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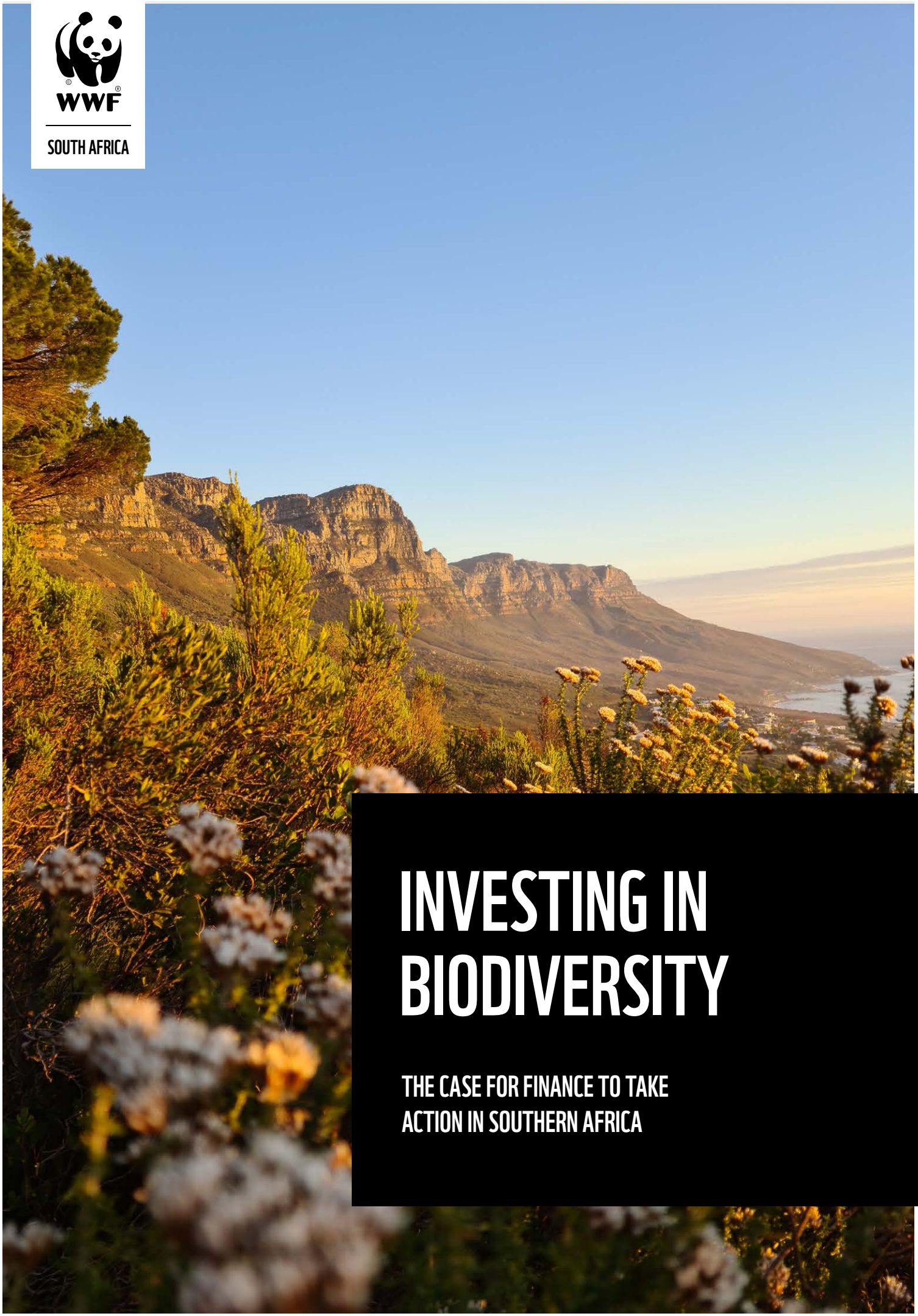
SOUTH AFRICA



INVESTING IN BIODIVERSITY

THE CASE FOR FINANCE TO TAKE ACTION IN SOUTHERN AFRICA

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WWF is one of the world's largest and most experienced independent conservation organisations with over 6 million supporters and a global network active in more than 100 countries.

WWF's mission is to stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature, by conserving the world's biological diversity, ensuring that the use of renewable natural resources is sustainable, and promoting the reduction of pollution and wasteful consumption.

WWF South Africa is a national office in the global WWF network. Started in South Africa in 1968, we are a local NGO with a vision of building a sustainable and equitable future in which humans and nature thrive. We work to champion the Earth's capacity to provide a source of inspiration, sustainable food, fresh water and clean energy for all. For Nature. For You.

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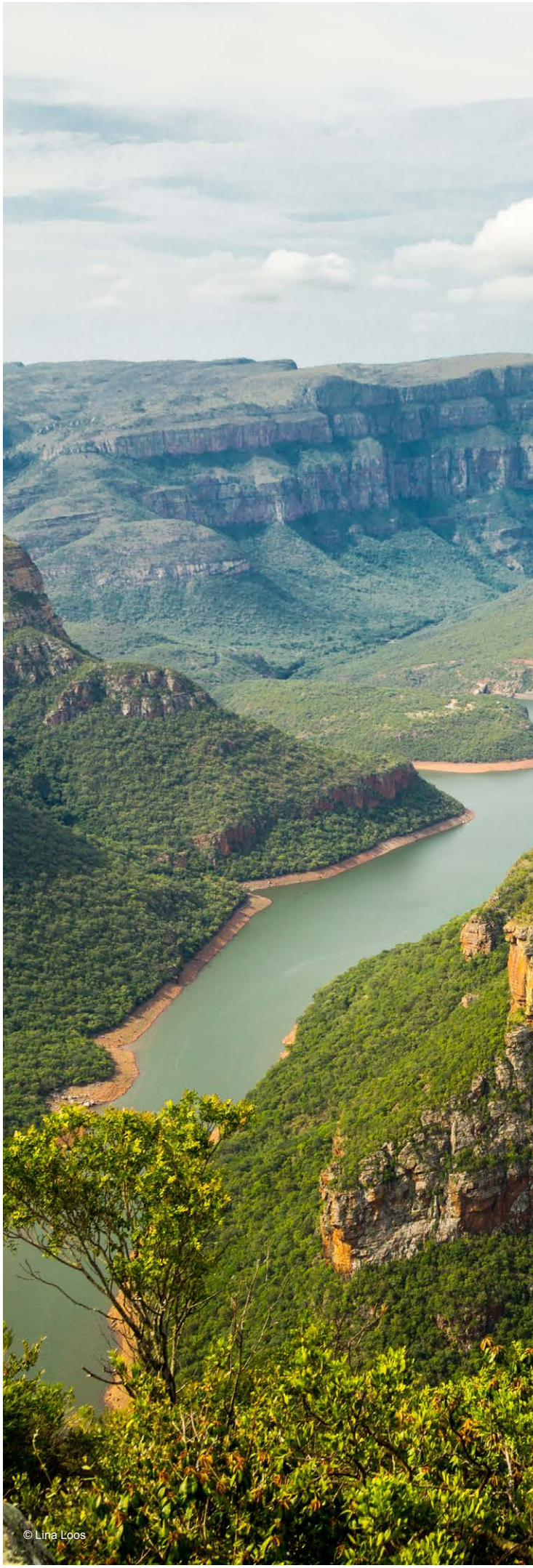

