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DEPARTMENT OF FORESTRY, FISHERIES AND THE ENVIRONMENT

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PUBLICATION OF THE REVISED DRAFT WHITE PAPER ON CONSERVATION AND SUSTAINABLE USE OF SOUTH AFRICA'S BIODIVERSITY 2022 FOR PUBLIC COMMENT

I, Barbara Dallas Creecy, Minister of Forestry, Fisheries and the Environment, hereby publish the revised draft White Paper on Conservation and Sustainable use of South Africa's Biodiversity, 2022 for public comments, as set out in the Schedule.

Members of the public are invited to submit, within 14 days from the date of publication of this notice in the **Gazette**, written comments to the revised draft White Paper on Conservation and Sustainable use of South Africa's Biodiversity, 2022, to any of the following addresses:

By post to: The Director-General: Department of Forestry, Fisheries and the Environment
Attention: Ms Tsepang Makholela
Private Bag X447
PRETORIA
0001

By hand at: Reception, Environment House, 473 Steve Biko Road, Arcadia, Pretoria, 0083

By e-mail: whitepaper2@dfre.gov.za

Any inquiries in connection with the revised draft White Paper on Conservation and Sustainable use of South Africa's Biodiversity, 2022 can be directed to Mr Khuthadzo Mahamba on +27 64 880 8728 or whitepaper2@dfre.gov.za.

Comments received after the closing date may be disregarded.



BARBARA DALLAS CREECY
MINISTER OF FORESTRY, FISHERIES AND THE ENVIRONMENT

SCHEDULE

**Revised Draft White Paper on the Conservation and Sustainable Use of South
Africa's Biodiversity**

Department of Forestry, Fisheries and the Environment

EXECUTIVE SUMMARY

South Africa is one of the most biodiverse countries in the world. However, global change, including climate change, habitat loss and transformation, invasive species, pollution, over-harvesting, and illegal harvesting, continues to result in the ongoing loss of biodiversity, ecological degradation, and decline of the ecosystem services from biodiversity and ecological infrastructure. Reasonable legislation and the effective implementation thereof, and other measures, are, therefore, required to guide the Government, the private sector, and traditional and indigenous communities, in biodiversity conservation and sustainable use.

This White Paper on Conservation and Sustainable Use of South Africa's biodiversity has been developed to set the country on a strong path of sustainable development based on the rich biodiversity and ecological infrastructure which supports ecosystem functioning for livelihoods and the well-being of people. It takes into consideration the historical, socio-economic, and environmental context of South Africa, and the aspirations and needs of its people.

In this regard, the following challenges that require policy intervention have been identified:

- (1) Lack of consensus among stakeholders around how to pursue conservation; sustainable use; fair and equitable sharing of benefits from genetic or biological resources;
- (2) Lack of transformation in the sector where majority of population are disadvantaged and disenfranchised from contributing to conservation and sustainable use;
- (3) Addressing the global challenges of biodiversity loss, land degradation, climate change, and pollution;
- (4) Lack of effective mainstreaming of biodiversity;
- (5) Practices within the sector that have brought the country into disrepute; and
- (6) Inadequate means of implementation of legislation, including uneven governance, capacity and resources in the management of biodiversity.

In addressing these challenges, the White Paper emphasises the importance of the biodiversity sector to the South African economy, underpinned by strengthened conservation and equitable sustainable use of biodiversity heritage, including the restoration and rehabilitation of South Africa's natural land- and seascapes.

At a strategic level, the White Paper:

- (a) Provides policy certainty and a strong policy base for biodiversity conservation, equitable growth in the biodiversity economy, and socio-economic development in the biodiversity sector;
- (b) Advocates for coherent and effective biodiversity conservation practices that protect South Africa's unique biodiversity, for the benefit of current and future generations;
- (c) Integrates environmental, social, and economic elements to advance sustainable development;
- (d) Places protected areas and other conservation areas as mechanisms to contribute strongly to ecologically sustainable rural development;
- (e) Advances process transformation of the sector, with nature-based access and benefit flows for equitable and inclusive socio-economic growth and development; and
- (f) Enhances South Africa's leadership in biodiversity conservation with a strong international reputation and promoting African coherence and unity.

The White Paper therefore sets forth the following vision: *"A society living in harmony with nature, where biodiversity conservation and sustainable use is transformed, ensuring improved benefits from healthy ecosystems, that are fairly and equitably shared"*. The White Paper is aspirational and advocates for a society where all people have a high quality of life, a voice, and a nurturing earth supporting them. As such, the policy sets out the following impact statement: *"Thriving People and Nature"*.

The White Paper contains four Goals:

- **Goal 1: Biodiversity Conservation Promoted:** Conserve all biological diversity and its components;
- **Goal 2: Sustainable Use:** Ensure that sustainable use enhances thriving living land- and seascapes and ecosystems, livelihoods, and human well-being, while avoiding, minimising, or remedying adverse impacts on biodiversity;
- **Goal 3: Equitable Access and Benefit Sharing:** Ensure that benefits are derived and shared from the use and development of South Africa's genetic and biological resources, without compromising national interests;
- **Goal 4: Biodiversity Conservation and Sustainable Use is Transformative:** gives effect the environmental right (contained in Section 24 of the Constitution), and other human rights, facilitates redress, and promotes transformation;

As well as two cross-cutting Enablers:

- **Enabler 1: Integrated, Mainstreamed and Effective Biodiversity Conservation and Sustainable Use:** Integrate policy and practice across government and effectively implement multilateral agreements; and
- **Enabler 2: Enhanced Means of Implementation:** Expand and develop ability to effectively conserve biodiversity, to manage its use, and to address factors threatening it.

The implementation of this White Paper will contribute strongly to the achievement of a broad range of the sustainable development goals, as well as the aspirations of the National Development Plan 2030, the Africa Agenda 2063, and key relevant Multilateral Environmental Agreements that South Africa has ratified

It is, therefore, considered a new deal to ensure people will not only be living in harmony with nature, but that both people and nature will thrive.

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LIST OF ACRONYMS AND ABBREVIATIONS

CBD	Convention on Biological Diversity
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CMS	Convention on the Conservation of Migratory Species of Wild Animals
DALRRD	Department of Agriculture, Land Reform and Rural Development
DFFE	Department of Forestry, Fisheries and the Environment
IPBES	Intergovernmental Platform on Biodiversity and Ecosystem Services
NBF	National Biodiversity Framework
NBSAP	National Biodiversity Strategy and Action Plan
NDP	National Development Plan
NEMA	National Environmental Management Act, 1998 (Act No. 107 of 1998)
NEM: BA	National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004)
NEM: PAA	National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003)
NEMLA	National Environmental Management Laws Amendment Act, 2022 (Act No. 2 of 2022)
MLRA	Marine Living Resources Act, 1998 (Act No. 18 of 1998)
OECD	Other Effective Area-based Conservation Measure
PDI	Previously Disadvantaged Individual
Ramsar	Convention on Wetlands of International Importance
SADC	Southern African Development Community
SANBI	South African National Biodiversity Institute
SANParks	South African National Parks
UNCCD	United Nations Convention to Combat Desertification
UNFCCC	United Nations Framework Convention on Climate Change
WHC	World Heritage Convention

1 INTRODUCTION AND BACKGROUND

1.1 Policy Issue Identification

The foundation for conservation and sustainable use of South Africa's biodiversity is the Constitution of the Republic of South Africa, 1996 (the Constitution), which is the Supreme law of the country. Section 24 of the Constitution provides for an environmental right that emphasises, amongst others, the need for the environment to be protected, for the benefit of present and future generations. It further emphasises the need to put in place reasonable legislative and other measures that, prevent pollution and ecological degradation; promote conservation; and secure ecologically sustainable development and use of natural resources, while promoting justifiable economic and social development.

To give effect to the Constitutional mandate, the National Environmental Management Act, 1998 (Act No. 107 of 1998) was promulgated to serve as a framework legislation on matters pertaining to the environment, and to inform specific environmental management acts and associated subordinate legislation, as well as relevant policies. South Africa enacts ratified international agreements concerning biodiversity conservation and sustainable use through national legislation and policy, and where such legislation and policy are not required, gives prominence to international agreements through strategies and guidelines.

South Africa is considered as one of the megadiverse countries in the world, with exceptional biodiversity, characterised by high species richness, high levels of species endemism, and a wide variety of ecosystems. South Africa's richness is not limited to biodiversity, but also include diverse cultures and languages, and exceptional geological and climatic diversity within its borders.

South Africa has a well-established network of protected areas, both on land and in the sea, which comprises of protected areas falling under the mandates of national, provincial and local spheres of government, supplemented by private and community areas. Collectively, these protected and conservation areas serve to protect the biodiversity and ecological infrastructure of South Africa. In addition, there are diverse approaches to sustainable use, in both state and particularly within the private sector, that form the basis for a dynamic and important biodiversity-based economy.

This White paper seeks to provide a policy framework on issues relating to:

- (1) the conservation of biodiversity;
- (2) the sustainable use of the components of biodiversity;
- (3) access to biological or genetic resources and the fair and equitable sharing of benefits arising from their utilization; and
- (4) the transformation of the country to ensure redress to previously disadvantaged individuals, equality, and equitable inclusion within the biodiversity-based economy.

Improvement in these four dimensions are identified as the four goals of this White Paper.

Transformation will require conservation and sustainable use that redresses discrimination and unfair disadvantage and enables and capacitates previously disadvantaged individuals, such that "people living in harmony with nature" can be achieved. Partnerships need to be built that promote respect and dignity for people and nature.

Furthermore, there are key barriers in implementation of conservation and sustainable use of biodiversity: uneven effectiveness in governance and shortages of human, financial and other resources. Integrated, mainstreamed and effective biodiversity conservation and sustainable use; as well as enhanced capacity and knowledge, can enable the mitigation of these and other barriers.

1.2 Problem Statement

People and nature are part of a holistic system consisting of interdependent systems of life which also include the values and relationships people have with nature¹. Valuing nature is influenced by (i) contextual and worldviews; (ii) knowledge systems, including indigenous and local knowledge; (iii) moral, spiritual, and cultural principles and life goals; and (iv) the importance of nature in different contexts. The latter includes instrumental values², relational values³, spiritual values, and intrinsic values⁴. There should be sustainable, equitable and full benefit from nature's values for all people.

As a signatory to the Convention on Biological Diversity (CBD), government supports and promotes both consumptive and non-consumptive sustainable use, with important economic activities and employment based on these, including within the ecotourism, hunting, fishing, harvesting, bioprospecting, customary use, and recreation industries. Furthermore, Ecological Infrastructure, strategic water source areas, and groundwater aquifers, all provide ecosystem services from which society and the economy benefits. Government therefore intends strengthening this approach while addressing challenges that confront the sector.

Within the context of the four goals (broadly covering conservation, sustainable use, fair and equitable sharing of benefits and transformation) identified under the policy issues, the following challenges require policy intervention, in respect of which the White Paper then provides solutions:

1.2.1 Lack of consensus among stakeholders around how to pursue conservation; sustainable use; fair and equitable sharing of benefits from genetic or biological resources; and transformation:

- 1.2.1.1 The lack of an over-arching policy on biodiversity has led to a general lack of consensus on approaches towards conservation and sustainable use.
- 1.2.1.2 Poor communication and engagement, and marginalisation among stakeholders, results in polarised standpoints leading to conflict and contestation.

1.2.2 Limited progress, or even decline, in achieving the four identified goals:

- 1.2.2.1 Global change, invasive alien species, pollution, overexploitation, illegal harvesting, illegal trade, habitat loss and degradation, all threaten terrestrial, freshwater, and marine ecosystems, and survival of species.
- 1.2.2.2 The sector has not reached its potential in terms of the contribution to the national economy or to equitable socio-economic development.
- 1.2.2.3 Complicated processes and procedures, and lack of resources, access, and awareness, hinder the unlocking of the genetic potential of biodiversity, and associated traditional and indigenous knowledge, into biotechnology value chains.
- 1.2.2.4 The sector remaining untransformed, limiting the full exercising of rights and inclusive participation by Traditional Leaders and Traditional Health Practitioners, Previously Disadvantaged Individuals (PDIs) and communities in access to, and sharing of, benefits.
- 1.2.2.5 Limited participation and access of Traditional Leaders and Traditional Health Practitioners, PDIs and communities to natural resources, and socio-economic opportunities.

