facility, made the following observation; “While Conservation Trust Funds are not a silver bullet, they are important contributors to developing innovative solutions to our planet’s needs. In the coming years, Conservation Trust Funds will be crucial actors in convening organizations and alliances to develop the mechanisms needed to mobilize resources to fund ecosystem restoration and the conservation and sustainable use of biodiversity” (Bath, *et al.*, 2020).

One early example in Africa was the [Madagascar Protected Areas and Biodiversity Fund](#), which was established in 2005 as an innovative financing mechanism to support biodiversity conservation. With legal independence and a strong institutional base, this trust fund has been able to attract significant investment from the Madagascar Government, Conservation International, WWF, the World Bank, the Global Environment Facility, the [MacArthur Foundation](#), and several bilateral agencies. Approximately USD43 million of additional investment came from French and German debt-for-nature swaps, making it the largest CTF in Africa with investment capital of USD139 million (WWF, 2009). The endowment is invested in international capital markets and only the investment income is spent each year to support protected areas. After more than 15 years in existence, it has provided sustainable and predictable financial flows to the country’s 45 protected areas covering more than 3.5 million hectares of land (FAPBM, n.d.).

Another example is the [African Elephant Fund \(AEF\)](#), a joint venture implemented by the United Nations Environment Programme (UNEP) in collaboration with 38 African range states, donors, CITES, and the [Convention on Migratory Species](#), to provide funding for reducing threats to African elephants. While not legally defined as a trust fund, it operates similar to a CTF with regular replenishment from donors and an annual grant making process for conservation projects. Since its establishment in 2010, AEP had received USD4.9 million from donors as of 2022, with the largest support coming from The Netherlands, Germany, and the European Union. (See Box 8 for further information about AEF.)

Another CTF example is the new [Pan African Conservation Trust \(A-PACT\)](#) that was launched in 2022, during the Africa Protected Areas Congress, the first continent-wide meeting of African conservationists and leaders to discuss protected areas and their affiliated ecosystem services. The fund was designed by the [African Protected Areas Directors](#) network, working with IUCN and the African Wildlife Foundation. A-PACT is envisioned as an African-led, independent mechanism to provide consistent and reliable funding for over 8,600 protected and conserved areas and systems across the continent (IUCN, 2022). (Box 9 provides additional details about A-PACT.)



Box 8. The African Elephant Fund

The African Elephant Fund is designed to help implement the [African Elephant Action Plan](#). The plan and fund emerged from actions at the 15th meeting of the Conference of Parties to CITES in Doha in 2010. Now managed by UNEP, AEF operates as a revolving fund offering small grants to African elephant range states.

Examples of funded activities include:

- Enhanced enforcement of wildlife laws in Nigeria leading to 141 arrests
- Training more than 300 enforcement officers in Ghana and Ethiopia on anti-poaching activity, and identifying, collecting and handling wildlife products
- Conducting first aerial elephant survey in northwest Namibia in more than 20 years
- Erection of more than 12 km of solar powered fencing in Malawi to reduce human-elephant conflict and protect elephants

In recent years, grants were awarded to organizations in Chad, Niger, Togo, Gabon, Ghana, Nigeria, Malawi, Kenya, South Africa, Uganda and Zimbabwe. Since the inception of the AEF, 52 projects have been funded and completed, mostly in the USD25,000-100,000 range.

Source: UNEP, n.d.; African Elephant Fund, 2022.

Box 9. A Pan-African Conservation Trust Fund (A-PACT)

The number of protected areas in Africa has increased tenfold over the past decades without a commensurate increase in government budget allocations. As a result, protected area management agencies struggle to fully implement their management plans (Rylance *et al.*, 2017). The closing statement of the Africa Protected Areas Congress, "[Kigali Call to Action for People and Nature](#)", noted that Africa's protected and conserved areas are "grossly underfunded." The statement called for a dramatic increase in conservation fund-raising and investment in innovative ways, including A Pan-African Conservation Trust fund.

Based on estimated management costs of USD380-1000 per square km to efficiently managed protected areas, the projected financing requirements for Africa's protected areas are USD2.6- 7 billion per year. Most protected areas have budgets less than USD50 per square km. Pulling together financing on a park-by-park basis, through tourism revenues and payments for ecosystem services is difficult, costly and subject to external shocks, which was dramatically illustrated by COVID-19-induced tourism losses.

While still under development, A-PACT is expected to have three components: (1) an endowment to provide funding for operational and recurring costs for those areas most in need, (2) a revolving fund that helps protected and conserved areas access carbon and biodiversity markets, and (3) an investment vehicle that mobilizes private capital for conservation and development activities in and around the areas.

Source: A-PACT, 2022.

Other Potential Financial Mechanisms to Support Conservation

In addition to the five innovative financial mechanisms discussed above, which are promising for mobilizing wildlife conservation funding, there are other mechanisms that may warrant future exploration. These are briefly introduced in this section.

Impact investing is an approach to investing that is made with the goal of generating positive social and environmental benefits alongside a financial return. It integrates ESG (environmental, social and governance factors) into investment decisions, and requires that impacts be measured and reported relative to intended targets (Meyers, *et al.* 2020). The fast-growing impact investment market provides capital to a number of sectors including renewable energy, sustainable agriculture, housing and conservation (Global Impact Investing Network, n.d.) In the context of wildlife conservation, an example would be private investment in a sustainable agriculture company operating near a protected area that agreed to follow wildlife-friendly farming practices.

Biodiversity offsets are conservation actions that compensate for development activity that has an adverse impact on wildlife and habitat. The actions restore or protect equivalent natural resources in another location. The aim is for projects like mining or infrastructure development to achieve a no net loss and preferably a net gain of biodiversity. Biodiversity offset programs are often rooted in regulatory requirements, but most low and middle-income countries do not require offsets (Deutz, *et al.*, 2020). A recent study showed that the biodiversity offsets associated with the Ambatovy cobalt and nickel mine in Madagascar are on track to avert as much deforestation as was caused by the development of the mine (Devenish, *et al.* 2022).

Public-private partnerships (PPPs) are long-term contracts between a private entity and a government agency to provide a public service in exchange for remuneration. In the conservation area, PPPs have been used for improved protected area management, concessions within protected areas, and several other activities (Meyers, *et al.*, 2020). An example is **African Parks**, which is an NGO that has assumed the management and rehabilitation of 22 national parks and protected areas in 12 countries. The organization was established in 2000 to address the underfunding of protected areas. It works in partnership with governments and nearby communities (African Parks, n.d.).

Biodiversity-relevant taxes are ways to produce revenue or incentivize behavior related to biodiversity. This can include taxes on conservation area concessions (including hotels), dedicated taxes on goods and services to generate revenue for conservation purposes, taxes on legal wildlife trade, and tax credits for landowners or project managers to promote conservation practices. For example, cruise ship entry fees and airport fees in Ecuador and Cosa Rica raise millions of dollars each year to support marine and terrestrial protected areas (Deutz, *et al.*, 2020). South Africa introduced an income tax provision in 2016 that allows privately and communally owned protected areas to take tax deductions. This enables landowners and businesses to pay less taxes, which increases their cash flow to ensure the viability of their eco-tourism operations and other enterprises (Stevens, 2018).