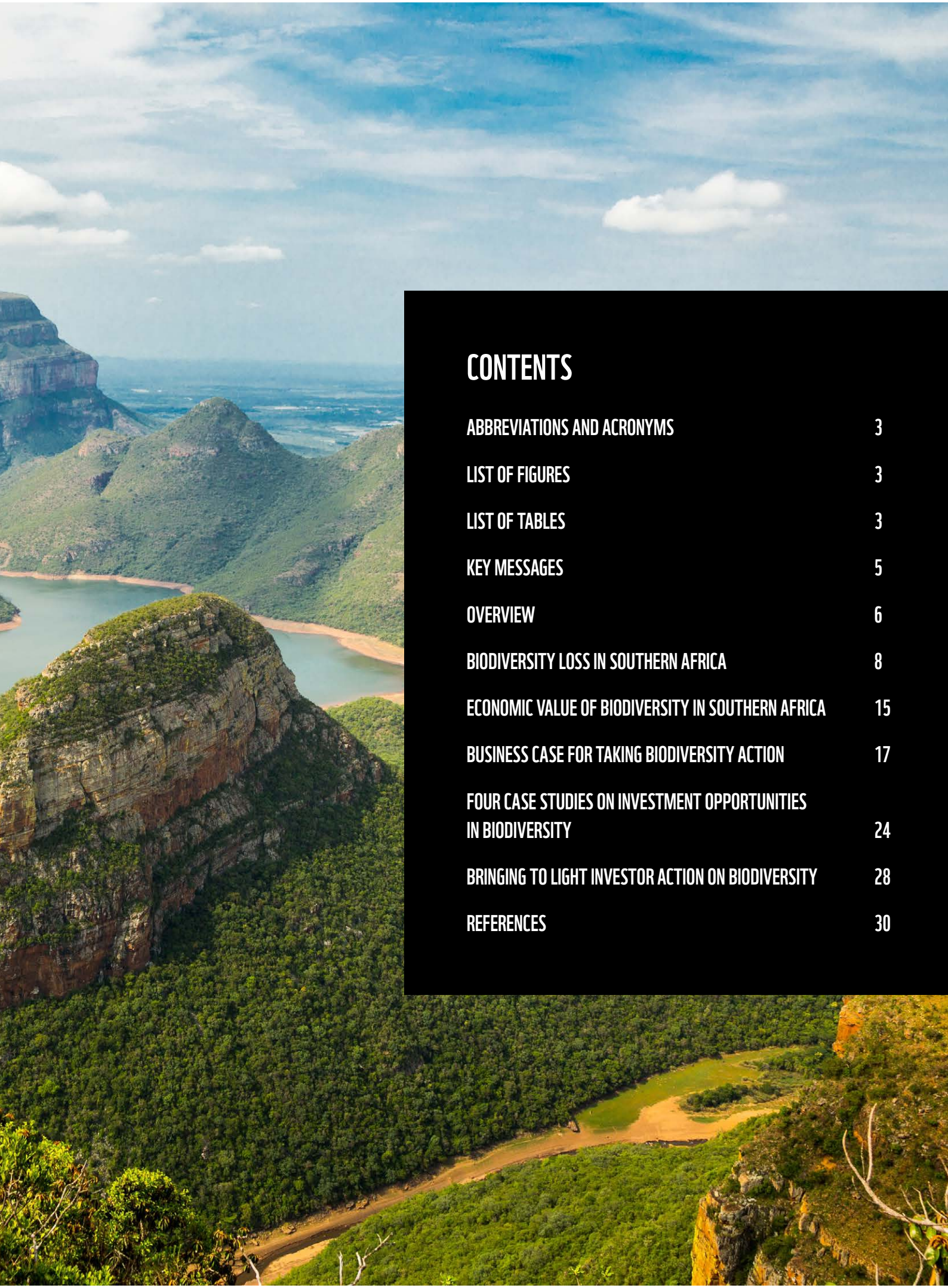

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ABBREVIATIONS AND ACRONYMS

ESG	Environmental, social and corporate governance
FSC	Forest Stewardship Council
IPCC	Intergovernmental Panel on Climate Change
REDD	Reducing Emissions from Deforestation and forest Degradation
SAVCA	Southern Africa Venture Capital and Private Equity Association
SDGs	Sustainable Development Goals
TCFD	Taskforce on Climate-related Disclosures
TNFD	Taskforce on Nature-related Financial Disclosures

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KEY MESSAGES

1. In the words of Margaret Kuhlow from the WWF Global Finance Practice, our imperfect responses to climate change, biodiversity loss, the Covid-19 pandemic, rising energy and food costs and war reveal that international systems are in dire need of redesign. An economic model predicated on the pursuit of indefinite production and consumption is confronting us with climate and ecosystem breakdown.
2. It is critically important that investors understand the causes and drivers of the biodiversity crisis, both globally and for their local contexts. The global average abundance of species has declined by 44% since 1970. Investors need to tackle their impact on biodiversity loss, lower biodiversity-linked portfolio risks and source investment opportunities that support biodiversity.
3. Financial institutions and business can no longer overlook nature in their decision-making when it comes to strategy, risk management and capital allocation because functioning economic and social systems are dependent on functioning natural systems.
4. Natural resources and nature's services must be properly valued, and externalities properly disclosed, priced and built into financial markets. More robust and transparent company reporting based on recommendations from the Task Force on Nature-related Financial Disclosure and the Task Force on Climate-related Financial Disclosure supports standardisation and the ability to track progress, nurture innovation and achieve impact at scale.
5. With more than $44 trillion in economic value at risk from nature loss, and with a net-zero transition that requires investment in nature-based solutions, initiating reform for a fairer and greener world must be a top priority. The finance sector has critical role to play in capital allocation to shape this trajectory.

"... Nature is more than a mere economic good. Nature nurtures and nourishes us, so we will think of assets as durable entities that not only have use value, but may also have intrinsic worth. Once we make that extension, the economics of biodiversity becomes a study in portfolio management."

— Sir Partha Dasgupta

OVERVIEW

For investors to meaningfully address the biodiversity crisis and tackle their impact on biodiversity loss, lower biodiversity-linked portfolio risks and source investment opportunities that support biodiversity, it is critically important that they understand the causes and drivers of this crisis, both globally and for their local contexts.

Understanding the place of humans – including investor communities – in nature is largely informed by the dissociated relationship between the market price and the value of ecosystem goods and services in economic and financial systems. The mobile, silent, and invisible characteristics that govern many of nature's processes have historically made it virtually impossible for markets to accurately record how humanity uses nature's goods and services (Figure 1). Low or negative price tags for nature's goods and services have encouraged many to view themselves as being external to nature, resulting in the ever-increasing loss in biodiversity.

In 2022, the post-2020 Global Biodiversity Framework[1] will be adopted by member states as a step towards charting a course to nature-positive and collective action for biodiversity. The Global Goal for Nature[2] has set a clear direction at a systems level to halt nature loss by 2030 and get to full recovery by 2050. This must be translated into action for all those who have a role to play, including business. The World Business Council for Sustainable Development[3] has been working closely with its members and partners to define what "nature positive" means for business, building on existing and emerging frameworks and methodologies, such as the Science Based Targets Network (SBTN)[4] and the Taskforce on Nature-related Financial Disclosures (TNFD)[5] to get the private sector on the right track.

Financial institutions and business can no longer overlook nature in their decision-making because functioning economic and social systems are dependent on functioning natural systems. Therefore, this report offers investors and companies case studies, analytics and evidence-based insights from credible sources to support the decisions that drive their strategies. It links nature and business performance and shows how investors can find finance solutions with nature-positive outcomes.

[1] cbd.int/conferences/post2020

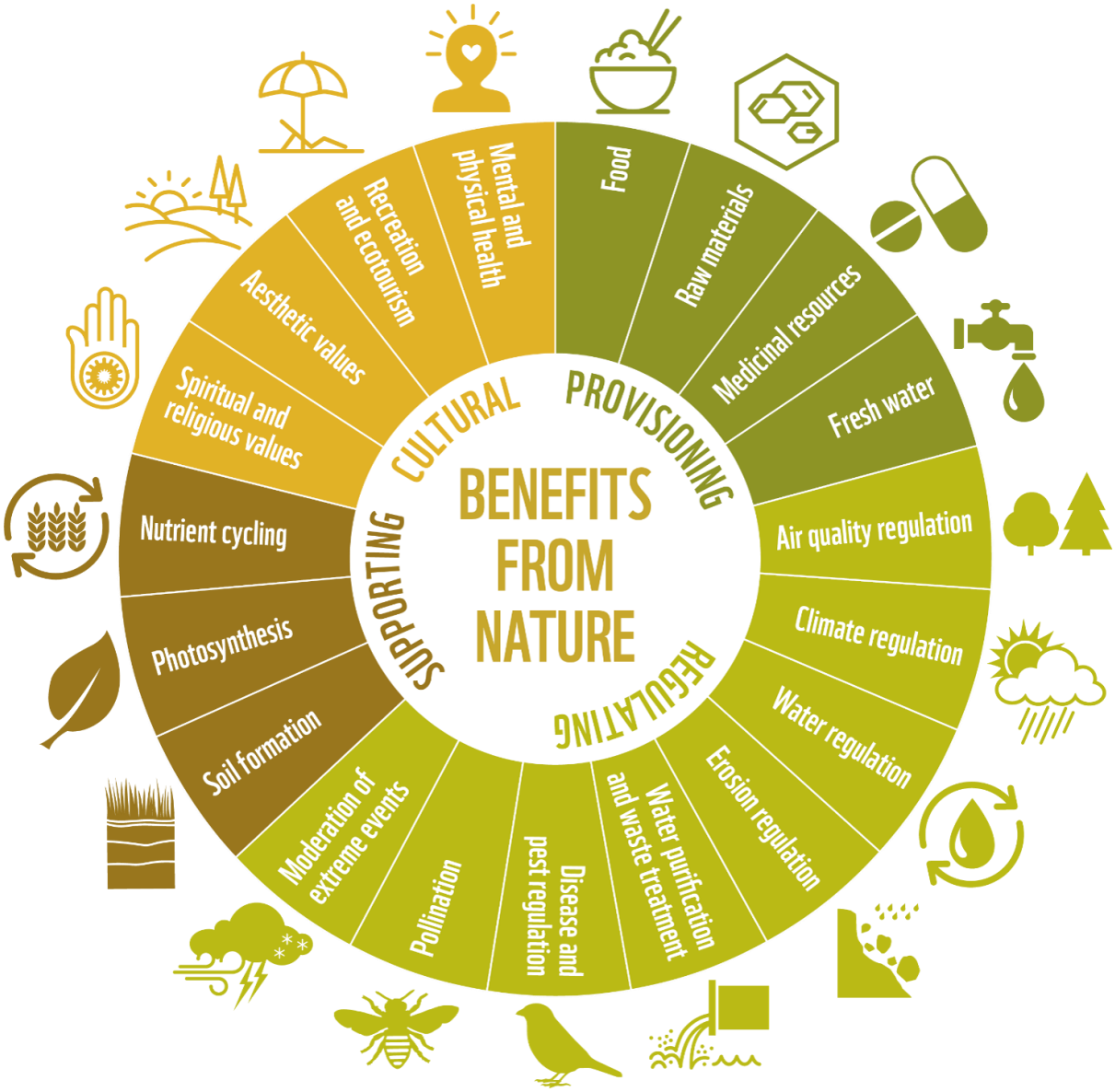
[2] naturepositive.org

[3] wbcsd.org

[4] sciencebasedtargets.org/about-us/sbtn

[5] tnfd.global

ECOSYSTEM SERVICES: BENEFITS FROM NATURE



Source: awsassets.panda.org/downloads/lpr_2016_full_report_low_res.pdf

Figure 1: Ecosystem services and their benefits

BIODIVERSITY LOSS IN SOUTHERN AFRICA

To the financial world, where assets exist that give rise to flows of revenue, nature consists of stocks of environmental assets that give rise to associated flows of benefits to people and the economy.