¹ Balvanera, P. et al. (eds.) (2022). Methodological assessment of the diverse values and valuation of nature of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. IPBES secretariat, Bonn, Germany. <https://doi.org/10.5281/zenodo.6522522>

² means to a desired end often associated with the notion of 'ecosystem services'.

³ the meaningfulness of human-nature interactions.

⁴ independent of people as valuers.

1.2.3 Uneven governance and capacity and resource constraints that hinder success:

- 1.2.3.1 Duplication and overlap in legislation, and ineffective integration across spheres of government, result in barriers and inefficiencies.
- 1.2.3.2 There is insufficient and ineffective resourcing of the conservation function under the current governance and funding models.

1.2.4 Practices within the sector that have brought the country into disrepute:

- 1.2.4.1 Inappropriate and illegal practices, activities, or actions that compromise animal well-being and ecosystem and genetic integrity, have negatively affected South Africa's reputation as a world leader in biodiversity conservation.

1.3 Vision, Mission, and Impact Statement**1.3.1 The Vision**

A society living in harmony with nature, where biodiversity conservation and sustainable use is transformed, ensuring improved benefits from healthy ecosystems, that are fairly and equitably shared for present and future generations.

1.3.2 The Mission

To conserve and manage South Africa's biodiversity, and ensure healthy ecosystems, ecological integrity and connectivity, with transformative socio-economic benefits to society for current and future generations through justifiable, ecologically sustainable, and socially equitable use of its components.

1.3.3 Impact Statement

Thriving People and Nature.

1.4 Scope of Application

This White Paper provides an overarching framework to inform policies, legislation and practices involving biodiversity within terrestrial, aquatic, and marine ecosystems, under custodianship of the State, and within traditional authority areas and on privately owned land. This includes biodiversity in extensive wildlife systems as well as in controlled environments.

The White Paper provides policy certainty and guidance in the conservation, sustainable use, and fair and equitable access and benefit sharing of South Africa's biodiversity, in order to contribute to the transformation of society, the well-being of people and nature, and to the prosperity of society.

The responsibility to give effect to the intent of this White Paper rests with a range of stakeholders, including, but not limited to, the State, traditional leadership and communities, private landowners, industry, academia, Non-Government Organisations, and civil society.

1.5 Background

With a landmass of 1.21 million km² and surrounding seas of 1.1 million km², South Africa is among the smaller of the world's 17 megadiverse countries, which together contain more than two thirds of the world's biodiversity. Three of the 35 biodiversity hotspots of the world (regions that are biologically rich and highly threatened) occur in South Africa – the Succulent Karoo, The Cape Floristic Region, and the Maputaland–Pondoland–Albany.

South Africa has a wide range of bioclimatic, oceanographic, geological, and topographical settings. These create high ecosystem diversity and endemism across terrestrial, freshwater, and marine ecosystems, which are recognised globally.

South Africa's biodiversity provides people with tangible benefits like food, clean water, medicine and materials, and it supports agricultural and fisheries production. The conservation of biodiversity and ecosystems provides ecological infrastructure that, in turn, provides protection against natural hazards like floods and droughts, as well as protection against climate change impacts. This natural heritage is the basis of a vibrant tourism industry and offers natural spaces and a valued sense of place⁵ for recreational, cultural, and traditional practices and activities.

The unique and diverse fauna and flora, together with the wide range of ecosystems, underpins, among others, South Africa's wildlife industries, culturally and economically important traditional medicine practices, extensive livestock farming industry, and the functioning of water catchment areas.

Together these industries and ecosystem functions provide numerous jobs and contribute to food and water security. Jobs directly related to biodiversity are often outside urban centres and are labour intensive, contributing to rural development, poverty alleviation, and inclusive growth.

The marine ecosystem provides South Africans with food and livelihoods by providing a basis for fishing (commercial, subsistence or recreational). Rivers, wetlands, and catchment areas are crucial ecological infrastructure for water security, often complementing built infrastructure.

In addition to the wide range of current use of biodiversity, there are additional opportunities to leverage underused, or as yet undeveloped, components. Continued investment in managing and conserving biodiversity is essential so that biodiversity can be adequately recognised and accounted for in our national accounts including its contribution to livelihoods, the economy and job creation.

1.5.1 Status of Biodiversity

Almost half the of the 1 021 ecosystem types assessed in the National Biodiversity Assessment (2018) are categorised as threatened. Overall, estuaries, rivers, and inland wetlands have the highest proportion of threatened ecosystem types. Rivers and inland wetlands have the highest proportion of types in the Critically Endangered category, 42% and 61% respectively.

Estuaries have the highest overall proportion of threatened ecosystem types (86%), followed by inland wetlands (79%), and rivers (64%). Over two-thirds of ecosystem types are represented in the current protected area network, leaving 31% in the Not Protected category. Wetland and river ecosystem types have the lowest levels of protection overall.

Of the assessed taxa in South Africa (23 312 indigenous taxa from 11 taxonomic groups), 0.2% are extinct and 14% are threatened with extinction. 22% of endemic taxa are threatened with extinction. Estuaries have the highest proportion of threatened taxa (27%), and 19% of marine taxa are threatened.

The IUCN Red List Index that tracks the changes in species threat status shows an increased extinction risk for most of eight taxonomic groups assessed (plants, reptiles, birds, mammals, amphibians, freshwater fishes, dragonflies, and butterflies) with freshwater species and butterflies at most risk.

In addition, species confined to inland aquatic ecosystems are declining more rapidly than those occurring in terrestrial ecosystems. Approximately 99% of the estuarine area and 88% of the wetland area are threatened. Across the main ecosystems, estuaries and inland wetlands are also the least protected ecosystem types, with less than 2% of their extent in the Well Protected category.

1.5.2 Pressures and Drivers

There are many pressures on biodiversity within the country, including habitat loss, freshwater flow modification, overfishing, overuse of some species, pollution, climate change, and biological invasions.

Overutilisation of rangelands, which results in the loss of shrub and herbaceous cover and leads to increased erosion, is a direct pressure to terrestrial species and ecosystems, and an indirect pressure on inland aquatic

⁵ Sense of place. The unique character of natural environments, and the value people derive from this.

ecosystems. Degradation of rangelands lowers the carrying capacity for both livestock and wildlife, with associated decrease in other ecosystem services like water quality, erosion control, and carbon sequestration, as well a decrease in economic potential and the sustainability of jobs. Both wildlife ranching and livestock farming are vitally important land uses for both socio-economic development and biodiversity conservation, but can have negative impacts if conducted too intensively, or inappropriately.

The harvesting of edible and medicinal plants and animals from the wild is widely practised in South Africa and is particularly important as part of the rural economy. Many indigenous plant and animal species have documented traditional medicine uses, and many also have important spiritual meanings. Much of this harvesting is unregulated, and overharvesting may lead to local extirpation of key species.

Pollution, and over abstraction of water from ground water aquifers, rivers and wetlands is a case of unsustainable use of natural resources that directly threatens biodiversity, ecosystems, and human well-being.

In the marine ecosystem, including the ocean, coastal areas, and estuaries, the unsustainable use of biological resources is a significant pressure on biodiversity. Fishing (including commercial, recreational, subsistence, small-scale, and illegal fishing) remains the biggest pressure on most inshore and offshore parts of the marine ecosystem, with greater impact on inshore resources than on the deep ocean systems.

The past decade has seen a rise of international wildlife trafficking syndicates that poach and trade illegally in species subject to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) restrictions on international commercial trade. For example, there has been large-scale investment by the South African government and private sector in rhino anti-poaching measures. Similarly, South Africa's cycads, succulent plants, pangolins, parrots, and some reptiles and invertebrates, are also severely threatened by illegal collection and trade.

Human activities are often concentrated in areas rich in natural resources, of high productivity and high accessibility. Pressures are particularly marked in and around estuaries, inland wetlands, river valleys, and riparian areas, lowland areas such as coastal plains, the seashore, bays and the inner shelf and shelf edge in the ocean.

In addition to these natural features, pressures are also focused on regions with high agricultural potential, around human settlements, and in regions with high mining potential. Ecosystems and species in these pressure hotspots are, therefore, particularly at risk of extinction or collapse due to the accumulation of pressures. Inland wetland, river and estuarine ecosystems have very high levels of threats.

1.5.3 Benefits Derived from South Africa's Biodiversity

South Africa's biodiversity provides a wide array of benefits to the economy, society, and human well-being, which are dependent on intact ecosystems, healthy species populations and genetic diversity. South Africa supports the sustainable use of biodiversity of the intrinsic, relational and instrumental values of biodiversity⁶. South Africa promotes a diverse biodiversity-based economy that includes both non-consumptive and consumptive uses of all the benefits, services and values of biodiversity.

These uses include, amongst others, ecotourism, hunting, fishing, harvesting, boating, hiking, as well as cultural and spiritual uses, and their associated value chains. There are diverse successful approaches and enterprises associated with the biodiversity economy, many of which leverage value from otherwise marginal production landscapes, and this diversity enhances the resilience and offers further potential for growth. Biodiversity-related jobs number approximately 418 000 and the biodiversity-based tourism industry is worth over R30 billion per year. Intact ecosystems and high species diversity are essential for agricultural production, providing healthy populations of crop pollinators and natural predators of agricultural pests.

Healthy rangelands support both livestock and wildlife ranching (the latter worth R14 billion per year). South Africa's biodiversity provides substantial employment in a range of sectors. This level of employment is comparable to that

⁶ Diaz, S. et al. 2015. The IPBES Conceptual Framework—Connecting nature and people. *Current Opinion in Environmental Sustainability*, 14, 1–16. <https://doi.org/10.1016/j.cosust.2014.11.002>

of the mining sector. There are at least five other jobs that depend directly on biodiversity use, for every job dedicated to conserving biodiversity (e.g., in protected areas or conservation authorities).

These jobs are prevalent in sectors such as fisheries, wildlife ranching, indigenous flora production industries, traditional medicine, and indigenous tea production and biodiversity-based tourism. Intact catchments, wetlands, and riparian systems help clean water supplies, attenuate floods, and store water for times of drought, thereby increasing water security and contributing to the resilience to the impacts of a changing climate. Harvesting of edible plants, edible insects, fish, medicinal plants, and building or weaving materials from the wild is widely practised in South Africa and is an important part of the rural economy. Natural ecosystems, plants and animals have also influenced cultural and spiritual development, and are woven into languages, place names, religion, culture, and folklore.

Biodiversity forms part of South Africa's national identity and heritage. Biodiversity is also an important national asset and a powerful contributor to inclusive growth and job creation. Biodiversity, therefore, contributes to the goals of the National Development Plan (2030) of reducing poverty and inequality in South Africa through stimulating the economy, improving employment figures, building an inclusive rural economy, and providing affordable health care. All of these goals rely to some extent on biodiversity, healthy ecosystems, resilient ecological infrastructure, and environmental sustainability.

Every decision taken, whether by government or individuals, affects the future of biodiversity. By investing in the restoration, protection, and conservation of biodiversity assets and ecological infrastructure, social and economic development is enhanced, while at the same time contributing to human well-being.

Sustainable use plays an important role in ensuring continued benefits from biodiversity for the present and future generation. The Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) Sustainable Use Assessment⁷ identified seven key elements and policy options to strengthen sustainable use of wild species:

- (a) Strengthen inclusive and participatory decision-making;
- (b) Recognize and support multiple forms of knowledge;
- (c) Ensure fair and equitable distribution of costs and benefits;
- (d) Tailor policies to specific context;
- (e) Monitor wild species and practices;
- (f) Align policies at international, national, regional, and local levels; and
- (g) Support robust institutions, including customary institutions.

All of these are relevant and applicable to the South African context, and are elaborated on under the Principles, Goals, and Policy Objectives of the White Paper

1.6 Policy and Legal Context

1.6.1 International Policy Context

South Africa has ratified the following Multi-lateral Environmental Agreements in relation to biodiversity:

- (a) The Convention on Biological Diversity, 1996 (CBD) which, has three main objectives: (i) the conservation of biodiversity, (ii) the sustainable use of the components of biodiversity, and (iii) the fair and equitable sharing of the benefits arising from the utilisation of genetic resources.
- (b) The Cartagena Protocol on Biosafety to the Convention on Biological Diversity (Cartagena Protocol) (governing the movement of living modified organisms, resulting from biotechnological intervention, from one country to another) (ratified by South Africa in 2003);

⁷ Assessment report on the sustainable use of wild species. <https://ipbes.net/sustainable-use-assessment>.