5. APPLYING FINANCIAL MECHANISMS TO CONSERVATION OF AFRICAN ELEPHANTS

In this section, we discuss the potential applicability of different financial mechanisms to elephant conservation activities. Each approach has advantages and disadvantages that are discussed below. (Table 3 provides a summary.)

Payments for ecosystem services could be readily adapted to provide funding for elephant conservation using a performance payment approach. As with other wildlife PES programs, performance could be measured with wildlife sightings, remote sensing, and other measures of elephant activity. If financed with a grant, philanthropy, or government allocation, then sustainability of the financial flows may be challenging. On the other hand, if a Conservation Trust Fund provides funding or a government agency makes a long-term commitment, this could be a sustainable approach to financing elephant conservation. Another challenge of effective PES schemes is the need for strong institutions to deliver regular payments to individuals or communities so this needs to be addressed as well. Emerging financial technology may help solve this challenge.

Table 3. Comparing Conservation Mechanisms for Elephant Conservation

Finance Mechanism	Pros	Cons
Payments for Ecosystem Services	Tied to performance Incentivizes local communities	Lack of financial sustainability Needs strong institutions for delivery
Carbon Credits	Large potential capital flows Well established global market for carbon	Need for elaborate performance monitoring May be challenging to apply to savanna elephant habitat
Green Bonds/ Wildlife Conservation Bonds	Predictable financial flows Could be scaled to cover multiple protected areas and countries	Complexity and cost of design and implementation Requires extensive measures to reduce risk for investors Uncertain market demand for biodiversity investments
Debt-for-Nature Swaps	Can imbed elephant conservation in overall debt relief and pursuit of climate and biodiversity goals Establishes trust funds to provide long-term, financial flows for conservation	If small scale and project based, there are high transaction costs May be difficult to find willing buyers Debt relief is limited to a small number of countries
Conservation Trust Funds	Sustainable financial flows Can be scaled to cover multiple protected areas and countries	Requires large infusions of capital investment Subject to capital market fluctuations

Carbon Credits have the potential for tapping into the large global capital flows that have emerged in the climate finance arena. Carbon credits require a standard, such as **Gold Standard** or **Verra**, to allow monitoring of changes in carbon stocks over time. Also, there are “carbon plus” transactions that add on a biodiversity monitoring component. There are a number of REDD+ projects that include elephant habitat and are providing support for conservation activity. One example is the **Kariba REDD+ Project in Zimbabwe** that protects almost 785,000 hectares connecting four national parks and eight safari reserves. It provides a large biodiversity corridor that protects a number of threatened species including elephants and lions (South Pole, n.d.).

Since forest elephants are believed to increase forest carbon where they live, this may create a promising opportunity for countries with forest elephant populations to enter into the exchange of “premium” carbon credits. Box 10 describes an innovative proposal to use blockchain technology to sell carbon credits paired with elephant conservation to corporations, and use the proceeds to pay communities for their conservation efforts.

Wildlife Conservation Bonds. The issuance of a Wildlife Conservation Bond in 2022 by the World Bank has shown that it is possible to attract private investors to wildlife conservation, if there is a backer with strong credit worthiness, a well-defined performance measure, and an entity willing to provide a flow of returns to investors when the bond becomes due. Efforts are underway to develop a bond to finance tiger conservation in Asia. This raises a potential opportunity for African range states to pursue similar options for elephant conservation by partnering with investors, development banks, and NGOs. Developing an elephant bond would be costly and would require a blended finance approach. Planning would be led by Ministries of Finance and would rely on several of the enabling conditions discussed in the next section, including measures to reduce risk to investors.

Debt-for-Nature Swaps could also provide funding for elephant and other wildlife conservation at a time when many African governments face crushing levels of debt. A new generation of debt for climate and nature swaps has the potential to provide debt relief as well as space for greater government spending on climate and biodiversity activities. This approach has the advantage of bringing finance and natural resource agencies to the table and has the potential to ensure long-term financing that some other mechanisms lack. The downside is that swaps can have high transaction costs, including the costs of legal, environmental, and financial expertise. These costs can be spread out with a programmatic, rather than project-specific approach, and lower the costs proportionate to total financing. An additional downside of this approach is that debt relief is limited to a small number of countries, and even then, it may be difficult to find buyers for the discounted debt.

Conservation Trust Funds have the virtue of providing sustainable and predictable financing for wildlife conservation activities. They have a long track record and many have performed well. They also can be operated at a scale that allows financing conservation activities in multiple protected areas, outside protected areas, and even across countries. The nascent A-PACT fund has potential to support elephant conservation in multiple range states. At this point, it is still in the early stage of raising large amounts of capital, but wildlife authorities could begin to position themselves to apply to this fund.

Box 10. Creating a Market to Connect Buyers and Sellers of Biodiversity Credits

Rebalance Earth is a project to develop technology that will create markets to raise money from corporations to fund biodiversity protection and community development. They plan to do this by creating a market for biodiversity conservation using blockchain technology, the Internet of Things (IoT), and artificial intelligence (AI). Their pilot project focuses on the carbon services provided by forest elephants. A combination of IoT sensors in the forest and AI is used to track each elephant. The information gathered is turned into a digital token that is on a public ledger where investors have full traceability and transparency of how the funds are used. Companies that want to obtain premium carbon offset credits will buy the tokens, and the funds raised from the sale of tokens will go to fund ranger activity, micro-investments, and job creation. Rebalance Earth plans to offer its first sale of biodiversity tokens in 2023.

Source: Kotseva. 2022.

6. CREATING AN ENABLING ENVIRONMENT

Expansion of revenue generation opportunities for elephant and other wildlife conservation will require strong partnerships and favorable conditions for donors and investors (IUCN, 2020). African elephant range states can take several actions to facilitate new sources of revenue to support conservation.