UNDERSTANDING NATURE AND BIODIVERSITY

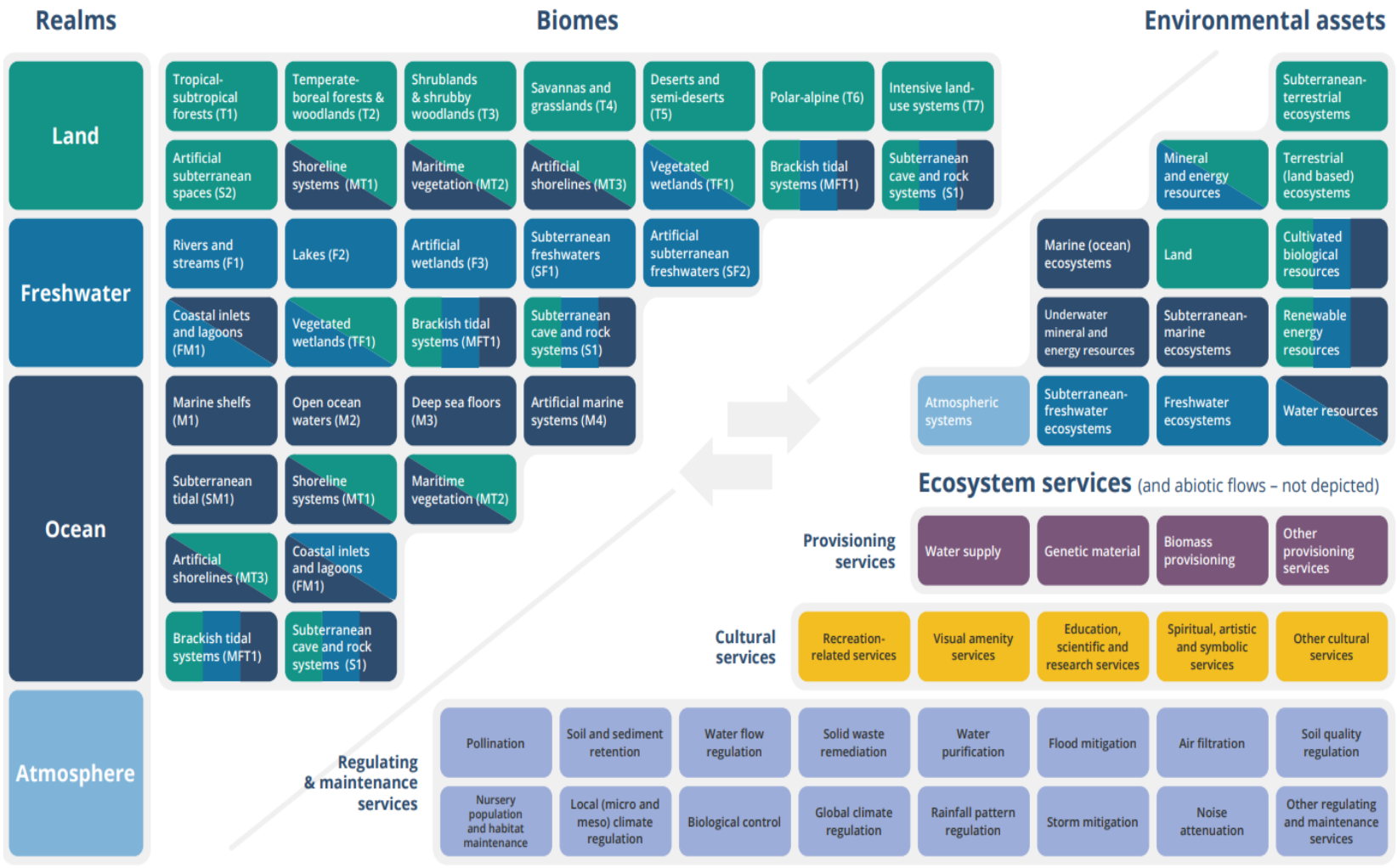
To provide an understanding of how organisations and people depend on and have an impact on natural capital, the Taskforce on Nature-related Financial Disclosures (TNFD) defines nature as a construct of four realms: land, freshwater, ocean and atmosphere (Figure 2). Environmental assets are the naturally occurring living and non-living components of the Earth, such as forests, wetlands, coral reefs and agricultural areas. Ecosystems are an important part of these assets. The TNFD defines them as a dynamic complex of plants, animals, and micro-organisms, interacting with each other and the non-living components.

GLOBAL BIODIVERSITY LOSS AND THE AFRICAN CONTEXT

Globally biodiversity loss is the third largest severe risk that threatens humanity on a global scale over the next 10 years (WEF, 2022). Biodiversity loss threatens human health and well-being, as well as the resilience and ability to achieve the United Nations' Sustainable Development Goals (SDGs). The cost to economies across the world will be detrimental, exacerbating the ability of countries and nations to address other pressing global challenges such as climate change. Despite global efforts to conserve and sustainably use biodiversity, the loss continues.

There is no single measure that can comprehensively assess the current state of biodiversity globally. Instead, a multitude of data and indicators are used to measure species, forests, wetlands and other ecosystems. But whichever indicator is used, the conclusion is the same: a worldwide decline in biodiversity.

For the African region, the predicted biodiversity loss under future climate change scenarios will increase with every 0.5 °C above the current 2001–2020 level of global warming (IPCC, 2022). For southern Africa, climate change and land-use change are the main drivers of potential biodiversity loss.



Source: Task Force on Nature-related Disclosure, 2022

Figure 2: Fundamental concepts for understanding nature

THREATS AND PRESSURES ON BIODIVERSITY IN SOUTHERN AFRICA

Despite the unique context of each country in southern Africa, the main threats to biodiversity are habitat loss, pollution, over-exploitation, invasive species and climate change (Table 1).

TABLE 1: THREATS TO BIODIVERSITY IN SOUTHERN AFRICA

Country	Threat
Angola	**Primary threats:** Habitat loss due to subsistence agriculture, mining, infrastructure, deforestation for charcoal and timber and a very high incidence of fires. Poaching, including for the bushmeat trade, is also a major threat. Over-fishing, particularly of mackerel, has resulted in an annual four-month ban.
Botswana	**Primary threats:** Habitat loss and degradation. Indirect causes of these threats include overgrazing through unregulated cattle grazing; range degradation; fires; mining; wind erosion; increased water extraction for irrigation resulting in increased salinity; a lack of protection for avian breeding sites; uncontrolled tourism and disruption of migration routes through fencing. Poaching for wildlife products and bushmeat are also serious threats to the biodiversity of the country. Human-wildlife conflict is a critical and ongoing issue in Botswana. Secondary threats include invasive species in both terrestrial and freshwater ecosystems. Climate change is emerging as a major threat to the Okavango Delta ecosystem and the Kalahari basin.
Eswatini	**Primary threats:** Habitat loss and habitat change for increasing agriculture, urbanisation and settlements, as well as wildfires and invasive species. 80% of Eswatini is infested with at least one invasive plant species. Unsustainable harvesting of plant and animal species for medicinal purposes is a major threat to many species. Likewise, unsustainable harvesting of trees for charcoal production has had a major impact on the habitat for many bird and mammal species. Climate change is an emerging pressure in Eswatini, likely to disrupt natural ecosystems across the country. Indirect threats include economic, demographic, social-political and cultural pressures.
Lesotho	**Primary threats:** Invasive species in both terrestrial and aquatic ecosystems. In addition, climate change is increasing climate uncertainty.
Madagascar	**Primary threats:** Habitat clearance and invasive alien species. Climate change and pollution have also caused pressure on the island's ecosystems. Indirect drivers of biodiversity loss include demographic change and socio-political factors, particularly the lack of funding and capacity for biodiversity conservation.