- (c) The Nagoya Protocol on access to genetic resources and the fair and equitable sharing of benefits arising from their use to the Convention on Biological Diversity (Nagoya Protocol) (ratified by South Africa in 2014);
- (d) The UN Convention to Combat Desertification (UNCCD, ratified by South Africa in 1997);
- (e) The UN Framework Convention on Climate Change (UNFCCC, ratified by South Africa in 1997);
- (f) The UN Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES, ratified by South Africa in 1975);
- (g) The International Plant Protection Convention (IPPC, ratified by South Africa in 1952);
- (h) The Ramsar Convention on Wetlands (Ramsar, ratified by South Africa in 1971);
- (i) The World Heritage Convention (WHC, ratified by South Africa in 1972);
- (j) The Convention on the Conservation of Migratory Species of Wild Animals (CMS, ratified by South Africa in 1991);
- (k) The African-Eurasian Migratory Waterbirds Agreement (AEWA, ratified by South Africa in 2002); and
- (l) The International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA, ratified by South Africa in 2004).

Other international agreements and programmes:

- (i) The UN Agenda 2030 for Sustainable Development and the Sustainable Development Goals (SDGs);
- (ii) The UNESCO Man and Biosphere (MAB) Programme; and
- (iii) The Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES).

Africa's regional economic communities also play a significant role in coordinating the development of Africa's subregions in a way that is compatible with regional development and conservation objectives. South Africa is a member State of the African Union (AU), as well as the Southern African Development Community (SADC), under which there are agreed Biodiversity Protocols. South Africa subscribes to the African Union Agenda 2063 for a prosperous Africa as a member of the AU, which is Africa's plan for sustainable development on the continent. South Africa is also a party to SADC's biodiversity-related protocols.

1.6.2 National Policy and Legislative Context

South Africa's environmental management regime is underpinned by the environmental right in section 24 of the Constitution with the following provisions:

24. Everyone has the right –

- (a) to an environment that is not harmful to their health or wellbeing; and*
- (b) to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that –*
 - (a) prevent pollution and ecological degradation;*
 - (b) promote conservation; and*
 - (c) secure ecologically sustainable development and the use of natural resources while promoting justifiable economic and social development.*

As part of its effort to fulfil the obligation to adopt reasonable legislative measures, a White Paper on Environmental Management Policy for South Africa was implemented in 1998. This served as the basis for South Africa's framework environmental law, the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA). NEMA, amongst others, guides environmental decision-making in South Africa, and provides mechanisms for

monitoring compliance and enforcing environmental laws. All spheres of government and individuals have obligations and roles in terms of NEMA.

A draft White Paper on the Conservation and Sustainable Use of South Africa's Biological Diversity was developed in 1997. Although this draft policy was not adopted, it informed the content of the National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004) (NEM: BA) and the National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003) (NEM: PAA). While the 1997 Draft White Paper can still be drawn on as a reference document, this White Paper replaces the 1997 draft White Paper in terms of providing policy guidance.

The object of NEM: BA is to provide for the management and conservation of biodiversity. It also makes provision for the establishment and governance of the South African National Biodiversity Institute (SANBI), which has the mandate of advising the Minister on issues related to biodiversity based on the best available science.

NEM: PAA has the overarching goal of providing for the protection and conservation of ecologically viable areas representative of biological diversity, and natural landscapes and seascapes. NEM: PAA also provides for the continued existence and governance of South African National Parks (SANParks), which expands and manages South Africa's national park network.

The World Heritage Act, 1999 (Act No. 49 of 1999) makes provision for the management of natural and cultural heritage and provides for the establishment of the iSimangaliso Wetland Park Authority.

The Marine Living Resources Act, 1998 (Act No. 18 of 1998) (MLRA) is South Africa's primary law dealing with the conservation of marine ecosystems and the long-term sustainable utilisation of marine living resources.

Other legislation that applies to the conservation and sustainable use of biodiversity in South Africa include: the National Environmental Management: Integrated Coastal Management Act, 2008 (Act No. 24 of 2008), the National Water Act, 1998 (Act No. 36 of 1998) (NWA), the National Forests Act, 1998 (Act No. 84 of 1998), the World Heritage Convention Act, 1999 (Act No. 49 of 1999), and the Game Theft Act, 1991 (Act No. 105 of 1991).

The Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983) provides for control over the utilization of the natural agricultural resources in order to promote the conservation of the soil, the water sources and the vegetation and the combating of weeds and invader plants. The Preservation and Development of Agricultural Land Bill (B8-2021, 2021-04-22) provides for conservation agriculture, agro-ecosystem management, agro-ecosystem authorisations, the listing and delisting of activities or areas within agro-ecosystems and the identification of competent authorities. Activities under the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002) may adversely impact conservation and sustainable use of biodiversity.

There is also national legislation that has implications for conservation and sustainable use despite not having those explicit purposes. These include the Broad-based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003) which establishes a legislative framework for the promotion of black economic empowerment. The Spatial Planning and Land Use Management Act, 2013 (Act No. 16 of 2013) (SPLUMA) and the Marine Spatial Planning Act, 2018 (Act No. 16 of 2018), which have implications for conservation planning. Legislation such as the Animal Diseases Act, 1984 (Act No. 35 of 1984), the Animals Protection Act, 1962 (Act No. 71 of 1962), the Meat Safety Act, 2000 (Act No. 40 of 2000), Animal Improvement Act, 1998 (Act No. 62 of 1998), and the Performing Animals Protection Act, 1935 (Act No. 24 of 1935), all have implications for species conservation and sustainable use.

The implementation of national legislation is guided by relevant policies, such as, the National Development Plan: Our Future – Make it Work (NDP 2030). The primary objective of the NDP is to eliminate poverty and reduce inequality by 2030. Chapter 5 of the NDP envisions ensuring environmental sustainability and an equitable transition to a low-carbon economy.

The National Framework on Sustainable Development (2008) provides the national vision for sustainable development and indicates strategic interventions to re-orientate the development path of the country in a more sustainable direction. It proposes a national vision, principles and areas for strategic intervention that will enable and guide the development of the national strategy and action plan.

The National Biodiversity Framework (NBF), required in terms of NEM: BA provides for an integrated, co-ordinated, and uniform approach to biodiversity management by organs of state in all spheres of government, non-governmental organisations, the private sector, local communities, other stakeholders, and the public. The NBF identifies priority areas for conservation action and the establishment of protected areas; and reflects regional co-operation on issues concerning biodiversity management in Southern Africa.

The National Biodiversity Strategy and Action Plan (NBSAP) is required in terms of the CBD and sets out a strategy and action plan to fulfil the objectives of the CBD; the conservation and sustainable use of a country's biodiversity, and the equitable sharing of benefits derived from this use.

Other relevant national policies include:

- (a) The National Protected Areas Expansion Strategy, which guides decisions on the declaration of Protected Areas in terms of NEM: PAA and other legislated forms of protection;
- (b) The National Biodiversity Economy Strategy, which is a strategy for developing and growing businesses and economic activities that either directly depend on biodiversity for their core business or that contribute to conservation of biodiversity;
- (c) The National Action Plan, which is a plan for the implementation of the UNCCD in South Africa;
- (d) The National Spatial Development Framework and its National Ecological Infrastructure Framework, which incorporates Strategic Water Sources Areas, Protected Areas, and Critical Biodiversity Areas. It also includes National Natural Resource Risk Areas as one of the categories of National Spatial Action Areas; and
- (e) The National Biosafety Framework comprised of Biosafety policies, a regulatory regime, a system to handle notifications, systems for monitoring and inspections, and systems for public information and participation, for the implementation of the Cartagena Protocol on Biosafety in South Africa.

1.6.3 Provincial and Municipal Laws and Policies

In terms of the Constitution, the "environment" and "nature conservation" are functional areas of concurrent national and provincial legislative competence. Provinces may, therefore, also pass legislation dealing with the conservation and sustainable use of biodiversity.

Each province has legislation dealing with nature conservation. Legislation has remained unchanged since the 1960s and 1970s in some provinces, and is, therefore, outdated. Nevertheless, they still play an important role in biodiversity governance, especially in so far as species management is concerned.

Certain provincial legislation makes provision for the establishment and governance of conservation authorities that are primarily responsible for the management of provincial State-owned protected areas, and the conservation of biodiversity outside of those protected areas.

Some provinces have also adopted policies to help guide the implementation of provincial and national legislation, including provincial biodiversity spatial planning tools and protected area expansion strategies.

In terms of the Constitution, local government/municipalities are required to promote a safe and healthy environment, and to deliver services in an environmentally sustainable manner. Local government plays an important role in biodiversity conservation as they have land that includes important biodiversity features, and areas that support biodiversity and ecosystem functioning; these need to be conserved and used sustainably.

Local Government/municipalities enact municipal by-laws in pursuance of their legislative mandate. In terms of SPLUMA, Local Government/municipalities are required to take into consideration environmental factors when developing spatial planning instruments, such as spatial development frameworks and land use schemes, and when taking land development decisions. Furthermore, municipalities also play an important role in supporting provincial and national organs of state to implement initiatives to conserve and use biodiversity.

2 DEFINITIONS

The definitions contained within this section that are marked * are already defined in existing legislation and are intended to have the same meaning for the purpose of this White Paper:

In addition, for the purpose of this White Paper, definitions have been compiled using existing legislation, common usage within the sector, published sources, and, where available, sources include international policy. Definitions of concepts defined in this White Paper may be amended in legislation in future, depending on the specific meaning within the specific legislative context.

*** Adaptive management:** An iterative process of interventions to achieve management plan objectives in the face of uncertainty through the development of an expectation of how the system may respond to a considered and planned intervention, implementation thereof, monitoring the outcomes, adapting management interventions and/or expectations, thereby allowing continued improvement through learning (from National Norms and Standards for the management of elephants in South Africa).

*** Alien species:**

- (a) a species that is not an indigenous species; or
- (b) an indigenous species translocated or intended to be translocated to a place outside its natural distribution range in nature, but not an indigenous species that has extended its natural distribution range by natural means of migration or dispersal without human intervention (NEM: BA).

*** Animal Well-being:** The holistic circumstances and conditions of an animal or population of animals which are conducive to its physical, physiological and mental health and quality of life, including its ability to cope with its environment (modified from NEMLA Act).

Biological Diversity or Biodiversity: The variability among living organisms from all sources including, terrestrial, marine, and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity at genetic, species, and ecosystem levels (modified from NEM: BA).

Biological Invasions: the phenomenon of, and suite of processes that are involved in determining, the transport of organisms to sites outside their indigenous range by human activities and the fate of the organisms in their new ranges.

*** Biological Resources:** Includes genetic resources, organisms, or parts thereof, populations, or any other biotic component of ecosystems with actual or potential use or value for humanity (CBD).

*** Biotechnology:** Any technological application that uses biological systems, living organisms, or derivatives thereof, to make or modify products or processes for specific use (CBD).

Biotrade: Harvesting, cultivation, processing and trade of products from indigenous plant species for the development of novel food, cosmetics and phytopharmaceutical products for local and international markets.

Community: A group of persons with interest or rights in land pertaining to biodiversity conservation and sustainable use, and/or a particular area of land on which the members have or exercise communal rights in terms of an agreement, custom or law, and includes any group of persons whose rights in land are derived from shared rules determining access to land held in common by such group and includes part of any such group⁸.

Conservation: Protection, custodianship, care, maintenance, rehabilitation, restoration, and recovery, of biological diversity and its components, and their intrinsic value, to improve the well-being of people and nature.

Conservation areas: Areas that are not Protected Areas but are managed in line with conservation principles.

⁸ This definition is adapted from the definitions of the term "community" found in the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002) (MPRDA), the Interim Protection of Informal Land Rights Act, 1998 (Act No. 31 of 1996) (IPLRA) and the Restitution of Land Rights Act, 1994 (Act No.22 of 1994) (RLLA).

Domestication: Sustained, multi-generational processes whereby wildlife populations are subjected to continuous biased selection in order to adapt wild plants and animals for human use, potentially leading to human dependency for survival, usually within controlled environments, by manipulating reproductive, physical, physiological or behavioural characteristics.

Ecological infrastructure: Natural or semi-natural ecosystems that generate or deliver valuable services and benefits to people and the economy.

