
GOVERNMENT NOTICES • GOEWERMENTSKENNISGEWINGS

DEPARTMENT OF FORESTRY, FISHERIES AND THE ENVIRONMENT

NO. 4448

29 February 2024

NATIONAL ENVIRONMENTAL MANAGEMENT: BIODIVERSITY ACT, 2004 (ACT NO. 10 OF 2004)**COMMENTS INVITED ON THE REVIEWED NATIONAL BIODIVERSITY ECONOMY STRATEGY**

I, Barbara Dallas Creecy, Minister of Forestry, Fisheries and the Environment, hereby publish the reviewed National Biodiversity Economy Strategy for public comments as set out in the Schedule hereto.

Members of the public are invited to submit written comments or inputs on the reviewed National Biodiversity Economy Strategy, within thirty (30) days from the date of publication of this Notice in the Government Gazette or in the newspapers, whichever date comes last, to the following addresses:

By post to: The Director-General: Department of Forestry, Fisheries and the Environment
Attention: Mr Khorommbi Matibe
Private Bag X447
PRETORIA
0001

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

By e-mail: nbes@dffe.gov.za

Any enquiries in connection with the reviewed National Biodiversity Economy Strategy, or in connection with obtaining a copy of the Socio-Economic Impact Assessment Study (SEIAS) on the reviewed National Biodiversity Economy Strategy, can be directed to Mr Khorommbi Matibe at KMatibe@dffe.gov.za

A copy of the reviewed National Biodiversity Economy Strategy can also be accessed at:
https://www.dffe.gov.za/legislation/gazetted_notices or www.gpwonline.gov.za

Comments received after the closing date may not be considered.



BARBARA DALLAS CREECY
MINISTER OF FORESTRY, FISHERIES AND THE ENVIRONMENT

CONTENTS

1	EXECUTIVE SUMMARY	4
2	ACRONYMS	5
3	DEFINITIONS	6
4	INTRODUCTION	6
5	POLICY CONTEXT	8
5.1	THE CONVENTION ON BIODIVERSITY AND THE GLOBAL BIODIVERSITY FRAMEWORK	8
5.2	THE WHITE PAPER ON CONSERVATION AND SUSTAINABLE USE OF SOUTH AFRICA'S BIODIVERSITY	10
6	STRATEGIC GOALS, CROSS-CUTTING IMPERATIVES AND ENABLERS	12
6.1	Goal 1: Leveraging biodiversity-based features to scale inclusive ecotourism industry growth in seascapes and in sustainable conservation land-use.	13
6.2	Goal 2: Consumptive use of Game from extensive wildlife systems at scale that drives transformation and expanded sustainable conservation compatible land-use.	14
6.3	Goal 3: Consumptive use of wild and produced marine and freshwater resources that drives inclusive coastal socio-economic development.	15
6.4	Goal 4: Well structured, inclusive, integrated and formalised Bioprospecting, Biotrade, and Biodiversity-based Harvesting and Production Sector that beneficiates communities.	16
6.5	Cross-Cutting Imperative 1: Leverage the Biodiversity Economy to promote conservation and species and ecosystem management, thereby ensuring a positive feedback loop.	17
6.6	Cross-Cutting Imperative 2: Promote growth and transformation of the Biodiversity Economy.	18
6.7	Enabler 1: Effective and Efficient regulation and policy implementation	20
6.8	Enabler 2: Increased capacity, innovation and technological support	21
6.9	Enabler 3: Financial support sustains conservation and grows the Biodiversity Economy	22
6.10	Enabler 4: Market access for Previously Disadvantaged Individuals and Communities	23
7	MONITORING, EVALUATION AND REVIEW	24
8	APPENDIX: DRAFT Implementation plan	25

Impact Statement: This will increase the GDP contribution for consumptive use of game from extensive wildlife systems from R4.6 billion (2020) to R27.6 billion by 2036;

- **Goal 3: Consumptive use of wild and produced marine and freshwater resources that drives inclusive coastal socio-economic development.**