Malawi	**Primary threats:** Mainly human-induced threats, including habitat loss and fragmentation, over-exploitation of biological resources, introduction of alien species and climate change. Increasing human population and economic development have led to major land-use change in Malawi, creating demand for land for agriculture and settlements. High levels of poverty have increased the reliance on natural resources, and particularly forests, which provide fuel for cooking for the vast majority of Malawi's population
Mauritius	**Primary threats:** Habitat clearance and invasive alien species Climate change and pollution have also caused pressure on the island's ecosystems. Indirect drivers of biodiversity loss include demographic change and socio-political factors, particularly the lack of funding and capacity for biodiversity conservation.
Mozambique	**Primary threats:** Land conversion, loss and fragmentation of natural ecosystems, habitats and species by anthropogenic factors. Equally serious are the over-exploitation of certain species; invasion by non-native species that damage ecosystems and native species; pollution or contamination of natural ecosystems, habitats or species by chemical products and uncontrolled forest burnings. Climate change is damaging natural habitats or species. Other threats include development and natural disasters.
Namibia	**Primary threats:** Unsustainable water use (large-scale irrigation, pollution, damming and over-abstraction of groundwater); impacts of climate change (increased drought and flood events, shifts in species distribution and impacts on vulnerable ecosystems). Other threats include extractive industries (expansion of mining and prospecting in ecologically sensitive areas); unsustainable land management (soil erosion, land degradation, deforestation and bush encroachment); alien invasive species; illegal harvesting and trade in wildlife and plant resources; human-wildlife conflict and uncontrolled bush fires. Many of these threats are driven by the expansion of urban areas and increasing industrialisation, leading to the increasing demand for resources and services, and increasing the types and volumes of waste and pollution.
Seychelles	**Primary threats:** Continued incursion by alien invasive species in terrestrial ecosystems; over-fishing in marine ecosystems, which has impacts beyond the species targeted. With elevated levels of endemism, the islands are particularly susceptible to the impacts of invasive species. The secondary threat is land-use change and habitat loss, where development pressures are threatening many habitats. Climate change represents a major threat to both terrestrial and marine ecosystems.

South Africa	**Primary threats:** Habitat loss and degradation of natural habitats in terrestrial, freshwater, estuarine and marine ecosystems. These threats are due to unsustainable land-use practices, inappropriate or poorly located land uses; invasive alien species (both plant and animal); destructive and over-harvesting of species, especially in the marine environment; illegal wildlife trafficking and other illegal resource use; over-abstraction of water and pollution of aquatic ecosystems; disruption of natural drivers of ecosystem functioning (such as fire cycles); and impacts induced by climate change.
Zambia	**Primary threats:** De-gazettement of forest reserves, mostly for purposes of mining. Other threats include deforestation and habitat degradation; human encroachment into protected areas; uncontrolled late bush fires; over-exploitation of certain tree species, as well as mammals for the bushmeat and illegal wildlife trade; over-fishing of freshwater ecosystems; pollution from agriculture, mining and other industrial activities and the encroachment of alien invasive species.
Zimbabwe	**Primary threats:** Habitat loss and degradation due to unsustainable agricultural expansion, overgrazing, use of trees as an energy source, fire damage, mining and infrastructural development. Other threats include invasive alien species and climate change. Many birds, reptiles, amphibians and mammals are also directly threatened by illegal or unsustainable harvesting for the illegal bushmeat wildlife trade. Elevated levels of pollution in Zimbabwe's aquatic systems have also had a significant impact on biodiversity in the country. Longer-term challenges are poverty, uncontrolled economic development and a lack of institutional capacity to sustainably manage natural resources.

Source: IUCN, 2020b

Habitat loss

Habitat destruction makes it difficult and impossible for entire habitats to function and to support the species present. Biodiversity is lost in this process when existing organisms in the habitat are displaced or destroyed. Main sources of habitat loss in many southern African countries are unsustainable agriculture expansion, overgrazing, invasive alien species and climate change (Table 1).

Invasive alien species

Eighty per cent of Eswatini is infested with at least one invasive plant species. In the Seychelles the primary threat to terrestrial ecosystems is the continued incursions by alien invasive species. Invasive alien species are also a major threat in Zambia.

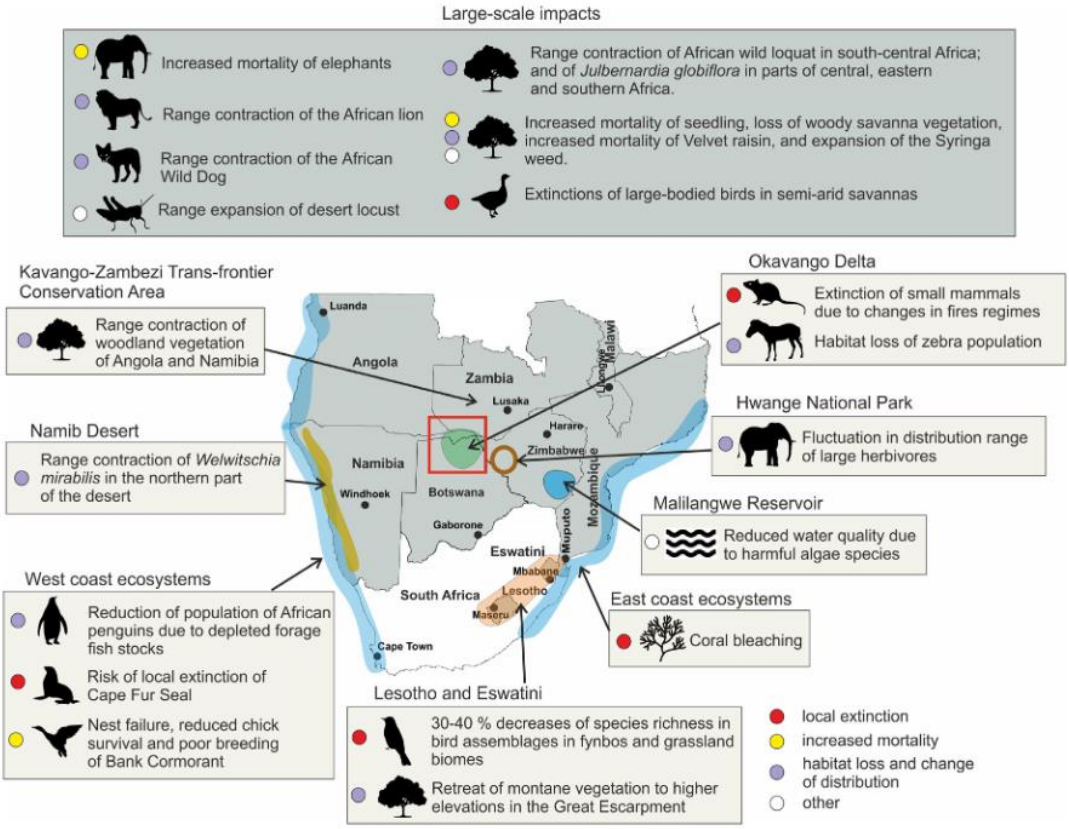
Climate change

Southern Africa is considered one of the global climate change hot spots due to erratic climatic regimes combined with high observed and projected climate risks (Hoegh-Guldberg et al., 2019). Large-scale impacts are predicted for critical populations, species and ecosystems, leading to extinction, habitat loss and increased species mortality (Figure 3). By way of example, the existence value of Cape Floristic Kingdom predicted to be lost by 2050 due to climate change is estimated at $8 378 240 per year (Turpie, 2003).

There is limited understanding of the threats climate change poses to both species and ecosystems in southern Africa (Kapuka and Hlásny, 2021). Improved understanding is vital to support climate change adaptation to halt the progressive biodiversity loss.

A major strategy globally to reverse ongoing losses in biodiversity is the use of protected areas. In southern Africa, protected and conserved areas vary considerably (Table 2). In Eswatini, for example, 76 000 ha (4,3%) is under protected area status compared to 22 650 000 in Zambia (30.4%) and 8 220 000 ha (3,4%) in Angola.

IMPACTS OF CLIMATE CHANGE ON SOUTHERN AFRICAN ECOSYSTEMS, SPECIES AND POPULATIONS



Source: Kapuka and Hlásny, 2021

Figure 3: Impacts of climate change on southern African ecosystems, species and populations

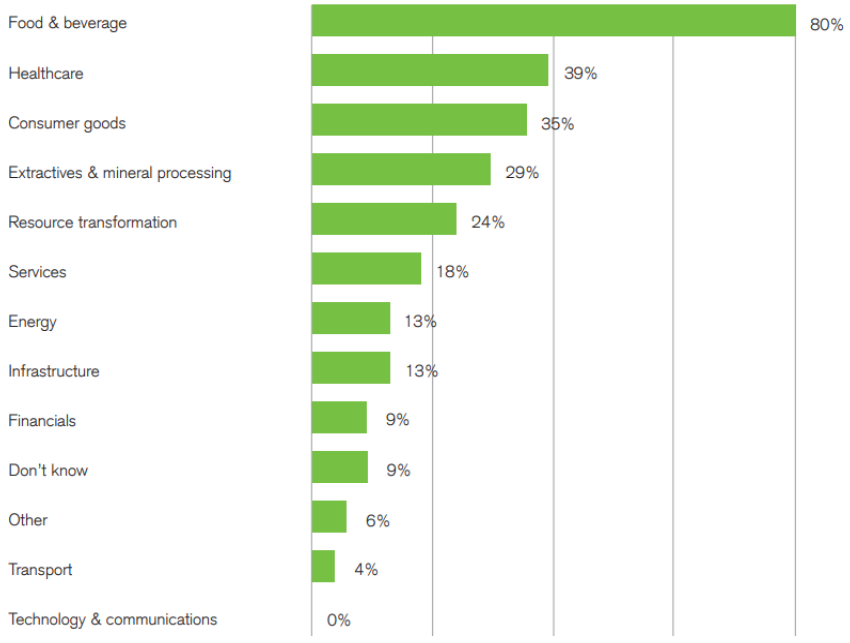
TABLE 2: PROTECTED AREAS IN SOUTHERN AFRICA

Country	Area ('000 ha)	Area (% of total land area)
Angola	8 220	3,4
Botswana	10 499	18,5
Eswatini	76	4,3
Lesotho	680	22,4
Malawi	1 058	11,2
Mozambique	12 875	16,1
Namibia	11 216	13,6
South Africa	7 314	6,0
Zambia	22 650	30,4
Zimbabwe	5 850	15,0

Source: IUCN, 2020b

Figure 4 illustrates the impacts of biodiversity loss on various sectors. Most at risk from biodiversity loss are the food and beverage, healthcare and consumer goods sectors.