- **Increase awareness of economic returns to conservation investments.** Many in government and the conservation community approach conservation as a cost that must be covered by scraping together limited funds, as opposed to an attractive investment opportunity. It is important to convey the notion that investments in conservation can lead to significant returns in the form of carbon credits, tourism revenue, jobs, and foreign exchange earnings.
- **Involve local communities in project planning and implementation.** Local communities that share space with African elephants are on the front line of elephant management and conservation. These communities bear high costs from crop damages and threats to human life, so their involvement in planning and implementing activities to promote human-elephant co-existence is crucial to lasting success. In a number of range states, local communities have either land rights or use rights that must be recognized in any long-term financing agreements.
- **Improve intersectoral coordination.** Biodiversity conservation is an activity that requires cooperation on the part of multiple government agencies – natural resources, tourism, agriculture, finance, and others. Likewise, intersectoral cooperation is needed to implement any of the highlighted finance mechanisms. Mainstreaming biodiversity conservation can be carried out at the national level using National Biodiversity Action Plans and National Biodiversity Finance Plans (Deutz, et al, 2020). Integrating biodiversity concerns across government sectors as well as the private sector and civil society also can help make a business case for investing in nature.
- **Set policies and regulations to accelerate private sector investment.** Changes in policies and regulations may be needed to de-risk and incentivize private sector investment (World Bank, 2020). This includes tax breaks, long-term tourism concessions, and government-backed guarantees. This also includes a regulatory environment that will encourage growth of the wildlife economy.
- **Enhance monitoring systems for tracking conservation performance and changes in carbon stocks.** Potential investors and donors want to see clear evidence of returns to investment. This requires developing and implementing low-cost monitoring of wildlife populations, surrounding socioeconomic conditions, and changes in forest quality and carbon stocks. The costs of monitoring can be lessened by using new technologies including remote sensing and on-the-ground sensors. Performance indicators could include the number of elephant sightings in particular areas, the number of enforcement patrols, and reduction in crop losses from elephants for households living near elephant herds.
- **Take advantage of catalytic international organizations.** International agencies, such as UNDP, UNEP, IUCN and World Bank provide technical assistance and information exchange regarding biodiversity finance. BIOFIN is working with governments and other stakeholders to develop National Biodiversity Finance plans and to establish new financing mechanisms in a number of countries including Botswana, Mozambique, Rwanda, Seychelles, South Africa, Uganda, and Zambia.
- **Mobilize domestic finance for conservation.** It is important to not overlook opportunities to expand domestic sources of conservation finance, whether it be increasing or restoring government budget allocations, ensuring that protected area fees are dedicated to conservation uses, or seeking support from tourism and other businesses that depend on sustainable landscapes. Mobilizing more domestic support for conservation will reassure potential external investors that conservation is valued and treated seriously by decision makers.

7. ROUNDTABLE ON SUSTAINABLE WILDLIFE FINANCE

Following the preparation of the draft version of this report, the Secretariat of the Convention on International Trade in Endangered Species of Fauna and Flora (CITES) organized a roundtable on Sustainable Wildlife Finance - African Elephant Conservation, on 27-28 October 2022 in Gigiri (Nairobi), Kenya. The roundtable, which was funded by the European Union and the United Kingdom, was represented by CITES Management Authorities from 24 African elephant range states, both in person and online. A small number of invited speakers who are directly involved in sustainable conservation finance were also present. A more detailed summary of the roundtable and a list of participants is included at the end of this report as Annex.

The roundtable consisted of a series of presentations on different conservation finance mechanisms, reports from several range states on their challenges with elephant conservation, and group discussions about ways to mobilize and utilize additional financial resources for wildlife conservation. There were many shared challenges faced by the different range states, although there was variation across states seemingly related to their elephant population size, amount of tourism, and geography. However, HEC emerged as the number one concern. In nearly every range state, local communities are bearing much of the cost of elephant conservation and sharing few of the benefits. Other conservation challenges that were discussed include maintaining and restoring habitat connectivity, continued attention to enforcement against illegal killing of elephants, strengthening of laws and regulations, capacity building of agencies, improved monitoring, storage of ivory stocks, and climate change. All of these challenges come with a sizable price tag, and cannot be fully addressed with existing budgets and periodic donor projects.

There was considerable interest among participants in the different conservation finance mechanisms presented in this report and discussed at the meeting, especially payments for ecosystem services, carbon payments, and conservation trust funds. There was interest as well in wildlife bonds and debt-for-nature swaps, although these are likely to be less uniformly applicable across the range states. There was also interest expressed in impact investing and biodiversity taxes.

During open discussions, several suggestions were made by roundtable participants including:

- Cultivate high level attention to biodiversity finance among country leaders (as is already the case for climate finance).
- Work collaboratively across the multilateral environment agreements (MEAs) on biodiversity finance
- Provide range states with technical support and a framework for implementing innovative conservation finance
- Integrate biodiversity finance into the planning processes as is already the case for climate finance in many countries.

During closing remarks, Ivonne Higuero, CITES Secretary-General, stressed the need for more conservation funding to go directly to countries and communities. Ms. Higuero also emphasized the need to address the biodiversity conservation funding gap by broadening the funding base overall, and having more dialogue with those in the world of finance about the financial importance of nature, and remind them that there are local costs with global benefits associated with biodiversity conservation.

8. CITES COP19, CBD COP15 AND BEYOND

Following the Roundtable, there were several important international meetings that addressed innovative finance for global biodiversity conservation. Sustainable financing for elephant conservation was considered at the 19th meeting of the CITES Conference of the Parties (CITES CoP19, Panama City, November 2022) in the context of two agenda items: Agenda item 7.5 on *Access to funding* and item 44.2.2 on *Establishing a fund accessible to range States upon non-commercial disposal of ivory stockpiles*. The Conference of the Parties did not agree on giving the CITES Standing Committee and the Secretariat a broad mandate to lead the discussion on sustainable financing for wildlife conservation. Instead, some African elephant range States expressed their wish to have a comprehensive consultation for all African elephant range States outside the formal intersessional process of the Convention.

Elsewhere, the sustainable financing landscape is gaining wide interest and evolving rapidly. In December 2022, the 15th meeting of the Conference of the Parties to the Convention on Biological Diversity (CBD COP15) was held in Montreal, Canada, and ended with an ambitious [Kunming-Montreal Global Biodiversity Framework \(GBF\)](#) to guide global action through 2030. One of the GBF targets is to substantially lower subsidies harmful to biodiversity by at least \$500 billion per year by 2030, while progressively increasing positive incentives for conservation and sustainable use. Another goal called for ramping up \$200 billion per year in domestic and international funding for biodiversity conservation and sustainable use. The Framework also urged optimal use of synergies between climate protection and nature protection. Clearly, tapping into the international carbon markets will be an important element in meeting such an ambitious biodiversity funding goal (Sills and Kramer, 2023).

At COP15, around 1,000 corporate representatives took part, which is the highest ever turnout of the private sector and constituted approximately 5% of the total accredited participants. Multiple business initiatives were launched at or around COP15 in support for the GBF and its objectives. For example, [Nature Action 100](#), a coalition of institutional investors, was announced at COP 15 and will focus on identifying and supporting critical private sector actors in various key sectors. The CBD Secretariat also convened the Business and Biodiversity Forum on 12-13 December 2022, which provided an opportunity for the business community to have an open dialogue on what business action looks like, what policies are needed to scale-up ambition and to identify tools and solutions that can support companies in contributing to the GBF.

At the [One Forest Summit in Libreville](#), Gabon in March 2023, a High Level Working Group released a report with recommendations for unlocking new resources to help close the gap in global biodiversity funding and meet the goals of the Global Biodiversity Framework and the Paris Agreement (Steele *et al.*, 2023). The report focused on two emerging financial instruments: biodiversity positive carbon credits and nature certificates. To encourage adoption of these instruments, the Working Group recommended: “pilot and test the biodiversity-positive credits and nature certificates as part of national biodiversity and climate strategy and plans (p. 9).”



9. SUMMARY AND NEXT STEPS

Once common throughout the continent, elephant numbers fell precipitously in the 19th and 20th century, mostly due to habitat loss and the ivory trade. More recently, elephant losses have slowed, but illegal hunting remains high in some areas and points to the need for greater enforcement efforts. At the same time, burgeoning elephant populations in other locations have intensified human-elephant conflict, and heightened the need to actively manage elephant populations and their impacts on local communities and habitats.