Ex-situ collections: Collections of seeds, tissues, or reproductive cells of plants or animals in biobanks for conservation, including:

- (c) sample banks, gene banks, microbial collections, explants, seedbanks, and living biobanks (including horticultural collections); and
- (d) collections from botanical gardens and zoological gardens).

*** Ex-Situ Conservation:** The conservation of components of biological diversity outside their natural habitats (CBD).

*** Genetic Resource:** Includes

- (a) any genetic material; or
- (b) genetic potential, characteristics, or information of any species. (NEM: BA).

Humane: Any activities, methods, or actions involving wild animals that avoid or minimise undue pain, stress, suffering, or distress, and promote their well-being.

Indigenous Species: A species that occurs, or has historically occurred, naturally in a free state in nature within the borders of the Republic but excludes a species that has been introduced in the Republic as a result of human activity (NEM: BA).

In-Situ Conservation: The conservation of ecosystems and natural habitats and the maintenance and recovery of viable populations of species in their natural surroundings (derived from CBD).

Marine: Means anything that is of or pertaining to the Coastal Zone, as defined in the National Environmental Management: Integrated Coastal Management Act, 2008 (Act No. 24 of 2008), namely the area between the outer edge of the Exclusive Economic Zone and the landward boundary of the Coastal Protection Zone, inclusive of offshore and inshore ocean waters, estuaries, the seashore (coast), and the Admiralty Reserve, and includes the organisms and species associated with marine areas.

Marine Spatial Planning: A governance process of collaboratively assessing and managing the spatial and temporal distribution of human activities in marine areas to achieve ecological, economic, and social objectives.

*** Other effective area-based conservation measure (OECM):** A geographically defined area other than a Protected Area, which is governed and managed in ways that achieve positive and sustained long-term outcomes for the in-situ conservation of biodiversity, with associated ecosystem functions and services and where applicable, cultural, spiritual, socio-economic, and other locally relevant values (CBD, 2018).

Protected area: A geographically defined area, declared or designated under NEM: PAA, which is designated, regulated and managed to achieve specific conservation objectives (derived from CBD).

Rehabilitation: The process of manual intervention where reparation of ecosystem processes, services, and productivity is done through upgrading existing features and/or adding new features, not necessarily to its pre-existing condition.

Restoration: The process of recovering an ecosystem that has been damaged, degraded, or destroyed, through re-creating missing features or characteristics, based upon physical or documentary evidence.

Revegetation: The process of replanting and rebuilding the soil of disturbed land to accelerate the repair of damage to a landscape.

Species: A population(s) of animal, plant or other organism that does not normally interbreed with individuals of another kind, and includes any sub-species, cultivar, variety, geographic race, strain, hybrid, or geographically separate population (derived from NEM: BA).

Sustainable Development: The integration of social, economic and environmental factors into planning, implementation and decision-making so as to ensure that development serves present and future generations (NEMA).

Sustainable Use: The use of any component of biodiversity in a manner that:

- (a) is ecologically, economically, and socially sustainable.
- (b) does not contribute to its long-term decline in the wild; or disrupt the genetic integrity of the population;
- (c) does not disrupt the ecological integrity of the ecosystem in which it occurs;
- (d) ensures continued benefits to people that are fair, equitable and meet the needs and aspirations of present and future generations; and
- (e) in the case of animals, is humane and does not compromise their well-being.

Systems approach: Considering holistically, components of socio-ecological systems as inter-related and interdependent, together with their interacting properties, instead of their elements separately.

*** Traditional or Indigenous Knowledge:** The knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity (CBD).

Transformation: The redress of discrimination and unfair disadvantage of previously disadvantaged individuals and communities through the promotion of inclusivity, access, empowerment, dignity, respect, ownership, and equitable sharing of benefits.

Ubuntu: Relational ethics, which prize relationships of interdependence, fellowship, reconciliation, relationality, community friendliness, harmonious relationships and other-regarding actions such as compassion and actions that are likely to be good for others, in which actions are morally right to the extent that they honour the capacity to relate communally, reduce discord or promote friendly relationships with others, and in which the physical world and the spiritual world are fundamentally united.⁹ The very essence of Ubuntu hinges on consolidating the human, natural, and spiritual tripartite¹⁰.

Wildness: Characteristics of ecosystems, landscapes and seascapes, on a spectrum from controlled environments to intact fully functioning wilderness, and where wilder land- and seascapes are more natural and increase human wellbeing¹¹.

Wildlife: Any undomesticated organisms, including micro-organisms, plants, and animals that exist as wild in nature.

⁹ Ewuoso, C & Hall, S. 2019. Core aspects of ubuntu: A systematic review. South African Journal of Bioethics and Law 12: 93-103. DOI:10.7196/SAJBL.2019.v12i2.679

¹⁰ Museka, G & Modondo, M.M. 2012. The quest for a relevant environmental pedagogy in the African context: Insights from unhu/ubuntu philosophy. Journal of Ecology and the Natural Environment 4: 258-265. DOI: 10.5897/JENE12.052.

¹¹ Modified from Child, M.F. 2021. Wildness, infinity and freedom Ecological Economics 186: 107055. <https://doi.org/10.1016/j.ecolecon.2021.107055>.

3 GUIDING PRINCIPLES

Several broad principles have guided the development of this White Paper. These principles, in addition to the principles included in Section 2 of NEMA, are applicable in the context of the conservation and sustainable use of South Africa's biodiversity and should be considered in applicable activities and practices, and in the development of all legislation and policy. The additional principles underpinning the White Paper principles are the following:

- (a) **Transformation:** Safeguarding, protecting and promoting the rights, ownership, and responsibilities of all role players in the biodiversity sector to ensure respect for dignity, inclusive participation, and fair and equitable sharing of benefits and growth, particularly for those that were previously disadvantaged. Important considerations should include aspects such as equality and freedom; inclusive economy; indigenous and traditional knowledge and practices; and rights of local and Indigenous communities;
- (b) **Sustainable Development:** Adopt an integrated approach with a governance system where the economy, socio-political, and ecosystems are embedded within each other;
- (c) **Good governance:** A government that is accessible, responsive, supportive, and accountable where barriers to effective and efficient biodiversity conservation and sustainable use are identified, consulted, and adequately addressed in line with stakeholder needs, including effective, coordinated, and harmonised legislation and meaningful engagement and influence by stakeholders; and
- (d) **Decision-making:** Evidence-based decisions that integrate context, science, and indigenous and local knowledge systems and practice, embracing complexities, monitoring and evaluation, learning, and adaptive management.

4 GOALS AND ENABLERS

Based on the Policy Issues Identified, and the Problem Statement, four goals and two cross-cutting enablers are identified. The basis for each of these is provided below:

4.1 Goal 1: Biodiversity Conservation Promoted:

The intention of this goal is to promote the conservation of the unique megadiverse nature of our biodiversity, including the diversity of land- and seascapes, ecosystems, habitats, ecological communities, species, populations, and genes.

South Africa is home to a major portion of the biodiversity of the world, and still retains much of its biodiversity, and large areas of natural lands that provide for the opportunity to conserve this biodiversity. Such lands provide essential and critical ecosystem services that underpin the livelihoods and well-being of our people. However, there has been major degradation of large areas of South Africa, and of the populations of many species, such that threatened habitats and species have been identified.

The area under conservation needs to expand, with due consideration to the increasing human population and resultant pressures and threats. Progressive approaches to biodiversity conservation and sustainable use provide opportunity to leverage the existing biodiversity, and restore and rehabilitate other components, such that biodiversity conservation can grow and drive the biodiversity economy, as the key mechanism for a step change in rural socio-economic development in South Africa. This is critical for a developmental state such as South Africa. In addition to this potential, are massive global change influences that threaten the biodiversity estate and the ecosystem services provided, making South Africa less resilient and more vulnerable to future shocks. These include risks from climate change, as well as alien invasive species. Careful consideration also needs to be given to ex-situ conservation and use of species.

This complex landscape requires robust understanding of biodiversity and the threats to its conservation and sustainable use.

4.2 Goal 2: Sustainable Use:

The intention of this goal is to ensure that sustainable use avoids, or minimises and remedies, adverse impacts on biodiversity, and, where possible, enhances thriving living landscapes and ecosystems, livelihoods, and human well-being.

South Africa relies on industries or economic activities which directly use or impact on components of biodiversity or the services provided by ecosystems. Through such activities, jobs and opportunities are created, and significant contributions are made to the country's economy. However, these benefits are not without direct and indirect costs to the environment.

Activities which provide socio-economic gains from the use of biological resources and ecosystems often result in the loss of biodiversity, including the impairment of ecosystem functioning. Decision-making should be based on the real costs and benefits for conserving biodiversity, which are quantified using innovative and progressive mechanisms such as natural capital accounting, to enable South Africans to continue to benefit from the use of biodiversity. Such holistic costing would further ensure that adverse impacts on biodiversity are minimised. In addition to these economic benefits, there are a wide range of other values and benefits that people derive from nature, including existence value, sense of place, cultural values, and spiritual values. The importance of these values should not be underestimated. For example, increased access to green spaces significantly reduces the probability of depression in South Africans¹².

South Africa's biodiversity is used by many different sectors in many different ways. Within this multiplicity of use, and reflective of South Africa's dual economy, are modern, highly commercialised industries, as well as more traditional, subsistence activities. At a broad level, these can be divided into economic sectors which: (1) directly use biological resources, are dependent upon the renewal of such resources, and which by overuse may impact on biodiversity; (2) less dependent upon the direct use of indigenous biological resources are activities such as cultivation and afforestation, which depend upon ecological processes, such as the generation of soils, the pollination of crops, or the control of pests, but which require that natural habitats be transformed; (3) Many other sectors in South Africa do not rely upon the direct, consumptive use of biodiversity, but may depend upon the maintenance of biodiversity, or may inadvertently have considerable negative impacts on biodiversity.

This third category includes industrial sectors dependent upon extractive use of non-renewable resources, such as mining and fossil fuel energy; those which rely upon chemical or biological processes; those involved in manufacturing or the provision of services such as housing or transport; as well as sectors such as tourism and recreation. Each of these sectors impacts upon biodiversity in different ways, and at many different levels of activity. Such activities may result in habitat degradation, loss and fragmentation, the overexploitation of species, the pollution of soil, air and water, the invasion of harmful alien organisms, and/or climate change.

In line with Ubuntu and recent jurisprudence, this goal provides policy direction for adopting conservation and sustainable use practices that avoid practices, actions or activities that are inhumane.

4.3 Goal 3: Equitable Access and Benefit Sharing:

The intention of this goal is to ensure that benefits derived and shared from the use and development of South Africa's genetic and biological resources serve national interests.

South Africa contains an extraordinary diversity of indigenous genetic material which has the potential to be used in a range of commercial and environmental applications. As is the case for other countries in the world, South Africa is heavily dependent upon material from elsewhere for its agriculture, horticulture, and forestry industries, as well as for the biological control of pest species and thus necessitates continued access to the broader gene pool of genetic resources located elsewhere in the world. This requires continued coordination and cooperation

¹² Tomita, A., et al. 2017. Green environment and incident depression in South Africa: a geospatial analysis and mental health implications in a resource-limited setting. *Lancet Planetary Health* 1: 152-162. [https://doi.org/10.1016/S2542-5196\(17\)30063-3](https://doi.org/10.1016/S2542-5196(17)30063-3)

with other countries. There are many different types of genetic or biological resources that may be used for different purposes. For example, categories of plant genetic resources for food and agriculture may include wild species, wild relatives of crop species, landraces, primitive and obsolete varieties, modern varieties, breeding lines and experimental populations, and lines with specific genetic characteristics.

Many other types of genetic or biological resources are used for purposes such as pharmaceutical development, traditional medicine, horticulture, personal care and cosmetics, foods or beverages, or environmental remediation. There are concerns with access to biodiversity; the equitable distribution of benefits derived from the use of biodiversity; and the fair and equitable compensation for use of traditional or indigenous knowledge about the useful properties of biological resources.

South Africa is a favoured destination for "bioprospecting" companies seeking potential new crops and novel biochemical molecules with medicinal, agricultural, horticultural, environmental, or other economic potential. This is largely because of the country's high levels of endemism and diversity, comprehensive traditional or indigenous knowledgebase of the fauna and flora, considerable scientific capacity, well-developed infrastructure, and well-managed protected areas and living collections, which enables the reliable sourcing of materials.