SECTORS MOST AT RISK FROM BIODIVERSITY LOSS



Source: Credit Suisse, 2021

Figure 4: Sectors most at risk from biodiversity loss

ECONOMIC VALUE OF BIODIVERSITY IN SOUTHERN AFRICA

A good starting point to improve the way we manage ecosystem assets is to better understand the economic value of those assets in southern Africa. Many valuation studies have been done at global, regional and local level that provide estimates of the benefits offered by biodiversity and ecosystem services.

Nature has not only use value considered from the view of an asset with durable entities, but also tremendous intrinsic worth. This makes the economics of biodiversity essentially an analysis in portfolio management (Dasguptha, 2021). With this lens on biodiversity, farmers, fishers, miners, households, companies, governments or communities must manage the assets humanity has access to in the best possible way.

The southern African region is rich in biological resources many with global significance. As much as 26 of the 82 sites selected globally for species richness and endemism in sub-Saharan Africa occur in southern Africa. More than 40% of species in the southern African region is endemic.

Well known natural wonders in southern Africa include the great Etosha saltpans, the Victoria Falls and Zambezi River and the unique inland Okavango Delta. Namibia is home to two of the world's oldest deserts, namely the Kalahari and the Namib. In South Africa, the world's richest flora of succulent plants is found in the Karoo. Fynbos is an integral part of the Cape Floristic Region, which is recognised as one of six floral kingdoms of the world. Southern Africa has a track record and long history of wildlife conservation, being pioneers of community-based natural resource management and transfrontier conservation.

Southern Africa exhibits high levels of diversity of both species and habitats, offering a range of ecosystem services. Ecosystem services is a concept or term that explains both the benefits and the contributions of nature to people. Our basic needs for oxygen, water, food and raw materials are provided by nature together, with other ecosystem services that play a critical role in human well-being. As shown in Figure 1, these include spiritual values, climate regulation and food provision as well as recreational activities.

The benefits we source from nature can be linked to business or economic activities. Natural systems can be key drivers in the success of businesses linked to these benefits.

BIODIVERSITY AND CLIMATE CHANGE

The latest Intergovernmental Panel on Climate Change's (IPCC) Sixth Assessment Report highlights biodiversity as one of the key losses from climate change impacts for ecosystems (IPCC, 2022). The main projected climate risks for biodiversity and ecosystems in Africa are:

- Biomes are predicted to shift as a result of changes in atmospheric CO_2 concentrations and aridity.
- Available habitat for freshwater species will decline due to lower levels of precipitation and increased drought, resulting in higher water temperatures above the optimal physiological limits in floodplains, estuaries, wetlands, ephemeral pools, rivers and lakes.
- Coastal and marine ecosystems are highly vulnerable to the impacts of climate change.
- Ecosystem services will be affected by a reduction in the productivity of fish stocks, crops and livestock production, and a reduction in the provision of water due to heat and droughts.
- Patterns of invasive species spread are projected to change.
- Approximately 80% of projections for assessed species demonstrate that 10% of them are at very high risk of extinction due to climate change.

BIODIVERSITY AND HUMAN HEALTH

The linkages between climate change and human health are complex and include a range of interactions of systems and sectors. Risks to human health arise from the pollution of air, freshwater, land, soil, seas and coastlines by chemicals and waste. Globally, 6,5 million people die annually as a result of poor air quality (UNEP, 2022).

BIODIVERSITY AND WATER SECURITY

There are strong but complex links between the environment and the economy, including financial systems. Well-understood and known examples exist for biodiversity and climate change, health, disaster risk management and water security, which in turn help to understand the drivers of biodiversity loss.

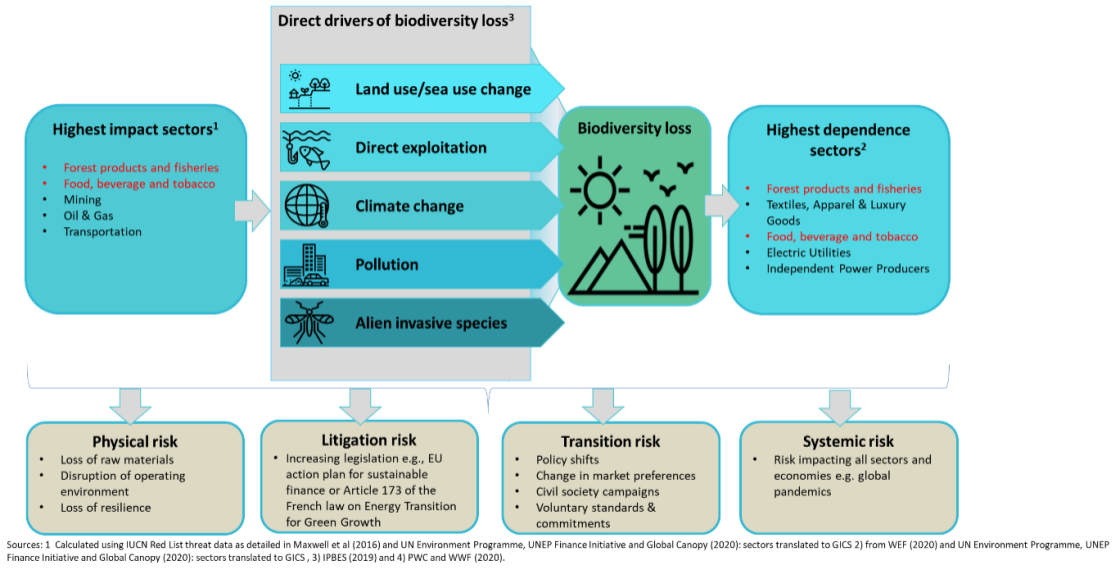
The benefits of conserving biodiversity are generally categorised as use and non-use values, which together encompass the total economic value of biodiversity conservation. Many people hold the view that it is incorrect for economic values to determine what should and should not be saved by conservation. The argument in favour of this approach rests on the fact that we are in a biodiversity crisis. Using economic values has the potential to save biodiversity in a real-world context. Making a business case for finance to take action in southern Africa could motivate those individuals who have the ability to influence capital allocation, to commit financial resources to the biodiversity sector.

BUSINESS CASE FOR TAKING BIODIVERSITY ACTION

Businesses who recognise that biodiversity loss exacerbates climate risk and measure their biodiversity dependencies and impacts, may better manage and prevent biodiversity-related risks and at the same time harness new business opportunities.

The business case for scaling up financial action on biodiversity is compelling. The impacts and dependencies of economic activities on biodiversity result in tangible risks to business and financial institutions. These risks range from environmental and operational to regulatory and reputational to market, financial and liability risks (Figure 5).

NATURE LOSS, RISK AND IMPLICATIONS FOR INVESTORS



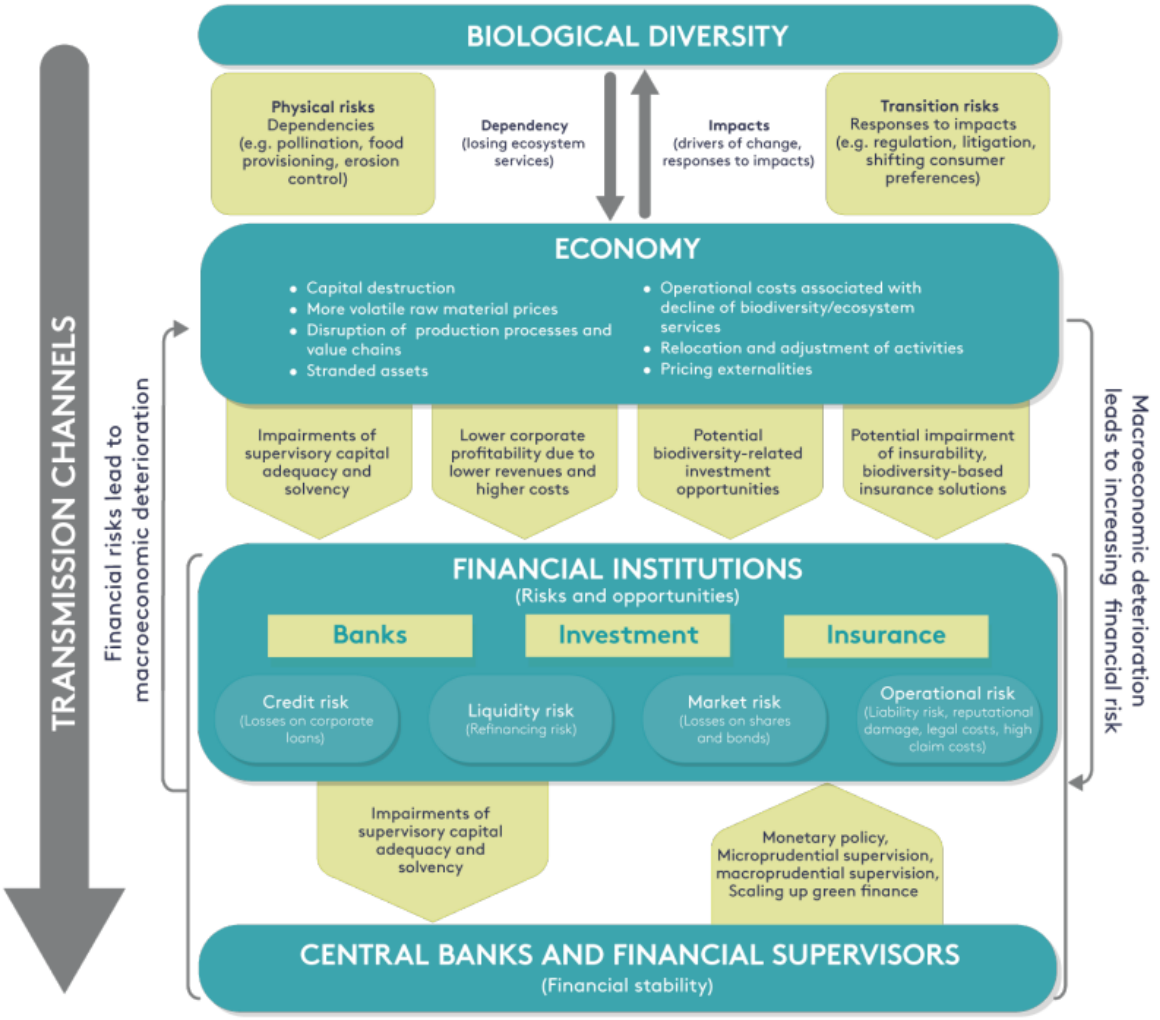
Sources: 1 Calculated using IUCN Red List threat data as detailed in Maxwell et al (2016) and UN Environment Programme, UNEP Finance Initiative and Global Canopy (2020): sectors translated to GICS 2) from WEF (2020) and UN Environment Programme, UNEP Finance Initiative and Global Canopy (2020): sectors translated to GICS , 3) IPBES (2019) and 4) PWC and WWF (2020).