Clearly, additional conservation funding is urgently needed. Government budget allocations for conservation have suffered in the face of the pandemic and recent inflation. As discussed, there are a number of mechanisms to mobilize additional financial resources for elephant conservation and community benefit sharing. There are likely other mechanisms that should be explored, given the changing conservation policy environment at the international level and the ongoing transformation of global financial markets.

There is no single financial mechanism that will fill all the conservation funding gaps, so a combination of innovative public and private approaches will need consideration. This will require a concerted effort to develop and pursue a multi-pronged approach and take advantage of the growing global momentum toward improving financial flows for biodiversity protection. An important next step will be to assess both the conservation funding needs in the range states as well as the potential for different mechanisms in combination to address those needs.

To capitalize on these opportunities, it will be necessary to address enabling conditions, including better monitoring, evaluation, and transparency, as well as working with local communities, to encourage greater financial flows. This will also require a multisectoral approach involving different agencies, and a collaborative approach involving government, NGOs, and the private sector in each country. This is an opportune time to set the stage for the African elephant range states to more fully engage as business partners with potential public and private investors.



GLOSSARY

Biodiversity finance contributes to activities that conserve, restore, or avoid a negative footprint on biodiversity and ecosystem services. Biodiversity finance and conservation finance can be used interchangeably (BIOFIN).

Biodiversity Finance Initiative (BIOFIN) is a global platform led by UNDP focused on raising and managing capital and using financial and economic mechanisms to support sustainable biodiversity management. Its aim is leveraging and effectively managing economic incentives, policies, and capital to achieve the long-term well-being of nature and our society (UNDP).

Carbon credits or carbon offset credits are quantified reductions in emissions of carbon dioxide or greenhouse gases made in order to compensate for or to offset an emission made elsewhere, and are traded in carbon markets. The tradeable units are quantified in tons of greenhouse gas emission, usually specified in CO₂ equivalents (UNEP).

Blended finance is the use of catalytic capital from public or philanthropic sources to increase private sector investment in sustainable development. More specifically, it is the use of concessional donor funds to mitigate specific investment risks and help rebalance risk-reward profiles of pioneering, high-impact investments so that they have the potential to become commercially viable over time (IFC).

Climate finance aims at reducing emissions, enhancing sinks of greenhouse gases and reducing vulnerability of, and maintaining and increasing the resilience of, human and ecological systems in the face of negative climate change impacts (BIOFIN).

Conservation finance – see Biodiversity finance

Conservation Trust Funds are private, legally independent mission-driven institutions that provide sustainable financing for nature conservation ([Conservation Finance Alliance](#)).

Debt-for-Nature Swaps are arrangements by which an indebted developing country establishes local currency funds to be used to finance a conservation program in exchange for cancellation of a portion of its foreign debt (OECD).

Debt-for-Climate-and-Nature Swaps are exchanges whereby a creditor allows a country's debt to be reduced by some form of write-off or a lower interest rate, and the money is used to invest in poverty-reducing climate resilience, climate emissions mitigation or biodiversity conservation initiatives ([IIED](#)).

Enabling conditions are necessary conditions for a program or project to move forward. In the conservation finance context, these are the policy and regulatory changes, and development of performance tracking measures, needed to attract investment to conservation projects and activities.

Finance vs. Funding. The term "funding" tends to refer mostly to the flow of capital to projects or programs rather than private investments. For example, an NGO is more likely to seek "funding" rather than "finance" and an investment bank will provide finance rather than funding to a company (Meyers, *et al.*, 2020).

Finance/financial mechanisms are tools used to mobilize, collect, manage and disburse funding. This term is used interchangeably with "tools" and "instruments" (BIOFIN).

Green Bond is a type of financial instrument that is issued to raise capital to support climate-related or environmental projects and provides investors with regular or fixed income payments (World Bank).

Impact investments are investments made with the intention to generate positive, measurable social and environmental impact alongside a financial return ([Global Impact Investing Network](#)).

Payments for Ecosystem Services (PES) is the name given to a variety of arrangements through which the beneficiaries of environmental services, from watershed protection and forest conservation to carbon sequestration and landscape beauty, reward those whose lands provide these services with subsidies or market payments (WWF).

Public-Private Partnerships are long-term contracts between a private party and a government entity, for providing a public asset or service, in which the private party bears significant risk and management responsibility, and remuneration is linked to performance (World Bank).

REDD+ is a framework created by the United Nations Framework Convention on Climate Change Conference of Parties to guide activities in the forest sector that reduce emissions from deforestation and forest degradation, as well as the sustainable management of forests and the conservation and enhancement of forest carbon stocks in developing countries (UNFCCC).

Sustainable finance is the process of taking due account of environmental, social and governance (ESG) considerations when making investment decisions in the financial sector, leading to increased longer-term investments into sustainable economic activities and projects (World Bank).

Wildlife economy is the businesses and economic activities that either directly depend on wildlife (both plants and animals, marine and terrestrial) or contribute to wildlife conservation through their activities (African Leadership University).



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ANNEX

CITES roundtable on sustainable wildlife finance – African elephant conservation

27-28 October 2022, UNEP HQ (Gigiri, Nairobi)

Meeting Summary

The Secretariat of the Convention on International Trade in Endangered Species of Fauna and Flora (CITES) organized a roundtable on Sustainable Wildlife Finance - African Elephant Conservation, on October 27-28 in Nairobi, Kenya. The roundtable was funded by the European Union and the United Kingdom. The meeting agenda is found at the end of this report.

There were more than 50 people in attendance and 10 participated remotely. CITES management authorities from 24 African range states were represented. A small number of resource persons who are directly involved in sustainable financial mechanisms/solutions for wildlife and other natural resource conservation were also invited, as well as several potential donor countries. A list of participants is included at the end of this report.

■ Day 1, October 27, 2022

Session: Opening

During the opening session, there were 3 speakers who welcomed the participants. Ivonne Higuero, CITES Secretary-General, opened the roundtable and thanked the participants for traveling from so many of the range states at this busy time of the year. Ms. Higuero discussed the origins of the workshop and stressed the importance of finding workable financial solutions that would help the range states address their conservation challenges. She acknowledged the EU for providing funding for the workshop. She closed by saying that the ultimate objective was to empower the management authorities to become better business partners with willing investors in wildlife conservation.

The participants were also welcomed by Lisa Farroway, Program Manager of the Global Wildlife Program, World Bank. She discussed the importance of nature-based economies and ongoing conversations at the global level about biodiversity conservation finance. She also discussed funding opportunities through GEF8, which includes a new funding priority on wildlife conservation and development.

Haruko Okusu, Chief of Projects and Outreach Unit, CITES Secretariat, was the final speaker in the opening session. She outlined the mandate of the roundtable, which are Decisions 18.4 to 18.11 Access to Funding. She then presented the objectives of the roundtable: (1) review the needs and concerns for financing conservation, (2) examine existing examples of financing solutions/initiatives in the wider environmental areas that may help African elephant conservation, and (3) discuss factors that would allow African elephant range states to become better business partners with the donor/investor community. Expected outcomes of the roundtable included increased awareness and sharing of sustainable finance initiatives, an open dialogue about how finance mechanisms can be applied to wildlife issues, and future directions for continued work.