Impact Statement: Grow sustainable consumptive use of marine, coastal, estuarine and freshwater resources, including through aquaculture, by 10% per annum by 2036; and;

- **Goal 4: Well structured, inclusive, integrated and formalised Bioprospecting, Biotrade, and Biodiversity-based Harvesting and Production Sector that beneficiates communities.**

Impact Statement: This will increase the GDP contribution of the bioprospecting/biotrade from R1,85 billion (2020) to R11,6 billion by 2036 through local beneficiation (finished pharmaceutical, cosmetics and food supplements products), and the development of SMME based production systems for restoration and sequestration.

In order to achieve these goals, the NBES requires implementation of four key enablers:

- **Enabler 1:** Effective and Efficient regulation and policy implementation
- **Enabler 2:** Increased capacity, innovation and technological support
- **Enabler 3:** Financial support sustains conservation and grows the Biodiversity Economy
- **Enabler 4:** Market access for communities and Previously Disadvantaged Individuals

Consistent with the policy context of the White Paper, the NBES is founded on the key pillars of conservation, sustainable use and beneficiation of biodiversity business value chains, and transformation, which will promote sustainable and inclusive socio-economic development. This requires growing and sustaining conservation land and seascapes while promoting and facilitating inclusive biodiversity based businesses that drive transformation of the biodiversity sector. Importantly, broadening the NBES in revision provides increased opportunity to contribute to achieving more elements of the National Development Plan and the Sustainable Development Goals. This emphasises the importance of sustainable use of biodiversity as key to inclusive socio-economic development, especially when effectively mainstreamed into cross sectoral planning.

2 ACRONYMS

ARC:	Agricultural Research Council,
BioPANZA:	BioProducts Advancement Network of South Africa
CBD:	Convention on Biological Diversity
CITES:	The Convention on International Trade in Endangered Species of Wild Fauna and Flora
COGTA:	Department of Cooperative Development and Traditional Affairs
CONTRALESA:	Congress of Traditional Leaders of South Africa
CSIR:	Council for Scientific and Industrial Research
DALRRD:	Department of Agriculture, Land Reform and Rural Development
DFFE:	Department of Forestry, Fisheries and the Environment
DHET:	Department of Higher Education and Training
DOH:	Department of Health
DSBD:	Department of Small Business Development
DSI:	Department of Science and Innovation
DTIC:	Department of Trade Industry and Competition
EPWP:	Extended Public Works Programme

South Africa has a diversity of wildlife-based land-uses, ranging from protected areas, extensive wildlife systems, semi-intensive management, intensive wildlife breeding facilities, sanctuaries, and rehabilitation facilities. The South African Wildlife Model has led to a range of conservation successes, including the increase in wild populations and range expansion of wild lion, elephant, and black and white rhinoceros. The game ranching economy makes a substantial contribution to the South African economy. Game ranching is an important land use for both socio-economic development and biodiversity conservation and can play an enhanced role in transformation. This can be done through removing barriers of entry into the game ranching economy for emerging black entrepreneurs and expanded sharing of benefits with previously disadvantaged individuals and rural communities.

The traditional harvesting of plants and animals (and honeycombs etc) from the wild is widely practised in South Africa and is particularly important as part of the informal rural economy. Many indigenous plant and animal species have documented traditional medicinal uses, and many also have important spiritual meanings, they are harvested for food, as a fuel source, as well as for building materials such as thatch and trunks. Much of this harvesting is unregulated, and overharvesting may lead to local extirpation of key species and the subsequent loss of contribution to the well-being of people. However, there is much indigenous knowledge and practice, which, together with the expertise and practice can be leveraged for sustainably growing the contribution to localised economies. This has great potential to feed into the growing Bioprospecting and Biotrade industries, as well as into formalised plant production, such as for the horticulture and landscaping industries.