Figure 5: Nature loss, risk and implications for investors

The pathways of links between biodiversity, the economy and the financial system underpin the need to act (Figure 6). As illustrated in Figure 1, the economy relies on biodiversity for essential ecosystem services and so a loss in biodiversity creates tangible physical and

transition risks leading to credit, liquidity, market and operational risk for banks and investment and insurance companies.

BIODIVERSITY, THE ECONOMY AND THE FINANCIAL SYSTEM



Source: NGFS, 2021

Figure 6: An overview of the links among biodiversity, the economy and financial systems

The ever-increasing rise of environmental, social and governance regulations and principles, and the growing recognition that businesses and investors must take cross-cutting views of risks to their operations, have driven a growing awareness of the role biodiversity loss can play in an organisation's overall risk exposure. This pressure will accelerate with the release of further regulations and taxonomies governing biodiversity risk in addition to those already in place, such as the UK's Deforestation Due Diligence Laws (2021) and the EU Taxonomy Regulation (2020). The Taskforce on Nature-related Financial Disclosures (TFND), due to be released in 2023, will build on the structure of the Taskforce on Climate-related Financial Disclosures (TCFD) to provide organisations with the ability to account for nature- and biodiversity-related concerns in their strategic planning, risk management and asset allocation decisions.

There are, however, significant opportunities to mitigate the risks of biodiversity loss through corporate and investment strategies. Integrating biodiversity and biodiversity loss when investing in southern Africa can create investment upsides. Environmental, social and corporate governance (ESG) due diligence is a good starting point. Adhering to existing standards, including, among others, the World Bank's International Finance Corporation's Performance Standard 6 Biodiversity Conservation and Sustainable Management of Living Natural Resources, Goal 14 (Life Below Water) and Goal 15 (Life on Land) of the United Nations' SDGs, as well as the Global Reporting Initiative Standard 304 Biodiversity will provide a good guideline.

The regulatory and reputational risks of mismanaging biodiversity loss will be become too significant to ignore, given the increased pressure to provide disclosure on par with management of carbon emissions and climate risk. Herein lies an investment and lending opportunity for biodiversity finance. Table 3 and Figure 7 set out the implications of biodiversity risks for investors and the financial materiality of biodiversity, respectively.

TABLE 3: IMPLICATIONS OF BIODIVERSITY RISKS FOR INVESTORS

	CREDIT RISK	MARKET RISK	OPERATIONAL RISK
Physical risk: physical impacts of biodiversity loss.	Revaluation of debt-servicing capacity and collateral for companies and governments.	Rating downgrades and share-price losses.	Biodiversity loss affects balance sheets through direct operations or indirectly through supply chains. Business continuity issues or opportunity costs linked to loss of access to raw materials and ecosystem services e.g. freshwater, fish, fertile soil, genetic diversity.
Litigation and regulatory risk: litigation and breach of underlying legal frameworks, and changes to regulations	▪ Reputational risk. ▪ New regulatory rules/ trade agreements[15] impose limitations on investing in activities that impact biodiversity. ▪ Damages due to false reporting of biodiversity risks. ▪ Damages due to greenwashing. ▪ Costs from changes in licenses, permitting and compliance.		
Transition risk: transition to an economy that conserves and restores biodiversity.	Investees face losses due to sanctions, stranded assets, damages, inability to access project finance or increased taxes related to negative impacts on biodiversity.	Long-term price increases as a result of biodiversity change. Market access impacted e.g.by failure to meet commitments on deforestation and consumer preferences.	Reputational loss resulting from failure to effectively manage biodiversity impacts or from NGO campaigns.[16]
Systemic risk: systemic impacts of biodiversity loss.	Economy can no longer be insured at a reasonable cost. Risk to sovereigns dependent on natural resources – impacts can lead to default risk.	Market-threatening effects from biodiversity loss globally or regionally.	Reputational loss for entire industries/ markets. Operational risk to businesses across the economy.

Source: PRI, n.d.

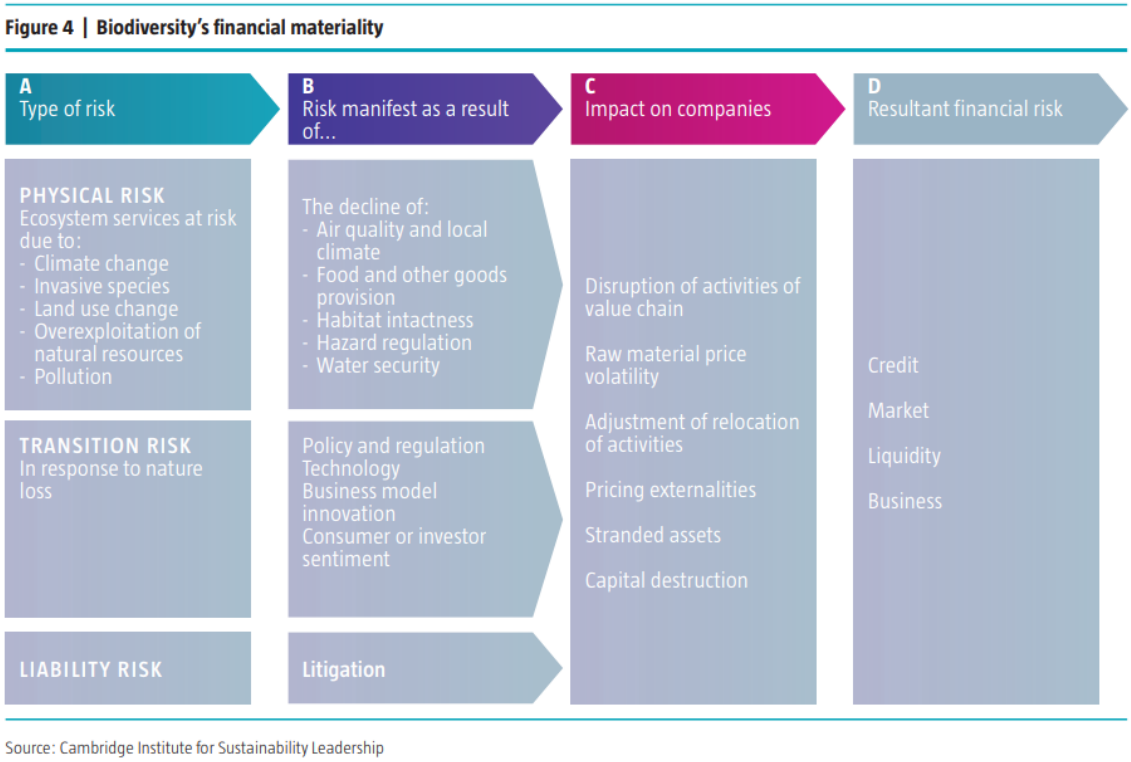


Figure 7: Biodiversity's financial materiality

INVESTOR INITIATIVES ON BIODIVERSITY

Biodiversity is not only a risk but also presents opportunities in specific sectors such as eco-tourism, nature-based solutions and regenerative agriculture by way of example. The following initiatives have proven their mettle in delivering returns on investment to investors in biodiversity projects (PRI, n.d.):

Act4Nature

Act4Nature is a French initiative that requires supporters to make commitments to, and take action on, biodiversity. Its supporters include AXA Investment Managers (AXA IM) and Natixis.