Biotrade is emerging as a significant industry which promotes the sustainable use of wild or cultivated natural resources for social and economic development. It is a high potential sector which can enhance and conserve biodiversity, build rural economies, empower women and youth, and also stimulate skills and technology development. Biotrade combines the traditional or indigenous knowledge of indigenous communities with modern manufacturing and emerging market demand of consumer economies.

4.4 Goal 4: Biodiversity Conservation and Sustainable Use is Transformative:

The intention of this goal is to give effect to Section 24 of the Constitution, the environmental right, and other human rights, facilitate redress, and promote transformation.

Preventing harm to human health or well-being, promoting conservation, and securing ecologically sustainable use are three key elements within the Environmental Right. The intention of this goal is to adopt transformative change in biodiversity conservation and sustainable use in order to ensure those and other rights are achieved more effectively. The goal promotes Ubuntu and recognises cultural and heritage value and practices in biodiversity conservation and sustainable use.

Transformation will also advance the meaningful participation and active involvement of PDIs through the value chain of the biodiversity sector.

Furthermore, the intention of this goal is to capitalise on the megadiverse nature of biodiversity, and key biophysical attributes, and wild landscapes, to drive rural socio-economic development.

The biodiversity sector has made considerable progress since 1994, however, much more still needs to be done. The restitution of rights of access and traditional appreciation and use of wildlife to communities that live with or near wildlife have not been made. Conservation performance and the biodiversity economy must improve in support of human well-being and socio-economic development, environmental justice with restitution, transformation and full participation of communities and previously disadvantaged groups, including access and benefit sharing.

Significant tracts of land under the custodianship of communities, land reform beneficiaries, and new entrants to the sector, will increasingly make a further substantial contribution as part of a successful transformation strategy. Challenges and risks include: (1) perceptions of over-regulation and over-management, irresponsible and unsustainable hunting practices, unethical tourism practices, and reputational damage to the sector and South Africa; (2) 'wildness', or the lack thereof; (3) inequities in access to, and benefits from, natural resources; and (4) State protected areas' mediocre performance.

Most importantly, there has been slow progress with transformation of the sector, including in: (1) Access to land by PDIs, youth, women, and people with disabilities, for conservation and sustainable use; (2) barriers to accessing

and benefiting from protected and conservation areas by adjacent communities; (3) limited biodiversity-based value chains in communal land; as well as from (4) land acquired through land reform processes for conservation and sustainable use. Addressing these has the potential to unlock meaningful access and equitable benefit sharing for designated groups, as well as for the empowerment of individuals as owners of land and operators of their own businesses. There is a limited awareness within the African community, as well as broadly across government, of the wildlife sector and its potential.

Despite South Africa having an incredibly rich diversity in genetic and biological resources, the biodiversity economy has not reached its full potential as it remains largely unrecognised, underdeveloped, and untransformed. Sustainable use of genetic and biological resources has been an integral part of human well-being for centuries but has untapped potential to support many local economies and livelihoods in the country. This can be harnessed through the establishment of businesses and the creation of job opportunities for individuals and communities at every level of the variety of value chains within the biodiversity economy sector.

South Africa has a substantial amount of legislation in place governing the conservation and use of natural resources. However, as is the case for other countries, these "command and control" mechanisms have not been adequate in addressing the underlying forces resulting in the loss of biodiversity.

The conservation of biodiversity is a global issue, requiring global action. Countries depend upon each other's biodiversity, and the loss of biodiversity represents a loss to all people. Moreover, the impacts of ecosystem degradation reach beyond national boundaries, requiring international cooperation to be a necessary component of this policy.

4.5 Enabler 1: Integrated, Mainstreamed and Effective Biodiversity Conservation and Sustainable Use:

The intention of this enabler is to integrate and mainstream biodiversity conservation and sustainable use across all spheres of government and society to ensure biodiversity contributes more meaningfully to justifiable sustainable development, but that development does not compromise conservation and sustainable use of biodiversity for present and future generations.

Given that multiple sectors use and impact on biodiversity, and that there are concurrent national and provincial mandates for the environment, effective co-operative governance is essential. However, sectoral-specific strategies to ensure the sustainable use of components of biodiversity and minimise adverse impacts on biodiversity are only part of the solution. Biodiversity questions are largely cross-sectoral, for which an integrated multi-sectoral approach would be the only way in which conservation and sustainable use can be responded to effectively and collectively.

Improved governance requires horizontal and vertical strategic partnership for effective and efficient biodiversity conservation and sustainable use, mainstreaming of biodiversity across and within sectors and leveraging on existing resources and capabilities.

South Africa is committed to playing its role globally, recognising that the conservation and sustainable use of global biodiversity is a common concern of all nations. This commitment is reflected in the active participation of South Africa in the range of multilateral international agreements to which the country is a party, and in numerous other scientific and technical collaborations. South Africa must continue to strengthen efforts to cooperate on environmental matters at international level. In addition to global cooperation, South Africa will continue to work as a member of the African group in international forums, Organisation of African Unity, and Southern African Development Community, to solve the problems of biodiversity loss on the continent and in the region, and to advance the interests of Africa internationally.

4.6 Enabler 2: Enhanced Means of Implementation:

The intention of this enabler is to expand and develop implementation mechanisms to conserve biodiversity, to manage its use, and to address factors threatening it, in order to meet South Africa's national priorities and requirements under the CBD.

Effective implementation of the White Paper requires implementation support mechanisms commensurate with the ambition set out in the goals and transformative changes required to reach them. These include:

- (a) mobilising sufficient and accessible resources required for the transformative, inclusive, and equitable change identified in the goals, across the economy and society;
- (b) capacity development by increasing public awareness and stewardship of the value and importance of biodiversity, and public involvement in its conservation and sustainable use; improving the understanding of biodiversity through conducting research, improving biological inventories, establishing, and maintaining monitoring systems, sharing information, and incorporating traditional knowledge; and strengthening existing management capacity through appropriate training; and
- (c) knowledge generation, management and sharing for effective biodiversity planning, policy development, decision-making, implementation and transparency and responsibility including greater protection of traditional knowledge and recognition of its contributions to the conservation and sustainable use of biodiversity; and promotion of biodiversity science and education and organizational learning.
- (d) New approaches, such as those embraced by the CBD, are increasingly turning towards the use of incentives as instruments and mechanisms by which people can be motivated to conserve and use biodiversity sustainably. Consideration needs to be given to: (1) the need to remove existing incentives that discourage biodiversity conservation (so-called "perverse incentives"); and (2) the need to use an array of different instruments, based upon bioregional and social characteristics, as well as the nature of the threat to biodiversity, to encourage biodiversity conservation in different areas.

5 STRATEGIC LINKAGES AND IMPACT

As the supreme law of the country, the Constitution was a deliberate starting point, ensuring that all components of Section 24 of the Constitution guided this process, but also considering other rights such as dignity, equality, culture, property, and the principle of redress. The policy takes cognisance of other legislation across sectors and spheres of government, with consideration of the role of municipalities, as well as international commitments and obligations.

The White Paper is aligned with Chapter 5 of the National Development Plan 2030 (Ensuring environmental sustainability and an equitable transition to a low-carbon economy) and responds to all the Medium-Term Strategic Framework (MTSF) Priorities 2019 – 2024.

This White Paper compliments the White Paper on Environmental Management Policy for South Africa (1998), in that it specifically covers areas of promoting conservation and securing sustainable use in the additional detail required to provide policy direction in this regard. The absence of such a White Paper creates a policy vacuum, resulting in a lack of coherence or integration within the biodiversity sector, as well as irresponsible and poor practices prevalent in the sector. In addition, the sector is largely untransformed following the end of Apartheid, and there is an urgent need to ensure equitable beneficiation from ecosystem services. The White Paper addresses these shortcomings.

Global change, including climate change, habitat loss and transformation, invasive species, pollution, overharvesting (and illegal harvesting), results in ongoing loss of our biodiversity, ecological degradation, and decline of the ecosystem services from biodiversity and our ecological infrastructure.

The Policy Objectives and Outcomes give strong direction for the future of the sector and the country, highlighting the need for a new approach that is framed on progressive understanding of biodiversity conservation and sustainable use, with a strong localised context through adopting the principles of Ubuntu.

As such, the White Paper emphasises the importance of people living in harmony with nature, and sets forth the vision "A prosperous nation, living in harmony with nature, where biodiversity is conserved for present and future generations, and secures equitable livelihoods and improved human well-being". The White Paper is aspirational in that it takes the concept of sustainability further, highlighting activities that enhance people and nature at the same time. The policy is intended to encompass a vision that represents our path out of unsustainable practices, toward a world where all people have a high quality of life, a voice, and a nurturing earth supporting them. As such, the White Paper sets out an impact statement of "Thriving People and Nature".

The White Paper will achieve the following strategic outcomes:

- (a) Provides policy certainty and a stable base for biodiversity conservation and equitable growth and socio-economic development;
- (b) Advocates for coherent and effective biodiversity conservation that protects South Africa's unique biodiversity for the benefit of current and future generations;
- (c) Integrates environmental, social, and economic elements to advance sustainable development that secures justifiable and responsible sustainable use;
- (d) Places protected and conservation areas as mechanisms to contribute to ecologically sustainable rural development;
- (e) Advances a process of transformation of the sector that ensures nature-based access and benefit flows for equitable and inclusive socio-economic growth and development; and
- (f) Enhances South Africa's leadership as a leader in biodiversity conservation with a strong international reputation for effectively promoting African coherence and unity.

This White Paper sets South Africa on a strong path of sustainable development based on our rich biodiversity and the valuable ecosystem services this provides. The sector will contribute to improving the livelihoods and well-being of our people and growing the Gross National Product of the country. This is underpinned by strengthened conservation of our biodiversity heritage, restoration, rehabilitation, and rewilding of natural landscapes, and a robust evidence base for effective decisions on, and responsible practices for, sustainable use. The outcome of this will contribute strongly to the achievement of a broad range of the Sustainable Development Goals, as well as the Goals encapsulated within the National Development Plan and the Africa Agenda 2063.