The participants agreed that the roundtable would be chaired by Ms. Higuero.

Session: Setting the stage: Overview on the study of sustainable finance for wildlife conservation

This session consisted of an overview presentation from Randall Kramer, a consultant commissioned by the CITES Secretariat, who summarized his discussion paper entitled “[Mobilizing Sustainable Finance for Elephant Conservation](#)”, which had been shared with the roundtable participants in advance. He included summaries of the main themes from the background interviews he conducted and shared a number of representative quotes. He discussed the growing recognition of the importance of Africa’s wildlife economy. He also introduced key concepts from the conservation finance literature, discussed the use of five approaches to innovative finance for wildlife conservation, and how each could be applied to elephant conservation. The final part of his talk focused on the enabling conditions that could facilitate greater public and private investment in wildlife conservation.

Session: Needs and Concerns for Financing Wildlife Conservation

In this session there were presentations from Namibia, Zimbabwe, Kenya, Cote d'Ivoire, and Congo. Representatives of the CITES management authorities from each country outlined their needs and priorities.

Namibia: Mr. Colgar Sikopo highlighted human-elephant conflict (HEC) and loss of habitat connectivity as Namibia’s highest conservation priorities. They receive reports of HEC every day. Poaching has significantly declined in recent years. Some conservancies receive incentives to engage in conservation activities including maintenance of elephant corridors. Namibia would like to allow sustainable use of elephants, and he indicated that there is a need for more patrols, provision of watering holes, general monitoring of elephants and early warning systems. The Game Product Trust fund, which was established by the parliament from sale of game, is available for future infusions of conservation investment funds.

Zimbabwe: Ms. Patience Gandiwa reported that her country manages its elephants with an ecosystems approach using a parastatal organization (Zimbabwe Parks and Wildlife Management Authority). HEC is their biggest challenge, and they want to secure more land areas for elephant migration. They have experienced a downward trend in poaching with a lot of resources devoted to keeping boots on the ground and to motivate communities to co-exist with elephants. They seek a multi-scale, multi-faceted approach to wildlife conservation and have a need for more reliable, long term financing for elephant conservation.

Kenya: Mr. Patrick Omondi talked about a recently completed national conservation census that showed an elephant population of over 36,000 elephants, a population that has doubled since 1989. The country faces considerable HEC due to human population growth and changes in land use. They have made a large investment in enforcement, which has dramatically reduced poaching, but the demand for ivory continues. Unfortunately, recent drought is contributing to significant wildlife mortality including elephants. They are working on a new national elephant action plan that prioritizes reduction of HEC. They are seeking sustainable finance for conservation, including payments for ecosystem services, carbon credits, increased government funding, and public-private partnerships.

Côte d'Ivoire: Ms. Salimata Koné Tondossama reported that the country has a population of approximately 500 elephants, with 80% found in protected areas. HEC is their top conservation challenge, with many cases of agricultural damages as well as human injuries and deaths. Poaching has significantly declined, due in part to increased enforcement and judicial activity. They do not have good monitoring data, but they know there is cross-border wildlife movement. They face a lot of challenges with conservation funding, and do not have adequate capacity to draft funding proposals.

Congo: Mr. Jean Bosco Nganongo reported that with a large forest base they have an excellent environment for elephants and other wildlife. HEC has been growing due to human population increases. They also face challenges resulting from climate change and civil unrest. The country has developed a national elephant action plan that calls for an HEC mitigation strategy, continued efforts to reduce poaching and ivory trafficking, and efforts to promote habitat connectivity between large forest blocks. Other priorities include a national inventory of elephants, strengthening of institutional and management capacity, and enhancing cross-border cooperation on elephant conservation.

Session: Examples of financing solutions on wildlife conservation

There were two speakers in this session.

Elisson Wright, World Bank “Wildlife Conservation Bond”

Mr. Wright began by noting that we all want to channel more money toward nature. With all the challenges, we need to grow the total amount of investment in biodiversity conservation. While grants and concessional lending are important, closing the biodiversity funding gap will require new approaches. Wildlife conservation creates a global public good, but funding for it must compete with other priorities – health, education, and infrastructure. He then discussed the development of the Wildlife Conservation Bond, which was designed to create additional funding for 2 rhino conservation sites in South Africa, which were selected from 130 potential sites. In March of this year, the bank issued a \$150 million bond. Foregone coupon payments are being used to finance rhino conservation activities, with much of the conservation funding front-loaded to the parks. Bonus payments to the investors at the end of the bond period will come from GEF funding, and the amount of bonus payments will depend on what happens to rhino populations. This feature transfers outcome risk to investors. Most buyers of the bond were from the US and Europe. Some were impact investors and some were high wealth individuals. Monitoring and evaluation were essential for attracting bond buyers.

For this instrument to be replicated, it will be necessary to have: (1) an organization with a great conservation track record, (2) investors who are willing to lock up funds for a while, (3) an organization that can issue a bond – e.g., World Bank, another bank, or government, and (4) an entity to pay for the biodiversity outcome. Markets are not yet pricing biodiversity, so you have to have grants or government funds to pay for the biodiversity benefit.

Indekhwa Anangwe, African Wildlife Foundation, “A-PACT – Overview”

Ms. Anangwe described A-PACT (A-Pan-African Conservation Trust) as a proposed new conservation trust fund that would be an African-led financing mechanism to channel global and African financing to protected and conserved areas across the continent. The fund was developed in response to needs raised by the Africa Protected Area Directors (APAD) Forum as a means to secure sustained and sufficient financing for Africa’s more than 8,600 protected and conserved areas. The fund is envisioned as a hybrid fund with an endowment component, a sinking fund component, and an investment fund to leverage private capital investments. A recently completed feasibility study confirmed the hybrid model approach and recommended a governance structure that incorporates indigenous people and local communities (IPLC) and youth representatives that is now being established. Under the guidance of the Steering Committee, further design aspects around the legal framework and fundraising strategies are currently on going with a formal launch envisioned for September 2023. More details can be found on the A-PACT website:<https://apact.africa/>

Breakout group discussions (1): Generating revenue streams for wildlife conservation

The day ended with the participants divided into 2 Francophone and 2 Anglophone breakout groups, supported by facilitators from UNEP and the CITES Secretariat, asked to discuss the following:

1. What are your unfunded conservation needs that would benefit from sustainable financing?
2. Considering the different financing mechanisms in Table 3³ of the [study](#), what might be more feasible for your country’s conservation efforts, and why?

3 The conservation financing mechanisms discussed were: payments for ecosystem services, carbon credits, green bonds/wildlife bonds, debt-for-nature swaps, and Conservation Trust Funds.