Business for Nature

Business for Nature is an organisation that aims to convene members of various platforms, including Act4Nature and the New York Forests Declaration, to share best practice, integrate biodiversity into corporate decision-making and influence policy.

De Nederlandsche Bank Sustainable Finance Platform

This platform was set up by the Dutch Central Bank to promote and increase awareness of sustainable funding in finance. It brings together the financial sector, supervisory authorities and government ministeris and has a biodiversity working group.

European Business @ Biodiversity Platform

The European Business @ Biodiversity Platform is a finance community of practice that has focused on good practice, tools to identify sector risk and biodiversity-related disclosure and metrics in finance institutions and companies. It is developing the “Finance for Biodiversity Pledge”, committing finance institution signatories to engagement, impact assessment and reporting on measures to address biodiversity, Members include AXA IM, CDC and Actiam.

Finans Norge

Finance Norge is a working gorup for investors and banks on nature risk, set up by the Norwegian finance industry body.

Natural Capital Finance Alliance

A partnership between UNEP FI and Global Canopy, which provides knowledge and tools to help the financial sector and other partners collaborate to reduce and manage nature impact risks and dependencies. Members include Robeco and Sumitomo Mitsui Trust Holdings.

Despite the risks emerging from business dependency on nature, the progress in integrating biodiversity into business and investment decisions remains limited (Share Action, 2020).

BIODIVERSITY FINANCE

Finance flows for biodiversity come from both domestic and international public and private sources, but there is a major funding gap to halt biodiversity loss.

In southern Africa, there is a need to increase self-generated revenues and develop innovative finance mechanisms (IUCN, 2020a) for biodiversity and ecosystem services. The World Bank (2020) identifies three main challenges hindering the scaling up of biodiversity finance:

- Failure of public policy
- A lack of data and measurement of biodiversity risk
- A lack of bankable biodiversity investment deals.

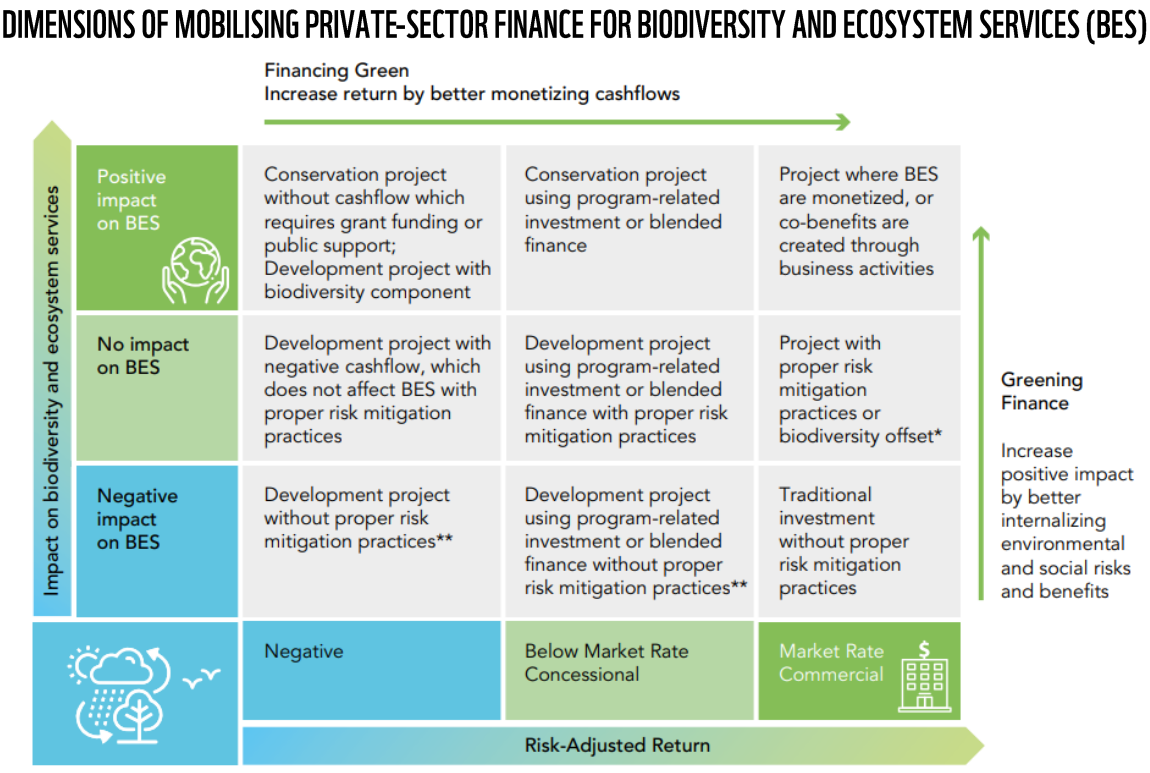
Another barrier to this is myopia. The time horizon in which financial actors plan and act is not more than a few years, but biodiversity and ecosystem projects run over a long period. Financial regulators and supervisors can play a key role in overcoming this barrier by changing their own assessment horizons and using their regulatory powers.

In addition, the time frame for deal sourcing, investment decision-making and review does not allow consideration of biodiversity issues if the expertise is not available. In this case, investors can increase their technical capacity to better understand and manage their biodiversity risks.

Integrating biodiversity into private equity can be more straightforward compared to listed equity as almost all investments involve controlling, or influential, minority stakes in the underlying portfolio companies. Investors should therefore have better access to information.

Integration can also be more impactful if investors use project-based safeguards, such as the International Finance Corporation's Performance Standard Six on Biodiversity Conservation and the Sustainable Management of Living Resources. The assessment of biodiversity risks in private equity is not that advanced (UNEP, 2020).

Figure 8 explains the dimensions of mobilising private-sector finance for biodiversity and ecosystem services. It indicates how return can be increased by better monetising cash flows, what the impact of the investment will be on biodiversity and ecosystem services (negative, none or positive), how the impact becomes increasingly positive if environmental and social risks and benefits are better internalised, and the various possibilities for the risk-adjusted return.



Source: World Bank, 2020

Figure 8: Dimensions of mobilising private-sector finance for biodiversity and ecosystem services (BES)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FOUR CASE STUDIES OF INVESTMENT OPPORTUNITIES IN BIODIVERSITY

There is a need to innovate and develop new finance solutions that are tailor-made for biodiversity and there is growing evidence that individual investors want investment providers to consider sustainability and nature in their investment decisions.

Biodiversity-related investments can be financed through, among others, direct investment, green bonds, commercial loans, private equity, risk-mitigation instruments or conservation trust funds. There is also a variety of financing streams and models for public–private cooperation.

There is growing evidence that individual investors want investment providers to consider sustainability and nature in their investment decisions. Nature-based tourism, for example, represents a significant opportunity to develop and maximise revenue streams for conservation and to generate benefits for communities (IUCN, 2020a). Integrating the protection of biodiversity with the fiduciary duties of institutional investors and asset managers would be a way to ensure that their investment policies account for natural capital.

CASE STUDIES

This report reviews four case studies of innovative biodiversity conservation finance initiatives in southern Africa. Through novel financial and business strategies, these innovative businesses have managed to overcome the barriers to financing biodiversity.

All the case studies presented had to overcome numerous challenges. The companies needed to work with businesses not large enough for investors but not small enough for micro-financing. Partnerships needed to be built with dispersed communities. Often, the projects function in an environment with weak regulatory frameworks and untested frameworks to monitor biodiversity impacts.

All these case studies have appealed to private investors despite challenging operating conditions. None of the success described would have been possible without the ingenuity, entrepreneurship and leadership skills of those leading these businesses and innovative funding solutions. Their resilience and their keen eye for seizing emerging opportunities

have proven to be a prerequisite for their survival and accomplishments. This is particularly true considering the lack of a large pool of professionals with the appropriate skills for these activities: investment managers with biodiversity conservation knowledge and biodiversity conservation experts with financial skills.

CASE STUDY 1: USING ALTERNATIVE ASSETS FOR CAPITAL DEPLOYMENT

AXA's Impact Fund on Climate and Biodiversity Fund

Where a biodiversity challenge has resulted in a new business opportunity, private equity funds have been developed to focus on single or multiple biodiversity-related issues. A showcase is the AXA Climate and Biodiversity Fund.

AXA Investment Managers' impact fund focuses on ecosystems that will support our world into the future. Created in 2012, AXA's Impact Investing Private Equity Strategy is aimed at addressing key social and environmental challenges. It also shows investors how it is possible to meet their fiduciary duty to provide risk-adjusted financial returns. Capital is deployed using alternative assets such as private equity, venture capital, private debt and project finance.

In 2019, AXA launched their Climate and Biodiversity Fund that will invest up to $200 million of capital into credible solutions to address the threat of climate change to biodiversity. Key target outcomes are climate change mitigation (tonnes of CO_2 avoided), landscape conservation (number of hectares under improved management), habitat protection (area of critical habitat conserved or threatened species protected) and climate resilience (number of people empowered).

An example that could be emulated in southern Africa is the investment into the Peruvian region of Madre de Dios to restore degraded lands and prevent deforestation while supporting smallholder framers to develop sustainable agroforestry livelihoods. Potential impacts are the protection of 600 000 ha of high-value ecosystems, 2,5 million tonnes of carbon emissions savings through natural sequestration, over 30 high conservation value species protected and improved income generation for 300 smallholder famers and their families.