6 THEORY OF CHANGE

Vision	A society living in harmony with nature, where biodiversity conservation and sustainable use is transformed, ensuring improved benefits from healthy ecosystems, that are fairly and equitably shared, for present and future generations.		Impact Statement: Thriving People and Nature	
Strategic Outcomes	<ul style="list-style-type: none">Provides policy certainty and a stable base for biodiversity conservation and equitable growth and socio-economic development;Advocates for coherent and effective biodiversity conservation that protects South Africa's unique biodiversity for the benefit of current and future generations;Integrates environmental, social, and economic elements to advance sustainable development that secures justifiable and responsible sustainable use;		<ul style="list-style-type: none">Places protected and conservation areas as mechanisms to contribute to ecologically sustainable rural development;Advances a process of transformation of the sector that ensures nature-based access and benefit flows for equitable and inclusive socio-economic growth and development; andEnhances South Africa's leadership as a leader in biodiversity conservation with a strong international reputation for effectively promoting African coherence and unity.	
Enablers and Policy Objectives	ENABLER 1: INTEGRATED, MAINSTREAMED AND EFFECTIVE BIODIVERSITY CONSERVATION AND SUSTAINABLE USE: Integrate policy and practice across government and effectively implement multilateral agreements			
	<ul style="list-style-type: none">Integrate and mainstream the conservation and sustainable use of biodiversity into all sectoral and cross-sectoral work across government and sectors of society.		<ul style="list-style-type: none">Strengthen integrated mechanisms and tools to conserve biodiversity, both inside and outside of protected areas.Effective compliance, monitoring, and enforcement promote conservation and enhance sustainable use.Effective participation in, and implementation of, multilateral environmental agreements.	
Enablers and Policy Objectives	ENABLER 2: ENHANCED MEANS OF IMPLEMENTATION: Expand and develop ability to effectively conserve biodiversity, to manage its use, and to address factors threatening it.			
	<ul style="list-style-type: none">Increase public education, awareness, capacity building, and involvementKnowledge and understanding inform effective decision-making, management and practice.		<ul style="list-style-type: none">Indigenous/Traditional knowledge and practice provide localised solutionsData and information form the basis of decision making and practiceMonitoring and evaluation inform conservation, management, and use.Enhanced capacity to conserve and sustainably use biodiversity.Identify and implement resource mobilisation, with innovative financial solutions	
Goals	GOAL 1: BIODIVERSITY CONSERVATION PROMOTED: Conserve all biological diversity and its components.		GOAL 2: SUSTAINABLE USE: Ensure that sustainable use enhances thriving living land- and seascapes and ecosystems, livelihoods, and human well-being, while avoiding, minimising or remedying adverse impacts on biodiversity.	
	<ul style="list-style-type: none">Representative and effective protected and conservation areasConservation areas integrated into broader landscapes.Rehabilitate & restore degraded ecosystems & threatened species.Prevent spread of alien invasive species, manage harmful biological invasions.Minimise GMO risksResponsible Ex-situ practices.Climate resilient approaches.		<ul style="list-style-type: none">Enhance sustainable use of biodiversity.Sustain wetlands, strategic water source areas, groundwater aquifers, and ecological infrastructureConserve and use marine, estuarine, and coastal ecosystems.Prevent ecological degradation.Promote duty of care to biodiversity, including humane practices, actions, and activities towards wild animals.	
Policy Objectives			GOAL 3: EQUITABLE ACCESS AND BENEFIT SHARING: Ensure that benefits are derived and shared from the use and development of South Africa's genetic and biological resources, without compromising national interests.	
			<ul style="list-style-type: none">Control access to South Africa's indigenous genetic and biological resources.Genetic & biological material promotes biodiversity-based food security.	
Policy Objectives			GOAL 4: BIODIVERSITY CONSERVATION AND SUSTAINABLE USE IS TRANSFORMATIVE: gives effect to the environmental right (contained within Section 24 of the Constitution), and other human rights, facilitates redress, and promotes transformation.	
			<ul style="list-style-type: none">Adopt an integrated conservation approach with Ubuntu.Position Protected and conservation Areas as development catalysts.Use that is sustainable, and socially and economically inclusive.Participation and influence of designated groups.Socio-economic mechanisms drive equitable sustainable development.	
Problem Statement	<ul style="list-style-type: none">Lack of consensus among stakeholders around how to pursue conservation; sustainable use; fair and equitable sharing of benefits from genetic or biological resources; and transformation:Limited progress, or even decline, in achieving success in conservation; sustainable use; fair and equitable sharing of benefits from genetic or biological resources; and transformation:Uneven governance and capacity and resource constraints that hinder success:Practices within the sector that have brought the country into disrepute:			

7 POLICY OBJECTIVES AND EXPECTED OUTCOMES

The following table is structured around the four goals and the two enablers. For each goal and enabler, there are stated policy objectives, with their associated outputs (what will be achieved) and outcomes (what will this deliver). The outputs and outcomes are numbered for convenience, but the numbers do not align across outputs and outcomes.

GOAL 1: BIODIVERSITY CONSERVATION PROMOTED: Conserve all biological diversity and its components.		
Policy Objective	Expected Output	Expected Outcome
1.1. Establish a representative system of protected and conservation areas that are effectively and efficiently managed.	<ol style="list-style-type: none"> 1. A national cooperative programme, and prioritised plan of action, identifies terrestrial, freshwater, marine and coastal areas that support landscapes, ecosystems, habitats, species and populations which contribute, or could contribute, to South Africa's system of representative protected and conservation areas. 2. Connected, new, or extended, protected and conservation areas, including through creating larger contiguous areas, as a means of improving the representation of terrestrial and marine ecosystem types. 3. Species of special concern identified, with viable populations effectively managed, and protected, including within the conservation estate. 4. Effective participation of landowners, traditional leaders, local communities and other interested and affected parties in expansion and custodianship of the conservation estate. 5. Measures established to incorporate appropriate Agro-ecosystems, Agro-ecosystem management, Agro-ecosystems authorisations, and Protected Agricultural Areas, as contemplated under the Preservation and Development of Agricultural Land Bill, into conservation planning for OECMs. 	<ol style="list-style-type: none"> 1. Expanded, connected, thriving, representative, inclusive, and effectively managed protected and conservation areas, through co-ordinated partnerships. 2. Species of special concern, including their genetic diversity conserved, and viable populations maintained.
1.2. Conservation areas better integrated into broader ecological and social landscapes.	<ol style="list-style-type: none"> 1. Strategies, guidelines, mechanisms and incentives integrate protected areas within the broader ecological and social landscape and encourage conservation in adjacent private and communal buffer zones. 2. Recognise and incorporate natural cultural sites of expression, within conservation area attributes. 3. Activities, in buffer zones adjacent to protected and conservation areas are compatible with and complement the area objectives. 4. Promote conservation agriculture, as contemplated in the Preservation and Development of Agricultural Land Bill, to enhance ecological connectivity and resilience, increase ecological infrastructure, and improve ecosystem services. 5. Mitigation and/or conservation offset from land transformation as a result of, among others, mining and hard infrastructure, supports broader conservation outcomes. 	<ol style="list-style-type: none"> 1. Increased conservation viability and connectivity of land adjacent to protected and conservation areas, with effective human-wildlife conflict mitigation, and increased socio-economic development. 2. Conservation compatible land-use and sustainable development reduce degradation inside and outside protected and conservation areas.

GOAL 1: BIODIVERSITY CONSERVATION PROMOTED: Conserve all biological diversity and its components.		
Policy Objective	Expected Output	Expected Outcome
	6. National Human-wildlife Coexistence Strategy promotes human-wildlife co-existence through bespoke practice revisions and innovative implementation of legislation, empowering and capacitating local communities, and an integrated, systems approach to human-wildlife conflict.	
1.3. Restore and rehabilitate degraded ecosystems and landscapes and strengthen threatened species recovery.	<ol style="list-style-type: none"> 1. Strategy and action plan to restore and rehabilitate degraded systems of national concern, identifying key sites based upon biological and socio-economic criteria, linking remedial action to jobs and skills, monitors effectiveness, and regulates and minimize adverse impacts of harmful activities on biodiversity. 2. Conserve and restore threatened species and populations through necessary legislative and other tools and measures. 3. Genetic contamination and loss of genetic variability amongst populations reduced. 	<ol style="list-style-type: none"> 1. An integrated and prioritised national approach to rehabilitation restores biodiversity and ecological infrastructure, with improved flow and quality of ecosystem services. 2. Genetic resilience of indigenous species enhanced, and threatened species and populations protected.
1.4. Identify and manage harmful, and potentially harmful, alien and invasive species, their potential and existing introduction pathways and biological invasions.	<ol style="list-style-type: none"> 1. Consistent, streamlined and strengthened legislation and enforcement promotes compliance, and controls the introduction and spread of potentially harmful alien organisms. 2. Proactive, comprehensive assessment of risks of introduction of alien organisms into South Africa against intended benefits. 3. Holistic, integrated, and prioritised control, management and eradication programmes for invasive species. 4. Unintended introduction of alien and invasive species to South Africa and the sub-Antarctic islands, and early establishment of invasive alien species, detected and prevented where possible. 5. Incursions of identified high-risk alien species new to South Africa are rapidly treated upon detection through the development and implementation of emergency response plans 6. Develop a national policy on the overall management of biological invasions, including for movement and transfer of species. 7. Local indigenous species used in rehabilitation and revegetation programmes and projects. 8. Landowners incentivised to control or eradicate invasive species. 9. Biological and other control methods for invasive species improved and expanded. 	<ol style="list-style-type: none"> 1. A proactive, preventative, and precautionary approach to control the introduction and spread of alien and invasive species. 2. Risks from deliberate introduction of alien and invasive species mitigated. 3. Integrated invasive species control and eradication programmes deliver environmental, social, and economic outcomes, with full participation from landowners and managers. 4. An integrated cross-sectoral approach to alien and invasive species.

GOAL 1: BIODIVERSITY CONSERVATION PROMOTED: Conserve all biological diversity and its components.		
Policy Objective	Expected Output	Expected Outcome
	<ul style="list-style-type: none"> 10. Strong public education and awareness of alien and invasive species. 11. Integrated approach with neighbouring countries to maximise commonalities and minimise conflicts among policies, legislation, and practices relating to alien and invasive species that threaten biodiversity. 12. Integrated cross sector approach, mechanisms, and practices to alien and invasive species that threaten biodiversity. 	
1.5. Minimise the potential risks associated with the release of genetically modified organisms into the environment, taking into account risks to human health.	<ul style="list-style-type: none"> 1. Strong capacity, legislation, Biosafety Protocol, guidelines, effective management, monitoring, and control measures, regulate the transfer, handling, use and release of genetically modified organisms into the environment. 	<ul style="list-style-type: none"> 1. Risks of genetically modified organisms to biodiversity minimised and considering risks to human health.
1.6. Support, complement, and enhance in-situ biodiversity conservation through sustainable ex-situ practices.	<ul style="list-style-type: none"> 1. Ex-situ institutions and collections promote and participate in conservation and use of local biodiversity, plant genetic resources, and microorganisms suitable for agricultural, medicinal, industrial, horticultural, or other commercial benefits. 2. The Biodiversity Biobank South Africa National Research Infrastructure enables the development of a comprehensive national strategy to characterise, evaluate, curate to international standards, and cost-effectively manage and utilise South Africa's indigenous ex-situ genetic resource collections. 3. Collection of biological resources from natural habitats for ex-situ purposes avoids or minimises threats to ecosystems and in-situ populations of species. 4. The National Botanical Gardens promote in situ conservation of indigenous plants through ex situ conservation, in line with species conservation plans. 5. National Botanical Gardens Expansion Strategy creates expanded network of botanical gardens across South Africa, strengthening biodiversity education, and awareness enhancement. 6. The National Zoological Gardens support in situ conservation of indigenous animals through ex situ conservation, in line with species conservation plans. 7. Where necessary and appropriate, species conservation plans adopt measures of ex-situ conservation for the recovery and rehabilitation of threatened species, and for their re-introduction into natural habitats. 	<ul style="list-style-type: none"> 1. Indigenous species Biobanks, botanical and zoological gardens provide tangible in situ biodiversity conservation and sustainable use benefits. 2. Ex-situ conservation interventions successfully conserve and protect threatened species. 3. Risks to in-situ conservation of ex-situ activities contributing to socio-economic benefits minimised. 4. Risks of cultivation and domestication of plants and animals on natural habitat and populations minimised.

GOAL 1: BIODIVERSITY CONSERVATION PROMOTED: Conserve all biological diversity and its components.		
Policy Objective	Expected Output	Expected Outcome
	8. Risk of domestication of wild animals minimised. 9. Mitigate the impacts of selective cultivation for specific trait on wild populations of plants. 10. Educational role of ex-situ conservation facilities strengthened to make demonstrable contribution to in situ conservation. 11. Responsible ex-situ propagation and breeding for commercial purposes should also have a demonstrable conservation benefit; or, must at the least, advance sustainable use.	
1.7. Adopt climate resilient approaches to biodiversity conservation and management to restore and maintain ecological infrastructure.	1. Updated Biodiversity Sector Climate Change Response Strategy to enhance South Africa's most vulnerable ecosystems, landscapes and species' responses to climate change impacts. 2. Incorporate biodiversity attributes into integrated climate change risk and vulnerability assessments, to ensure intact and resilient ecological infrastructure through effective conservation areas and other identified interventions. 3. Develop and implement adaptation options for resilience and reduced vulnerability of species and of ecosystems in the face of climate change.	1. Enhanced climate change resilience of species, ecosystems, and ecological infrastructure, and people.

GOAL 2: SUSTAINABLE USE: Ensure that sustainable use enhances thriving living land- and seascapes and ecosystems, livelihoods, and human well-being, while avoiding, minimising or remedying adverse impacts on biodiversity.		
Policy Objective	Expected Output	Expected Outcome
2.1. Enhance sustainable use of components of biodiversity in terrestrial, freshwater, marine and coastal ecosystems.	1. Interventions and practices that support conservation and sustainable use encouraged and promoted, and potentially harmful ones discouraged and reduced. 2. Promote sustainable harvesting and use practices for terrestrial, freshwater, marine and coastal ecosystems. 3. Mechanisms and tools infuse biodiversity conservation and sustainable use, and priority biodiversity economy interventions, into National, Provincial, and Municipal socio-economic development plans, and District Development Model	1. Practices and activities that promote sustainable use and harvesting of components of biodiversity, and ecological integrity and resilience, are promoted, and harmful ones prevented and/or avoided.
2.2. Promote the conservation, sustainable use, and prevent further	1. A national framework for the conservation, management, and protection of wetland, strategic water source areas, groundwater aquifers, and other ecological infrastructure in South Africa.	1. Wetlands, strategic water source areas, and ecological infrastructure secured, with no net loss.