■ Day 2, October 28, 2022

Session: Report back from the breakout group discussions

Question 1 - Conservation Challenges

The groups reported that while each country's situation is different, HEC is the biggest challenge, regardless of the national elephant population size. To address this, there is a strong need for effective compensation policies and for developing alternative livelihoods. Another challenge is loss of habitat connectivity, which contributes to HEC. Addressing this is expensive in terms of measures to protect existing corridors and reestablish lost corridors. Illegal killing of elephants has gone down in many countries in eastern and southern African countries, but remains more of a challenge in other regions. The groups reported that continued diligence is needed in all range states in terms of law enforcement and strengthening of laws and regulations.

There is also a great need for more monitoring and inventories, as several range states do not have a good handle on the size and location of their elephant herds. In addition, there was recognition that capacity building in conservation agencies is needed regarding the use of new science and technology. Finally, the groups reported that climate change is making conservation more difficult, by encouraging greater elephant movement to search for food and water, which in turn impacts both humans and other species. Addressing these needs requires considerably more financial resources than currently available.

Question 2 – Different finance mechanisms

The breakout groups provided a variety of comments on the different mechanisms, and it was clear that different approaches are likely more feasible in some countries than others:

Payments for Ecosystem Services (PES) – The breakout groups indicated a lot of interest in PES, perhaps because it has been around for a while and is familiar to many working in conservation. In terms of feasibility, all of the groups ranked this as #1 or #2. They reported that several range states are building this finance mechanism into their conservation programs. One concern is that most PES programs are funded by donors or governments, so they may not be sustainable.

Carbon credits were favored by 3 of the breakout groups. Given the very large amount of climate finance available globally, this approach shows promise for expanding available funds for conservation if a clear link to carbon storage can be made. One group said that all range states should use this approach to mitigate climate change and fund conservation activities.

Conservation Trust Funds (CTF) were considered feasible by three of the breakout groups, and ranked #1 by two groups. There were several comments about desirable features of this approach -- dependability and sustainability of financial flows. It was noted that one challenge with CTF is where does the trust fund investment come from? If the investment comes from donors, the CTF can create a longer-term flow of funds than the usual 5-year, donor funded project.

Debt-for-nature swaps - Three of the four breakout groups thought this was a feasible approach and should be explored further. One group mentioned this would be particularly attractive for infrastructure investments. One caveat is that a number of elephant range states are now classified by the World Bank as middle-income countries, so they are likely ineligible for debt swaps.

Wildlife Bonds - Two groups had wildlife bonds on their list of feasible approaches. Others reported that this approach to raising conservation funding was too new for them to judge if it was feasible for their countries to use.

Other mechanisms – Several other revenue raising approaches were brought up by different groups. This included tourism fees, taxes, and support for wildlife economy activities, including opportunities for communities to support themselves.

Session: Examples of Financing Solutions in Other Areas Relevant for Environmental Sustainability

Zhengzheng Qu, UNEP, "Climate finance and Biodiversity"

Ms. Qu started by talking about finding common solutions to address multiple challenges – food, climate, land degradation and biodiversity. We should consider similarities and co-benefits of climate and biodiversity projects. This requires integrated planning and programming and pursuing different sources of funding. She then presented 4 example projects based on her experience with the Green Climate Fund (GCF).

1. Bhutan for Life: This project is a good example of using long-term climate finance (from the GCF) to provide both carbon storage benefits and biodiversity protection in a country where 51% of its territory is in protected areas. The project also addresses community livelihood needs and human-wildlife conflict (tigers and leopards).
2. Inclusive Green Financing Initiative in the Great Green Wall: This project covers 13 African nations and focuses on fostering climate resilient, low emission, small holder agriculture. It works through green finance – concessional loans (lower interest rates, and longer-term loans) to local banks, which then provide loans to local farmers. A major aim of the project is to build greater coherence and complementarity of climate action in Africa.
3. Global Fund for Coral Reefs Investment Window: This project creates a private equity fund to encourage investments in the blue economy of 17 countries in Africa, the Asia-Pacific, Latin America and the Caribbean. It focuses on ecotourism and reducing overfishing and sewage pollution. It makes use of concessional finance from GCF to bring in other investors.
4. Coral Reef / Mangrove Insurance: This project provides insurance to communities for climate related damage to coral reefs. When there is damage, funds are released to communities to fix the damage and to avoid future damage. Could a similar approach be developed for the damages from human-wildlife conflict?

Juan Jose Dada, FMO - Dutch Development Bank, "Role of the Development Banks"

Mr. Dada began his presentation with an overview of FMO, a private sector-oriented bank that focuses on innovation. Their activities are done in alignment with the SDGs, and they recognize that they need to consider nature in their work. FMO focuses on empowering local entrepreneurs in 3 sectors: agriculture, energy, and banking. These three sectors are key to economic, environmental and social progress. FMO works in emerging markets in 85 countries to support job creation and income generation.

The bank staff like to facilitate market creation. They help small businesses scale up by making them investible. To do this they use blended finance - philanthropic and public funds to catalyze private sector investment. The basic unit of activity is a single business, for example an ecotourism business that wants to grow by using sustainable practices. FMO helps them access a loan through a local bank.

FMO also works with green bonds, sustainability bonds and green guarantees. In addition, FMO manages several public funds including the Dutch Fund for Climate and Development, which partners with other organizations to finance climate adaptation and mitigation projects in developing countries.

Session: Innovative Finance for Wildlife Conservation

Walid Al Saqqaf, Rebalance Earth, "Creating Markets for Biodiversity"

Mr. Al Saqqaf began his presentation with a discussion of interconnected problems that our society faces: climate change, biodiversity loss, poverty, and extinction of species. Rebalance Earth has proposed a holistic approach to these problems. They are focusing on keystone species, starting with forest elephants, which support ecosystem services. For carbon, the elephants do this through disturbance, browsing preferences and seed dispersal.

Rebalance Earth is creating a platform to allow investors to buy these ecosystem services, enrich biodiversity and support local communities. How? Buyers (corporations, households and others) pay for the credits at a rate of \$40 per day. If sensors report the presence of an elephant and then again 2 months later, the platform produces a carbon credit for 2 months and offers it for sale. The proceeds go to rangers, village support and a micro investment fund for women creating their own businesses. This is all tracked on a blockchain platform for traceability and transparency. A buyer sees a dashboard where they can buy the credits. Rebalance Earth creates

tokens that show how the payments are supporting park ranger salaries, school supplies, micro-credit funds, etc. Their approach requires approval and cooperation with government, as well as underlying science. They plan to launch a pilot next year to show that corporations will buy the credits and then there is corresponding action on the ground.

Gaurav Gupta, UNEP, “Financing Wildlife Conservation and Recovery”

Unlocking financing for nature to address the biodiversity and climate crises, as well as improve the socioeconomic well-being of local communities, is one of the fundamental global challenges that needs to be addressed, according to Mr. Gupta. To meet biodiversity goals, we need private sector financing because there is not enough public financing. Impact investing is fine at the project level, but for landscape level conservation, we need something else. The type of large-scale financing depends on several factors. A sovereign bond will work in a country like India, but not in countries with high debt. The latter requires a different type of bond.