CASE STUDY 2: NATURE-BASED TOURISM

Grovest Mdluli Lodge, South Africa

Nature-based tourism offers significant benefits for communities if the funds generated are reinvested in conservation management. These funds are generated most notably through entrance fees, accommodation and activity revenue and concessions for local communities living in or around protected areas.

The southern African region offers a range of natural assets critical for successful nature-based tourism development, such as iconic and endemic wildlife, mountains, rivers, waterfalls, forests, endemic bird populations, beaches and coral reefs. Enabling conditions that would be required include ease of access and entry, security and safety, enabling policy, suitable accommodation and experience to match the needs of the facility's target audience.

In 2017, Grovest launched Mdluli Safari Lodge Venture Capital Company partnered with the local Mdluli community. Approximately R80 million was raised from 80 corporate and retail investors to develop Mdluli Safari Lodge, a luxury responsible tourism experience with access to the iconic Kruger National Park.

In 2021, Impact Capital Africa awarded Mdluli Safari Lodge with its highest AA+ environmental, social and governance impact rating.

CASE STUDY 3: ECOLABELLING – BENEFITS FOR BIODIVERSITY AND BUSINESS

Forest Stewardship Certification

Sustainable and impact forestry investment has grown steadily. In 2019 the Global Impact Investment Network estimated an investment of US$9,4 billion in forestry and related assets, with the majority pursuing certification with the Forest Stewardship Council (FSC).[6]

Established in 1993, the FSC is an independent NPO that promotes forest stewardship with the FSC certification. It currently certifies more than 180 million hectares across 80 countries. The FSC's ten core principles promote sound management practices and best practice.

The FSC standard indicates that a forestry business protects forest ecosystems, manages water quality, conserves wildlife habitats and supports local communities. Several studies and tools (including WWF's Forest Certification Assessment Tool) have shown that the FSC provides the most credible forest certification scheme at present.

FSC certification shows that businesses that work in harmony with nature and that manage their biodiversity impacts can help to preserve wildlife species, tropical forests and critical habitats while also having a positive economic and social impact.

CASE STUDY 4: TRACKING SUSTAINABILITY PERFORMANCE THROUGH BIODIVERSITY METRICS AND DATA

BioCarbon Partners (BCP)

BioCarbon Partners (BCP) is one of the companies working to overcome the challenges that still exist regarding biodiversity metrics and data, and tracking sustainability performance. BCP's pilot project, the Lower Zambezi REDD+[7] Project's unique milestones include becoming the first Verified Carbon Standard project in Zambia and the first in Africa to earn gold level validation for the Climate, Community and Biodiversity Standard.

With world class national parks, and vast but rapidly disappearing forests, Zambia was chosen as the country to lay the foundation of BCP in early 2012. Since its inception, BCP's unique milestones for both Zambia and Africa include becoming the first Verified Carbon Standard project in the country and then going on to achieve another seven consecutive verifications.

BCP now employs over 200 people working across 13 chiefdoms in two provinces in Zambia to help conserve over 1 million ha of threatened wildlife habitat. In 2015 BCP achieved another unique milestone when the Lower Zambezi National Park became the first park in the world to go carbon neutral from operations.

The Luangwa Community Forests Project, BCP's second REDD+ project and the largest in Africa, achieved CCB Triple Gold too. In 2015, the Lower Zambezi National Park went carbon neutral from operations, a world-first. In 2017, BCP became the world's third highest ranked B Corp for social and environmental impacts.

[6] thegiin.org/assets/GIIN_Scaling%20Impact%20Investment%20in%20Forestry_webfile.pdf
[7] REDD+ is a United Nations-backed framework that aims to curb climate change by stopping the destruction of forests.

BRINGING TO LIGHT INVESTOR ACTION ON BIODIVERSITY

Many southern African investors are at a very early state of considering biodiversity in their portfolios. The challenge will be to fully include biodiversity as both a risk and an opportunity at the urgency at which action needs to be taken.

WHAT ARE FIRST STEPS INVESTORS CAN TAKE?

As the starting point, investors can assess and analyse the impact of investments on nature and the portfolio risk that is linked to biodiversity. The much-anticipated launch of the Beta framework of the Taskforce on Nature-related Financial Disclosures (TNFD) will most likely improve assessment and disclosure, although it might not be the magic bullet given the slow pace of adoption of the climate equivalent, the Taskforce on Climate-related Financial Disclosures (TCFD).

Figure 9 shows the disclosures that the TNFD recommends for nature-related investments for governance, strategy, risk management and metrics and targets.

BOX 2: WHAT IS THE TASKFORCE ON NATURE-RELATED FINANCIAL DISCLOSURES?

The Taskforce on Nature-related Financial Disclosures (TNFD) aims to redirect flows of finance at scale towards nature-positive outcomes. This is catalysed through a partnership between Global Canopy, United Nations Development Programme, United Nations Environmental Programme's Finance Initiative and WWF. The TNFD is a global, market-led initiative that aims to develop a risk and disclosure framework for organisations wanting to report on and act on nature-related risks to shift financial flows from negative outcomes to nature-positive outcomes.

The TNFD framework evolved from consultations with a range of knowledge partners from science, standards, data, technology, finance, business, policy and regulation. The framework provides recommendations on nature-related risks and opportunities applicable to investors, analysts, corporate executives and boards, regulators, stock exchanges and accounting firms.

RECOMMENDED NATURE-RELATED FINANCIAL DISCLOSURES

Source: TNFD, 2022

Figure 9: Recommended disclosures for nature-related investments from the Taskforce on Nature-related Financial Disclosures

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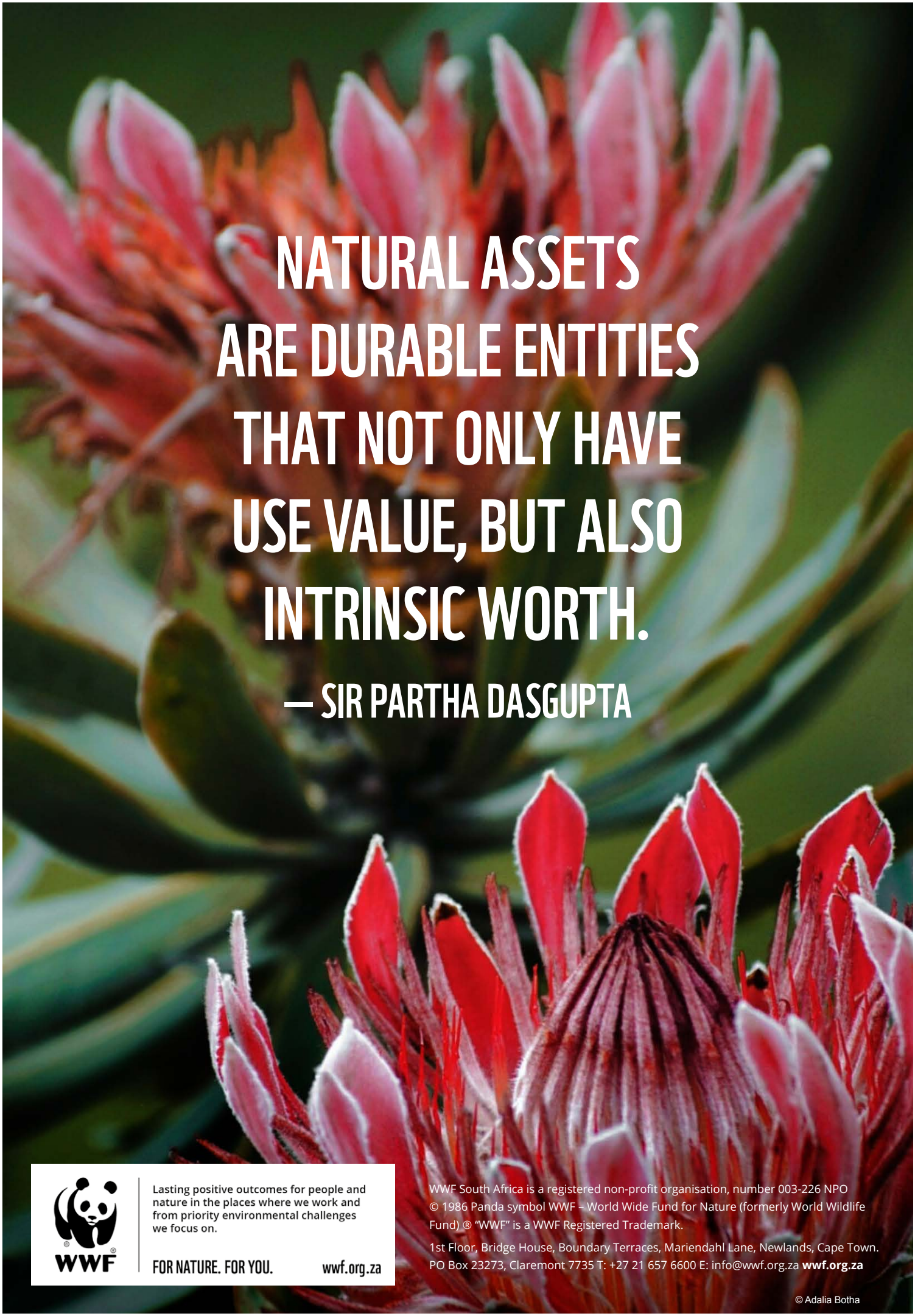

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