GOAL 2: SUSTAINABLE USE: Ensure that sustainable use enhances thriving living land- and seascapes and ecosystems, livelihoods, and human well-being, while avoiding, minimising or remedying adverse impacts on biodiversity.

Policy Objective	Expected Output	Expected Outcome
loss and degradation of wetlands, strategic water source areas, groundwater aquifers, and other ecological infrastructure	<ol style="list-style-type: none"> 2. Drivers of wetland, strategic water source areas, and other ecological infrastructure loss and degradation prevented and/or avoided and mitigated. 3. Biodiversity of aquatic areas and wetlands, strategic water source areas, and ecological infrastructure adequately incorporated into the national policy on integrated pollution control and waste management. 4. Integrate control measures to protect the utilization and protection of vleis, marshes, water sponges, water courses and water sources, and the regulating of the flow pattern of run-off water; including soil conservation work, established under CARA, into conservation and use of components of biodiversity. 5. Ensure that wetlands, strategic water source areas, and ecological infrastructure provide ecosystem services for the benefit of the environment and people. 	<ol style="list-style-type: none"> 2. Society and government sectors understand the critical role, function, and ecological services of wetlands strategic water source areas, and ecological infrastructure.
2.3. Ensure the protection, conservation, and sustainable use of marine, estuaries, and coastal ecosystems and their natural resources.	<ol style="list-style-type: none"> 1. Conservation and sustainable use of marine, estuarine and coastal biodiversity mainstreamed into national policies and practices affecting these ecosystems. 2. National policy on coastal zone management developed and implemented. 3. Legislation, enforcement, and compliance strengthened to control the use or extraction of marine, estuarine and coastal resources, and prevent inappropriate activities and development. 4. Fisheries, small scale fisheries, and aquaculture management follow an ecosystem approach that promotes conservation and sustainable use of the whole ecosystem. 5. Effective marine protected areas zonation and regulation mitigates pressure on key marine ecosystems and species, incorporating marine spatial planning. 	<ol style="list-style-type: none"> 1. Sustainable use of the marine, estuarine, and coastal ecosystems support sustainable livelihoods, well-being, and inclusive socio-economic development. 2. Marine Protected areas buffered from adverse economic activities, and impacts mitigated for threatened marine ecosystems and threatened or overexploited species, and recovery supported.
2.4. Prevent ecological degradation, through enhancing ecological integrity and resilience.	<ol style="list-style-type: none"> 1. Threats, such as from global change or over-exploitation, to biodiversity, ecological integrity and resilience, identified and avoided and/or minimised and remedied, and, where possible, biodiversity enhanced. 2. Enhance ecological integrity and resilience through inter alia linkages, corridors, and connectivity, and rehabilitated and restored systems, including through adaptive management. 3. Enhance conservation of soils and abiotic processes, and promote these through regenerative processes, including conservation and regenerative agriculture. 	<ol style="list-style-type: none"> 1. Ecological degradation and biodiversity loss prevented or minimised. 2. Increased ability of natural land and seascapes to withstand anthropogenic disturbances and natural disasters and continue to provide benefits to present and future generations.

GOAL 2: SUSTAINABLE USE: Ensure that sustainable use enhances thriving living land- and seascapes and ecosystems, livelihoods, and human well-being, while avoiding, minimising or remedying adverse impacts on biodiversity.

Policy Objective	Expected Output	Expected Outcome
2.5. Promote duty of care towards all components of biodiversity, including humane practices, actions, and activities towards wild animals.	<ol style="list-style-type: none"> 1. Integrate the environmental duty of care for practices, actions and activities effecting components of biodiversity into legislation and other measures. 2. Integrate wellbeing of individual animals and populations of animals into biodiversity policy, legislation, tools, and practice. 3. Humane and responsible standards and practices incorporated into the ethos and regulation of wildlife management and use in South Africa. 4. Education, capacity building, and awareness of animal well-being and associated concerns builds collaboration across the sector. 	<ol style="list-style-type: none"> 1. Improved well-being of nature. 2. Animal well-being is realised and considered in biodiversity conservation and sustainable use practice and activities. 3. Collective understanding of animal well-being across the biodiversity sector.

GOAL 3: EQUITABLE ACCESS AND BENEFIT SHARING: Ensure that benefits are derived and shared from the use and development of South Africa's genetic and biological resources, without compromising national interests.

Policy Objective	Expected Output	Expected Outcome
3.1. Promote and regulate access to, and benefit sharing from, the use and development of South Africa's indigenous genetic or biological resources, their information and data.	<ol style="list-style-type: none"> 1. Streamlined and simplified legislation, regulations, and guidelines promote access to indigenous genetic and biological resources for bioprospecting and Biotrade, ensure fair and equitable sharing of benefits arising from the use and development of indigenous genetic and biological resources, their information and data, and their associated traditional or indigenous knowledge, where applicable. 2. Benefit-sharing arrangements contribute to biodiversity conservation, drive transformation and redress, and promotes indigenous communities' rights, and benefit the holders of indigenous or traditional knowledge. 3. Scientific and technical cooperation for use and development of indigenous genetic and biological resources, and their information, and data, are coordinated, strengthened, and promoted. 	<ol style="list-style-type: none"> 1. South Africa's genetic and biological resources are sustainably leveraged for national and global benefits. 2. Providers of genetic and biological material, and associated indigenous or traditional knowledge, benefit fairly and equitably.
3.2. Promote biodiversity-based food security through the use and development of genetic and biological material for agriculture.	<ol style="list-style-type: none"> 1. The International Treaty on Plant Genetic Resources for food and agriculture harmonised with other biodiversity related agreements. 2. Farmers' intellectual property rights to genetic and biological material incorporated into policy and legislation. 3. "Crop wild relatives" identified and encouraged for genetic use and development for commercial crop production, especially for small-holder farmers. 	<ol style="list-style-type: none"> 1. Structured and uniform access to genetic resources that are used and developed for crop production. 2. Thriving food systems promoted through sustainable use and development of biodiversity assets.

GOAL 4: BIODIVERSITY CONSERVATION AND SUSTAINABLE USE IS TRANSFORMATIVE: gives effect to the environmental right (contained within Section 24 of the Constitution), and other human rights, facilitates redress, and promotes transformation.

Policy Objective	Expected Output	Expected Outcome
4.1. Adopt an integrated conservation approach that is in line with the principles of Ubuntu.	<ol style="list-style-type: none"> 1. An understanding of biodiversity conservation linking to improvement of the well-being of people and nature. 2. A strategy for including Ubuntu into conservation and sustainable use, emphasizing a localised approach that is in line with the traditions, culture, knowledge and aspirations of African people in terms of defining their well-being. 3. African perspectives, approaches, needs, and aspirations inculcate and pervade the philosophy and approach to biodiversity conservation and sustainable use, empowering traditional leaders and healers as influential and impactful leaders of the sector, and as equal and meaningful participants. 4. A strategy for preservation of culture and traditional practices associated with biodiversity, ensuring and enhancing the spiritual and sacred contribution of nature to people, especially for fronting the close connection of African people with nature and the environment, and of living in harmony with nature. 5. Promoting connectedness with biodiversity and nature through cultural, traditional and spiritual practices. 6. Conservation approaches and practices that harm our standing, image and reputation ended or revised. 	<ol style="list-style-type: none"> 1. Clear understanding of the intent and aspirations of South Africa, in promoting conservation in order to achieve protection of the environment for the well-being of people and nature. 2. The value and integrity of nature as a key component of African traditional culture is restituted and restored. 3. African traditional leaders and healers are empowered and respected as influential custodians, leading transformation of the biodiversity sector.
4.2. Position Protected and conservation Areas as catalysts of inclusive socio-economic development.	<ol style="list-style-type: none"> 1. A Strategy and Action Plan for State owned and other protected areas to promote economies of scale and enhance socio-economic outcomes. 2. Institutional arrangements for State protected areas promote effective governance, and more equal, and balanced partnerships with the private sector and communities. 3. Co-management arrangements with communities, and arrangements for incorporation of community owned land, more equal, balanced, and promote holistic outcomes. 4. Biodiversity economy strategy promotes access and unlocks ecotourism and hunting benefit streams from protected areas to adjacent communities, with increased net benefit flows to people in and beyond protected and conservation areas. 	<ol style="list-style-type: none"> 1. Improved governance and management of protected areas, and contribution to the biodiversity economy, with meaningful community participation, influence and benefit from protected areas. 2. Protected and conservation areas provide access and benefit flows to communities, redressing past injustices, reducing dis-services, and promoting support for protected and conservation area persistence over alternative land-uses.

GOAL 4: BIODIVERSITY CONSERVATION AND SUSTAINABLE USE IS TRANSFORMATIVE: gives effect to the environmental right (contained within Section 24 of the Constitution), and other human rights, facilitates redress, and promotes transformation.

Policy Objective	Expected Output	Expected Outcome
4.3. Promote and enable use that is sustainable, and socially and economically inclusive.	<ol style="list-style-type: none"> 1. An understanding of sustainable use that protects biodiversity and sustains livelihoods and clarifies the responsibilities incumbent on use. 2. Legislation, mechanisms and tools enable transformative and inclusive use of components of biodiversity along the whole value chain. 3. Mechanisms for promotion of access, and benefit sharing, in a fair and equitable manner, for local communities living with biodiversity, particularly for those removed from, and adjacent to, conservation areas. 4. Mechanisms and tools for traditional leaders of rural communities to lead their communities in accessing nature and biodiversity, and in facilitating the conducting of sustainable traditional practices. 5. Mechanisms for local community and PDI entrepreneurship, to ensure meaningful participation, and their entry into local biodiversity-based value chains. 	<ol style="list-style-type: none"> 1. Sustainable use ensures inclusive and meaningful participation in the biodiversity economy, and catalyses rural socio-economic development. 2. Improved livelihoods and well-being of previously disadvantaged communities, through meaningful participation and increased access and benefit sharing.
4.4. Promote participation and influence of designated groups, including women, youth, and people with disabilities in biodiversity conservation and sustainable use.	<ol style="list-style-type: none"> 1. Perspectives, approaches, needs and aspirations of women, youth, and people with disabilities, incorporated into to biodiversity conservation and sustainable use. 2. Conduct a baseline of the current status of designated groups, including women, youth, people with disabilities, in biodiversity conservation and sustainable use. 3. Develop and implement a National Biodiversity Transformation Framework, with key interventions across the biodiversity sector that ensure: <ol style="list-style-type: none"> (a) There is access to opportunities by previously disadvantaged individuals, youth, women, and people with disabilities for conservation and sustainable use; (b) Protected and conservation areas are sustainably used for the benefit of people and nature, especially by communities surrounding protected areas; (c) communities participate meaningfully in the full biodiversity-based value chains from their communal land, as well as from adjacent protected and conservation areas; and (d) communities owning biodiversity and land acquired through land reform processes fully develop biodiversity-based opportunities from their land, complimented by support from government, industry, and other role players. 	<ol style="list-style-type: none"> 1. The broad values of ecosystem services are realised and enhanced for designated groups, including women, youth, and people with disabilities. 2. The integrity and importance of a gender sensitive and responsive approach, and female and youth perspective of nature as a key component social cohesion and society, is restituted and restored. 3. Designated groups, including women, youth and people with disabilities are empowered as equal and influential participants, leading transformation of the biodiversity sector.

GOAL 4: BIODIVERSITY CONSERVATION AND SUSTAINABLE USE IS TRANSFORMATIVE: gives effect to the environmental right (contained within Section 24 of the Constitution), and other human rights, facilitates redress, and promotes transformation.

Policy Objective	Expected Output	Expected Outcome
4.5. Secure socio-economic mechanisms and interventions that drive equitable sustainable development.	<ol style="list-style-type: none"> 1. Innovative mechanisms and interventions, with stakeholder partnerships, including communities, drive key components of the biodiversity economy. 2. Traditional and other communities empowered to support addressing socio-economic challenges, reduce environmental vulnerability, and promote coexistence. 3. Wildlife estate leveraged for transformation of rural communities through strategic investments and promoting ownership of and access to by previously disadvantaged individuals. 4. Sustainable use of marine and freshwater biodiversity for driving socio-economic development, including SMME value chains based on subsistence fishing and harvesting, where appropriate. 5. A strategy and action plan for growing freshwater and marine biodiversity-based ecotourism, integrating better with terrestrial ecotourism, and targeting transformation opportunities, with localised SMMEs. 	<ol style="list-style-type: none"> 1. A prosperous and equitable society living in harmony with our natural resources. 2. Inclusive and equitable biodiversity economy with redress, full access, and beneficiation of ecosystem services. 3. Barriers to entry and participation in the biodiversity economy significantly reduced.