The Tiger Recovery Bond is under development through conversations with governments and other organizations in Thailand, Malaysia, and Cambodia. The approach is to bring together stakeholders to identify threats and prepare a business plan for the cost of interventions (tourism, law enforcement, human-wildlife conflict management, forest management, etc.) and discuss how to get the verified carbon credits and biodiversity credits to generate needed revenue to cover those costs. Once the implementation of activities begins, the program sells credits and pays the revenue to the investors. One must start with donor funds like GEF or GCF for proof of concept and then attract other investors. The benefit of including multiple countries in a single bond is that if one country does not perform well, this is offset by performance of other countries. The anticipated potential tiger bond investment is \$750 million. There will be at least 4 tiger source sites and 9 million or more hectares of ecosystems protected and benefiting people and the economy. Potential institutional investors are pension funds, insurance funds and investment banks. Corporate interest may align with the forthcoming Taskforce on Nature-related Financial Disclosures (TNFD) framework.

Richard Diggle, WWF Namibia, “Namibia Wildlife Credits”

R. Diggle explained that Wildlife Credits is a program developed in partnership with the Namibian Association of Community Based Natural Resource Management Support Organizations (NACSO), the Ministry of Environment and Tourism, and local communities. It was developed as a means for paying wildlife stewards for verifiable biodiversity results. It is a mechanism that recognizes wildlife stewards for protecting biodiversity, a global public good. By paying for performance, it is a more efficient way of achieving conservation because it pays for the result, not the effort. This approach requires products, institutional structure, a business model, markets and technology. We are employing a blended finance approach that uses philanthropic and development funding to mobilize other investors.

Namibia’s conservancies have set aside 4 million hectares for conservation. If we can prove that the area is intact and wildlife is there, people will pay for that, but we need rigor in the product. For pricing there is a base payment to conservancies plus a bonus payment. We are using a proxy value for wildlife. For landscapes, this is hectareage and a biodiversity index and presence that can be used to calculate the bonus payment. The intuitional arrangement is essential – without legislation giving wildlife rights to conservancies, Wildlife Credits would not work. Technology also plays an important role including satellite images and camera traps to monitor conservation performance. SMART app is used to determine the level of management and patrolling on the ground. We are working with Deloitte Germany, which is designing an artificial intelligence (AI), performance dashboard for the wildlife products. We are also working with a company called *wadapt* to introduce biodiversity certificates, which are the next level of trusted reporting.

We began by piloting six wildlife sightings projects and one wildlife corridor. Over the past 5 years, we have paid out US\$30,000 per annum on average. We are now developing additional projects, the most significant one being Wildlife Landscapes, which could include securing the afore mentioned 4 million hectares of conservation areas. In summary, the Wildlife Credits vision is to change conservation financing so that it works for wildlife stewards and wildlife.

Breakout group discussions (2): how to become better business partners

In the second breakout group session, the four groups were asked to discuss the following:

1. How would you rank the different conditions⁴ discussed in section 6 of the study – which ones are more feasible and which are more challenging?
2. Are there any other conditions that you think would make wildlife conservation in your country more attractive to donors or the private sector?

Report back from breakout group discussions

After discussing the different enabling conditions, each breakout group reported back. All had used a voting process to rank the conditions from most feasible to most challenging.

Increase awareness was viewed as very feasible by 3 of the four groups.

Involve local communities was seen as both feasible and very important. One group commented that local communities must be involved in order to have effective conservation.

Improve intersectoral coordination was reported to be either somewhat challenging or very challenging by 3 groups. It was also acknowledged to be very important. In the discussion, it was noted that difficulty of coordination can arise from siloed interests, competing concerns and differing cultures across sectors.

Change policies and regulations to accelerate private sector investments had a range of responses from easy to challenging. One group noted it takes a long time to change policy.

Enhance monitoring systems was seen as quite challenging by all the groups, but understood to be necessary to attract carbon finance and other outside finance.

Take advantage of catalytic international organizations was seen as quite challenging by 3 of the groups. One group said it depends on government policy.

Finally, increasing domestic finance was seen as very challenging by all the groups. Two groups said that governments generally assign a low priority to conservation. Protected areas are underfunded and underappreciated (so this requires sensitization).

The groups did not have much time to discuss other enabling conditions, but two were mentioned: (1) involving more stakeholders in the awareness raising and pursuit of financing, and (2) greater use of public-private partnerships. Both were seen as feasible and important for facilitating greater investment in wildlife conservation.

Final Session: Way Forward and Closing

In the final session, Mr. Kramer summarized and made some reflections on the two days of discussion. He said it was clear that there were many commonalities in the challenges faced by the different range states, although there was variation across states seemingly related to their elephant population size, amount of tourism, and geography. However, HEC emerged as the number one concern across the board. Communities are bearing much of the cost of elephant conservation and sharing few of the benefits. Other conservation challenges include maintaining and restoring habitat connectivity, continued attention to enforcement against illegal killing of elephants, strengthening of laws and regulations, capacity building of agencies, improved monitoring, storage of ivory stocks, and climate change. All of these challenges come with a sizable price tag, and cannot be fully addressed with existing budgets and periodic donor projects.

There was considerable interest in the different conservation finance mechanisms discussed at the meeting, especially payments for ecosystem services, carbon payments, and conservation trust funds. There was interest as well in wildlife bonds and debt-for-nature swaps, but these are likely to be less uniformly applicable across the range states.

⁴ Briefly, the enabling conditions discussed in the study were: increase awareness of economic returns to conservation investment, involve local communities in project planning and implementation, improve intersectoral coordination, change policies and regulations to accelerate private investment, enhance monitoring systems for conservation and carbon, use catalytic international organizations, and increase domestic finance for conservation.

There was some discussion during the meeting about other financial mechanisms beyond the 5 that were highlighted. One was impact investing, which is defined as investments made with the intention to generate positive social and environmental returns along with a financial return. For example, we heard about impact investing to grow the wildlife economy with private investments in ecotourism or other wildlife-based businesses. Another example mentioned about impact investing was development bank investment in agricultural enterprises near protected areas with requirements that they meet environmental and social conditions that contribute to the SDGs. There was also discussion about the use of biodiversity-relevant taxes, including a recent change in South Africa's income tax laws to incentivize private conservation areas.

During open comments at the end of the meeting several observations and suggestions were made by roundtable participants:

- We should bring in people from finance ministries to future meetings and discussions like this.
- It would be very helpful to cultivate high level attention to biodiversity finance among our leaders (as is already the case for climate finance).
- Working together across the multilateral environment agreements (MEAs) on biodiversity finance should be explored.
- Range states need technical support and a framework for implementing what we have discussed at this meeting. Coordination across agencies and with UNDP is important as well.
- Climate finance is now integrated into the planning processes in many countries. We need to do the same for biodiversity finance.

In her closing remarks, Ms. Higuero said she was impressed by, and expressed her gratitude for so many participants who joined the meeting in person and online. Once the Secretariat is given a solid mandate by the Conference of the Parties, her hope is to continue this work during the intersessional period, including the consideration for some projects to address urgent needs and long-term work on several finance approaches. She would like to see more conservation funding go directly to countries and communities, and her hope is that some of the approaches discussed during the roundtable can help this and speed up the flow. Ms. Higuero stressed that we need to address the biodiversity conservation funding gap by broadening the funding base overall, and that we need to talk more with those in the world of finance about the financial importance of nature, and remind them that there are local costs with global benefits.