The marine environment provides South Africans with food and livelihoods by providing a basis for fishing (commercial, subsistence or recreational). In the marine environment, 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 marine ecosystems, with greater impact on inshore resources than on the deep ocean systems. There are coastal threats from development, as well as from climate change, including abnormal storm surges, sea-level rise, and ocean acidification. Similarly, freshwater fishing is an important recreational activity, but also an important local food source in some areas. Alien species, in particular, pose a major risk.

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 all that is valued in nature. South Africa promotes a diverse biodiversity-based economy that includes both non-consumptive and consumptive uses of all the benefits and services 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 land- and seascapes, and this diversity enhances the resilience and offers further potential for growth. Biodiversity-based jobs are prevalent in sectors such as fisheries, aquaculture, wildlife ranching, indigenous flora harvesting and production industries, bee product harvesting and apiculture, traditional medicine, indigenous tea production and biodiversity-based tourism. Of these, despite its high economic and social value, the traditional medicine sector is largely informal.

South Africa's biodiversity, also contributes to tourism and the presence of iconic African wildlife well beyond the "big five" gives it an advantage in attracting international tourists. More income from such tourism, based on the attraction of these iconic species, could help transform and build the biodiversity sector, and the South African economy more generally, in an inclusive manner.

The NBES provides one of the mechanisms for South Africa to domesticate the GBF. The revision of the NBES has been aligned with the broad context of the framework, the key relevant elements of which outlined below.

The GBF, including its Vision, Mission, Goals and Targets, is to be understood, acted upon, implemented, reported and evaluated, consistent with the following, amongst others:

- (a) *Contribution and rights of indigenous peoples and local communities*: The Framework acknowledges the important roles and contributions of indigenous peoples and local communities as custodians of biodiversity and as partners in its conservation, restoration and sustainable use. The Framework's implementation must ensure that the rights, knowledge, including traditional knowledge associated with biodiversity, innovations, worldviews, values and practices of indigenous peoples and local communities are respected, and documented and preserved with their free, prior and informed consent, including through their full and effective participation in decision-making.
- (b) *Different value systems*: Nature embodies different concepts for different people, including biodiversity, ecosystems, Mother Earth, and systems of life. Nature's contributions to people also embody different concepts, such as ecosystem goods and services and nature's gifts. Both nature and nature's contributions to people are vital for human existence and good quality of life, including human well-being, living in harmony with nature, and living well in balance and harmony with Mother Earth. The Framework recognizes and considers these diverse value systems and concepts, including, for those countries that recognize them, rights of nature and rights of Mother Earth, as being an integral part of its successful implementation;
- (c) *Whole-of-government and whole-of-society approach*: This is a framework for all - for the whole of government and the whole of society. Its success requires political will and recognition at the highest level of government and relies on action and cooperation by all levels of government and by all actors of society;
- (f) *Right to development*: Recognizing the 1986 United Nations Declaration on the Right to Development, the Framework enables responsible and sustainable socioeconomic development that, at the same time, contributes to the conservation and sustainable use of biodiversity;
- (h) *Gender*: Successful implementation of the Framework will depend on ensuring gender equality and empowerment of women and girls, and on reducing inequalities;
- (i) *Science and innovation*: The implementation of the Framework should be based on scientific evidence and traditional knowledge and practices, recognizing the role of science, technology and innovation;
- (j) *Intergenerational equity*: The implementation of the Framework should be guided by the principle of intergenerational equity which aims to meet the needs of the present without compromising the ability of future generations to meet their own needs and to ensure meaningful participation of younger generations in decision-making processes at all levels;

The vision of the GBF is a world of living in harmony with nature where "by 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people."

The mission of the GBF for the period up to 2030, towards the 2050 vision is: To take urgent action to halt and reverse biodiversity loss to put nature on a path to recovery for the benefit of people and planet by conserving and sustainably using biodiversity and by ensuring the fair and equitable sharing of benefits from the use of genetic resources, while providing the necessary means of implementation.