ENABLER 1: INTEGRATED, MAINSTREAMED AND EFFECTIVE BIODIVERSITY CONSERVATION AND SUSTAINABLE USE: Policy and practice is integrated across government sectors and levels of government and multilateral agreements are effectively implemented.

Policy Objective	Expected Output	Expected Outcome
E1.1. Integrate and mainstream the conservation and sustainable use of biodiversity into all sectoral and cross-sectoral work across government and sectors of society	<ol style="list-style-type: none"> 1. Integrated coherent cross sectoral strategies for effective and efficient biodiversity conservation and sustainable use, including approaches, learning, experience, and practice across, at intra- and intergovernmental level. 2. All policy instruments and tools integrate and mainstream conservation and sustainable use across government and sectors of society. 3. All organs of state and sectors of society responsible for activities affecting biodiversity, biodiversity conservation, or sustainable use, implement sector-specific plans. 4. Incorporate full cost-accounting measures into tools and measures for conservation and sustainable use. 5. Integrate biodiversity conservation and ecological integrity into land use planning and implementation. 	<ol style="list-style-type: none"> 1. Mainstreamed biodiversity across government and sectors for effective governance of conservation and sustainable use.

ENABLER 1: INTEGRATED, MAINSTREAMED AND EFFECTIVE BIODIVERSITY CONSERVATION AND SUSTAINABLE USE: Policy and practice is integrated across government sectors and levels of government and multilateral agreements are effectively implemented.		
Policy Objective	Expected Output	Expected Outcome
	6. Ecosystem-based approaches, mitigation, and disaster risk reduction measures mainstreamed into land use planning.	
E1.2. Strengthen integrated mechanisms and tools to conserve biodiversity, both inside and outside of protected areas.	<ol style="list-style-type: none"> 1. Review and align biodiversity legislation, mechanisms and tools across all spheres of government to eliminate gaps, duplications and conflicts. 2. Appropriate measures and tools developed and implemented to prevent, avoid, mitigate and/or manage human-wildlife conflict. 3. OECMs such as nature reserves, contract protected environments, and biodiversity agreements through biodiversity stewardship programmes are scaled and resourced 4. Development of mechanisms and tools across spheres of government and sectors of society for biological management for survival of species in the wild. 	<ol style="list-style-type: none"> 1. Enhanced conservation, ecological infrastructure and human-biodiversity co-existence promote living in harmony with nature.
E1.3. Effective compliance, monitoring, and enforcement promote conservation and enhance sustainable use.	<ol style="list-style-type: none"> 1. Cross-sectoral legislation, prevention, enforcement, compliance, prosecution, and effective governance, prevents illegal harvesting of, and trade in, South Africa's biodiversity. 2. Enforcement and compliance strategy for the conservation and sustainable use of biodiversity. 3. Cross-sectoral collaboration, including with law enforcement agencies, for integrated compliance and enforcement of biodiversity legislation. 	<ol style="list-style-type: none"> 1. Improved status of threatened species and ecosystems, and sustainable use thereof.
E1.4. Effective participation in, and implementation of, multilateral environmental agreements	<ol style="list-style-type: none"> 1. Maintain, strengthen, and harmonise South Africa's participation in bilateral and multilateral biodiversity agreements. 2. Effective enactment and implementation of international biodiversity agreements. 3. Negotiate, sign, and/or ratify new agreements and arrangements that are relevant to the conservation, sustainable use of biodiversity, and equitable benefit sharing, in line with the country's international relations framework. 4. Strengthen South Africa's participation in appropriate southern African and African biodiversity fora for synergistic approach for African empowerment and leadership. 5. National strategy for international trade in species and their parts and derivatives promotes biodiversity conservation and sustainable use, and equitable socio-economic transformation. 6. Strategic positioning and engagement in domestic and international trade promotes and enhances cohesive trans-Africa approach to international trade in Africa's biodiversity. 	<ol style="list-style-type: none"> 1. Strengthened multi-lateralism and advocacy in global biodiversity governance enhance thriving biodiversity in Africa with a positive contribution to improve planetary health..

ENABLER 2: ENHANCED MEANS OF IMPLEMENTATION: Expand and develop ability to effectively conserve biodiversity, to manage its use, and to address factors threatening it.		
Policy Objective	Expected Output	Expected Outcome
E2.1. Increase public education, awareness, capacity building, and championing of the value and importance of biodiversity, and improve participation and public involvement in its conservation and sustainable use.	<ol style="list-style-type: none"> 1. Public support, commitment, and participation programmes for biodiversity conservation and sustainable use. 2. Improve and enhance duty of care towards biodiversity, its conservation and sustainable use. 3. Protected areas are promoted and accessible to all South Africans. 4. Biodiversity conservation and sustainable use integrated into formal and informal education and training 	<ol style="list-style-type: none"> 1. Integrated and strengthened awareness for people to value, appreciate, and care for biodiversity conservation and sustainable use.
E2.2. Knowledge and understanding of South Africa's biodiversity inform effective decision-making, management, and practice.	<ol style="list-style-type: none"> 1. Targeted, strategic, and facilitated biodiversity research and evidence enhances knowledge and improves conservation and sustainable use. 2. Partnerships and collaboration in scientific biodiversity research and indigenous and traditional knowledge and practice. 	<ol style="list-style-type: none"> 1. Improved understanding and evidence-based best practice in conservation and sustainable use, with effective translation of knowledge into practice.
E2.3. Indigenous/ Traditional knowledge and practice provide localised solutions to biodiversity conservation and sustainable use.	<ol style="list-style-type: none"> 1. Strengthened mechanisms and tools for identification and protection of indigenous, traditional, and local knowledge, innovation and practices associated with nature and biodiversity. 2. Mechanisms and tools for ethical collection and curation of indigenous, traditional, and local knowledge, innovation and practices associated with nature and biodiversity co-developed with knowledge holders. 3. Indigenous, traditional, and local knowledge informs and strengthens biodiversity policy development and decision-making. 4. Transmission of indigenous, traditional, and local knowledge and practices by training the next generation. 5. Any use or benefit that derives from traditional knowledge or practices includes fair and equitable sharing with holders of knowledge and practices. 6. Multisectoral partnerships leverage indigenous knowledge and practices for biodiversity conservation and benefits.. 	<ol style="list-style-type: none"> 1. Indigenous, traditional, and local knowledge, innovations and practices curated for effective protection, recognition, and use. 2. Traditional leaders, healers, and practitioners, are recognised and treated with the dignity and respect as the custodians of traditional knowledge, innovation, and practices.

ENABLER 2: ENHANCED MEANS OF IMPLEMENTATION: Expand and develop ability to effectively conserve biodiversity, to manage its use, and to address factors threatening it.		
Policy Objective	Expected Output	Expected Outcome
E2.4. Data and information form the basis of decision making and practice	<ol style="list-style-type: none"> 1. Coordinated and integrated national biodiversity monitoring, evaluation and reporting framework, with implementation at the appropriate spatial and temporal scales. 2. Biodiversity monitoring and evaluation informs biodiversity conservation and sustainable use planning and adaptive management. 3. Key real-time biodiversity indicators enable robust and scalable reporting and evaluation, with identification of biodiversity and ecological integrity threats and risks. 	<ol style="list-style-type: none"> 1. Robust and effective biodiversity reporting and trend analysis enhances biodiversity conservation and sustainable use and prevents or mitigates threats..
E2.5. Monitoring and evaluation inform biodiversity conservation, management, and sustainable use.	<ol style="list-style-type: none"> 1. Coordinated and integrated national biodiversity monitoring, evaluation and reporting framework, with implementation at the appropriate spatial and temporal scales. 2. Biodiversity monitoring and evaluation informs biodiversity conservation and sustainable use planning and adaptive management. 3. Key real-time biodiversity indicators enable robust and scalable reporting and evaluation with identification of biodiversity and ecological integrity threats and risks. 	<ol style="list-style-type: none"> 1. Robust and effective biodiversity reporting and trend analysis enhances biodiversity conservation and sustainable use and prevents or mitigates threats.
E2.6. Enhance the capacity necessary to conserve and sustainably use South Africa's biodiversity.	<ol style="list-style-type: none"> 1. Effective Sector wide Human Capital Development and Deployment Strategy, with streamlining and transformation. 2. Influence development of transformative biodiversity qualifications and curricula, with multidisciplinary approaches, for effective biodiversity education and training at all levels. 3. Skills development, transfer, and retention strategy across the sector enhanced. 4. Enhanced biodiversity content expertise within mandated State agencies. 5. Efficient and funded organisational design for mandated agencies enhance biodiversity service delivery outcomes 	<ol style="list-style-type: none"> 1. Streamlined, appropriate, representative, and transformed human capacity underpin effective and improved management and conservation of biodiversity and its use.

ENABLER 2: ENHANCED MEANS OF IMPLEMENTATION: Expand and develop ability to effectively conserve biodiversity, to manage its use, and to address factors threatening it.		
Policy Objective	Expected Output	Expected Outcome
E2.7. Mobilise resources from all sources, including identification of innovative financial mechanisms, to promote financial sustainability of the sector.	<ol style="list-style-type: none"> 1. Provision of financial support and incentives, within available financial resources, in respect of activities which are intended to achieve the goals, objectives, and outcomes of the White Paper. 2. Integrated and innovative mechanisms, funding and investment models, and resource mobilisation, including internationally, to support biodiversity conservation and sustainable use. 3. Develop mechanisms and tools, in partnership with the private sector, to facilitate access to capital, and financial training and support, for new entrants to the biodiversity sector. 4. Fiscal instruments in place that promote and incentivise biodiversity conservation and growing the biodiversity economy. 5. Innovative approaches, with mechanisms for reinvestment, change business practices to reduce biodiversity loss, adding net value, or at least ensure no net biodiversity loss. 6. Market instruments such as certification schemes, enhance reputation and market share of improved sustainable products and practices. 7. Pursue external financing sources through bilateral and multilateral agencies, and the private sector, to secure funding for priority programmes and projects. 	<ol style="list-style-type: none"> 1. Financial support and incentives are harnessed and leveraged from all sources to ensure the biodiversity sector is adequately resourced, and transformed.

8 IMPLEMENTING THE POLICY

A high-level implementation plan, as well as a monitoring and evaluation plan are contained within the Socio-Economic Impact Assessment (SEIAs). These indicate the initial priority areas that have already been identified for implementation.

The following activities will be undertaken in developing the implementation roadmap:

1. The development of a detailed implementation roadmap based on engagements with key relevant stakeholders to develop the programme of work. To this end, the following activities will be undertaken:
 - 1.1. Identification of key stakeholders
 - 1.2. Engagements with relevant stakeholders
 - 1.3. Intergovernmental consultation to discuss implementation modalities
 - 1.4. Develop a programme of work
 - 1.5. Costing of the implementation roadmap
 - 1.6. Finalise and adopt the implementation roadmap
 - 1.7. Implement the roadmap
 - 1.8. Mainstream the roadmap across spheres of government.
2. The implementation roadmap will be monitored and evaluated on an annual basis in partnership with stakeholders, while the outcomes of such monitoring and evaluation will be used to update the programme of work as necessary. Consequently, the implementation plan will require or enable the following:
 - 2.1. Review and reform of key legislation and strategies to align with the goals and objectives of the White Paper;
 - 2.2. Improved co-operative governance and reduced inefficiencies across implementing authorities in line with goals and objectives, building on current initiatives underway within the environmental sphere of government;
 - 2.3. Development and implementation of cooperative governance tools such as Memoranda of Understanding with organs of states and key strategic partners on policy support and implementation mechanisms.
 - 2.4. Development of a sector Transformation Framework.
 - 2.5. The review and reallocation of financial and human resources to cover identified gaps, and new areas of operation required for implementation; and
 - 2.6. Development of a South African model for conservation management strategy which will lay down a protocol for efficient and effective governance.