Meeting Agenda

CITES roundtable on sustainable wildlife finance – African elephant conservation

27-28 October 2022, UNEP HQ (Gigiri), Conference Room 9

Draft provisional agenda

■ Day 1, 27 October 2022

Time	Agenda item
10:00-10:30	Opening Opening remarks <ul style="list-style-type: none"> • Ivonne Higuero, CITES Secretary-General • Lisa Farroway, Program Manager Global Wildlife Program, World Bank Introduction to the roundtable: background, purpose, expected outcomes
10:30-11:30	Setting the stage: Overview on the study of sustainable finance for wildlife conservation Presentation by the CITES Secretariat followed by Q&A
11:30-11:45	<i>Coffee break</i>
11:45-13:00	Needs and concerns for financing wildlife conservation Presentations followed by Q&A <ul style="list-style-type: none"> • Southern Africa: Namibia, Zimbabwe • Eastern Africa: Kenya • West Africa: Côte d'Ivoire • Central Africa: Congo
13:00-15:00	<i>Lunch break</i>
15:00-16:15	Examples of financing solutions on wildlife conservation Presentations followed by Q&A <ul style="list-style-type: none"> • Elisson Wright, World Bank (Wildlife Conservation Bond) • Indekhwa Anangwe, African Wildlife Foundation (A-PACT Trust Fund)
16:15-16:30	<i>Coffee break</i>
16:30-18:00	Breakout group discussions (1): Generating revenue streams for wildlife conservation

■ Day 2, 28 October 2022

Time	Agenda item
10:00-10:30	Report back from the breakout group discussions
10:30-11:30	Examples of financing solutions in other areas relevant for environmental sustainability Presentations followed by Q&A <ul style="list-style-type: none"> • Zhengzheng Qu, UNEP (Climate finance – biodiversity link) • Juan Jose Dada, FMO Dutch Development Bank (Role of the Development Banks)
11:30-11:45	<i>Coffee break</i>
11:45-13:00	Innovative finance for wildlife conservation Presentations followed by Q&A <ul style="list-style-type: none"> • Richard Diggle, WWF Namibia (Namibia Wildlife Credits) • Walid Al Saqqaf, Rebalance Earth (Creating markets for biodiversity) • Gaurav Gupta, UNEP (Designing suitable biodiversity investments)
13:00-15:00	<i>Lunch break</i>
15:00- 16:15	Breakout group discussions (2): how to become better business partners
16:15-16:30	<i>Coffee break</i>
16:30-17:00	Report back from the breakout group discussions
17:00-18:00	Discussion on the way forward and Closing by the CITES Secretary-General

Meeting Participants

CITES roundtable on sustainable wildlife finance – African elephant conservation

27-28 October 2022, UNEP HQ (Gigiri)

Confirmed participants as at 20 Oct 2022 (***) denotes virtual participation)

Country/ Organisation	Designation (Ministry/Department)	Name
African elephant range state Parties		
Angola	Ministry of Environment, National Directorate of Biodiversity	Albertina NZUZI *
Benin	Ministère du cadre de Vie et du Développement Durable, Direction Générale des Eaux, Forêts et des Chasse	Amandine Gnido ASSOGBA Josue KPETERE
Burkina Faso	Ministère de l'Environnement et des Ressources Halieutiques, Direction de la Faune et des Chasses	Idrissa OUEDRAOGO
Cameroon	Ministère des Forêts et de la Faune	Maha NGALIE Liliane Léonie Nadia NHIOMOG
Chad	Ministère de l'Environnement et de la Pêche, Direction de la Conservation de la Faune et des Aires Protégées	Theophile YAMTIBAYE Etienne BEMADJIM NGAKOUTOU
Congo	Ministère de l'Economie Forestière et du Développement Durable, Direction Générale de l'Economie Forestière (DGEF)	Jean Bosco NGANONGO Joseph MOUMBOUILOU Roger Albert MBETE
Côte d'Ivoire	Ministère des eaux et forêts, Direction de la faune et des ressources cynégétiques	Salimata KONE TONDOSSAMA Alex Romaric BAYE TEMOMIN
Democratic Republic of the Congo	Organe de Gestion CITES, Institut Congolais pour la Conservation de la Nature (ICCN)	Augustin NGUMBI AMURI
Equatorial Guinea	Ministerio de Agricultura, Ganadería, Bosques y Medio Ambiente	Francisca ENEME *
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Kenya	Kenya Wildlife Service	Patrick ODUOR OMONDI Solomon KYALO
Liberia	Conservation Department, Forestry Development Authority	Blamah Sando GOLL
Mozambique	National Administration of the Conservation Areas / ANAC	Cornélio COELHO MIGUEL Emilio ZAVA

Country/ Organisation	Designation (Ministry/Department)	Name
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Nigeria	Federal Department of Forestry	Timothy Daniel JOHN Nkeiruka Tessy IMOIE
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Togo	Ministère de l'Environnement, du Développement Durable et de la Protection de la Nature	Kossi AGBODJI Akondo TCHEDRE
Uganda	Ministry of Tourism, Wildlife and Antiquities	Stephen OKIROR Rwetsiba AGGREY
Zimbabwe	Parks and Wildlife Management Authority	Patience GANDIWA Nobesuthu Adelaide NGWENYA
Developed country Parties		
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China	Wildlife Conservation Department of National Forestry and Grassland Administration	CHEN Fei * CHEN Mingyong * JI Wei * XIE Yi *
European Union	Directorate-General Environment	Heidi FUEHRMANN * Agatha SOBIECH *
European Union	Directorate-General International Partnerships	Aurelie GODEFROY * Aymeric ROUSSEL * Pablo VILLANUEVA-HULLEBROEK * Thierry DUDERMEL *
Germany	Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection	Rudolf SPECHT *
Spain	Dirección General de Biodiversidad, Bosques y Desertificación	Jaime Muñoz-Igualada *

Country/ Organisation	Designation (Ministry/Department)	Name
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United States of America	U.S. Fish and Wildlife Service	Matthew LUIZZA *
Speakers		
African Wildlife Foundation		Philip MURUTHI Indekhwa ANANGWE
World Bank	Environment, Natural Resources and Blue Economy Global Practice	Lisa FARROWAY * Elisson WRIGHT *
World Wildlife Fund Namibia		Ingelore KATJINGISIUA * Richard DIGGLE
Dutch Development Bank (FMO)	Impact and ESG Department	Juan Jose DADA *
Rebalance Earth		Walid AL SAQQAF
UNEP	Climate Finance Unit	Zhengzheng QU Gaurav GUPTA
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African Leadership U.	School of Wildlife Conservation	Sue SNYMAN *
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Consultant	Duke University	Randall Kramer

The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), also known as the “Washington Convention”, was signed in Washington, D.C., the United States of America, on 3 March 1973 and entered into force on 1 July 1975.

CITES regulates international trade in specimens of species of wild fauna and flora. It plays an important role in supporting sustainable development by ensuring that trade in wild animals and plants is legal, sustainable and traceable.



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