The GBF has four long-term goals for 2050 related to the 2050 Vision for biodiversity:

- 1) Enhanced Biodiversity Conservation (All biological diversity and its components conserved);
- 2) Sustainable Use (The sustainable use of biodiversity enhances thriving living land- and seascapes and ecosystems, livelihoods, and human well-being, while a duty of care avoids, minimises, or remedies adverse impacts on biodiversity);
- 3) Equitable Access and Benefit Sharing (Benefits are derived and shared from the use and development of South Africa's genetic and biological resources, without compromising the national interests); and
- 4) Transformed Biodiversity Conservation and Sustainable Use (Effect is given to the environmental right as contained in Section 24 of the Constitution which facilitates redress and promotes transformation).

As well as two cross-cutting Enablers:

- 1) Enabler 1: Integrated, Mainstreamed and Effective Biodiversity Conservation and Sustainable Use: Integrated policy and practice across government and the effective implementation of Multilateral Environmental Agreements; and
- 2) Enabler 2: Enhanced Means of Implementation: Expanded and developed ability to effectively conserve biodiversity, to manage its use and benefits, whilst addressing factors threatening biodiversity.

The White Paper identified the following broad challenges:

- 1) Fragmented conservation responsibilities, duplication of efforts and underfunded conservation mandates that hamper the effective conservation and sustainable use of South Africa's biodiversity;
- 2) Lack of transformation in the sector, where a majority of the population are disadvantaged and disenfranchised from contributing to conservation and sustainable use;
- 3) Inadequate efforts in addressing the global challenges of biodiversity loss, land degradation, and climate change in the context of sustainable development;
- 4) Proliferation of biodiversity and conservation legislation, uneven governance, limited capacity and declining allocation of resources in the management of biodiversity and inadequate revenue generation efforts; and
- 5) Practices within the sector that have brought the country into disrepute.

In addressing these challenges, the White Paper emphasises the importance of the biodiversity sector to South Africa's economy, underpinned by strengthened conservation, sustainable use and access, and fair and equitable sharing of benefits arising from the utilisation of biodiversity and its components.

The White Paper, therefore, set out the vision: *"An inclusive, transformed society living in harmony with nature, where biodiversity conservation and sustainable use ensure healthy ecosystems, with improved benefits that are fairly and equitably shared for present and future generations"*, with 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 ecologically sustainable, and socially equitable use of what people values from nature."*

This NBES is guided and informed by the detail provided in the White Paper Policy Objectives and outputs and is intended to provide strong direction for the growth and transformation of the biodiversity-based economy in South Africa. Importantly, the NBES does not only focus on the White Paper Goal 2 (Sustainable Use) and Goal 3 (Equitable Access and Benefit Sharing), but includes two cross-cutting imperatives that address Goal 1 (Enhanced Biodiversity Conservation) and Goal 4 (Transformation). Furthermore, in its revision, the NBES has been broadened to include additional ecosystems, and

Each Goal, Cross-cutting Imperative, and Enabler have a set of Actions for Implementation that prioritise intervention to achieve the Strategic Goals and high-level outcomes. Brief context is provided for each of these actions.

The Draft Implementation Plan for these Actions is provided as an appendix, in which the targets to be achieved are detailed. Given that the National Biodiversity Economy Strategy is relatively long-term, the Implementation Plan will require reporting, monitoring and evaluation, and revision of the targets periodically in order to ensure progress towards the achievement of high-level outcomes.

6.1 Goal 1: Leveraging biodiversity-based features to scale inclusive ecotourism industry growth in seascapes and in sustainable conservation land-use.

Impact Statement: To grow sustainable and inclusive eco-tourism-based businesses by 10% per annum through marine-based ecotourism activities and expansion of the conservation estate from 20 million ha to 34 million ha by 2040 (4,2 million ha from declared protected areas and 10 million ha from Other Effective area-based Conservation Measures-OECMs).

Action 1.1.: Establish 5 mega living conservation landscapes through voluntary involvement of suitable state, private and Community areas.

There is a need to reimagine conservation and conservation compatible land-use into the future through mega-living conservation landscapes – mosaic of conservation and productions systems under different legal and management arrangements. This should include integration of terrestrial, estuarine, coastal and marine elements, e.g. consideration of the “big seven”. While there may be multiple sustainable use approaches (see Goal 2), in this context these will increase geographic spread and number of potential bed-nights in large Big-5 areas. These can build on the Biodiversity Nodes identified in the previous Biodiversity Economy Strategy, and there are a number of areas that have programmes for this underway, considered, or with potential, including Umkhanyakude/ iSimangaliso/ Ezemvelo; Waterberg/ Limpopo R/ Makapans Valley; Lekgalameetse/Wolkberg/Thabana, Addo Camdeboo Corridor; Grasslands National Park; North West (Dr Ruth Segomotsi); Northern Cape.

Action 1.2.: Prioritise infrastructure development and viable enterprises in community reserves and areas adjacent to faunal Big 5 areas such as Kruger Park, suitable state protected areas and Private Game Reserves

There are a large number of community owned reserves adjacent to big five areas including those fenced into the Greater Kruger Park area, with the same potential to drive conservation compatible socio-economic development as the incorporated private reserves such as Associated Private Nature Reserves and Sabi Sands. Successful ecotourism ventures in these (in addition to other use options (see Goal 2) require infrastructure investment, viable business plans and models, and capacity development for substantial ecotourism operations in community owned reserves, and in community land adjacent to Kruger Park. There is a need to engage with communities to co-develop large scale ecotourism infrastructure in ten community reserves/areas, for example in Makuleke, Letaba Ranch, Maseke, Manyeleti, Metsi-Metsi, Mjejane, and new areas that have expressed interest such as Giyani and Hazyview. There is also potential for such development in other nodes, such as around Addo, Hluhluwe-iMfolozi Park, etc.

Action 1.3.: Develop Ecotourism infrastructure in priority locations in existing and developing large terrestrial and marine conservation areas that are not based on big-five activities, and with high potential for community involvement.

Expanded and more inclusive recreational hunting a key driver of conservation compatible land-use. There is potential for plains game to be introduced to community areas as a basis for ecotourism, recreational hunting, and feeding into the game meat industry, and other value chains. Traditional hunting could transition to recreational hunting, with added value.

Action 2.3. Formal large scale enterprises harvesting and processing game meat from extensive wildlife systems, including from substantial plains game on community owned land, growing the collective game meat industry.

In line with the Game Meat Strategy, develop formalised and scaled Game Meat sector as key pillar of the wildlife economy. Formal commercial ventures (with economies of scale) focused on game meat production on extensive wildlife systems and the associated full value chain. Facilitate access by the informal sector (harvesting is secondary to hunting), to resultant infrastructure (e.g. abattoirs), marketing and distribution of the value chains for improved efficiencies and collective scaling. Develop larger extensive wildlife systems with plains game for harvesting, including in community areas where populations can be built up, for example through game donation programmes, to ensure sufficient continuous harvesting for persistent, scaled and viable value chains.

6.3 Goal 3: Consumptive use of wild and produced marine and freshwater resources that drives inclusive coastal socio-economic development.

Impact Statement: Grow sustainable consumptive use of marine, coastal, estuarine and freshwater resources, including through aquaculture, by 10% per annum by 2036.

Action 3.1.: Develop and implement an inclusive and transformative sustainable harvesting strategy for all components of the commercial marine fisheries.

Sustainable and transformed commercial Marine Fisheries. The marine fisheries are an important economic sector that is an important employer. However, the sector is largely untransformed, with barriers to entry for new players, as well as challenges with the allocation of fishing rights. There are a wide range of different species harvested, both open ocean and inshore, and over-exploitation, including from illegal harvesting, threatens stocks. It is possible to implement management measures to allow stocks to replenish to sustainable levels.

Action 3.2.: Develop and implement a small-scale sustainable harvesting strategy that addresses barriers to entry, ensures economies of scale, and promotes transformative value-chains.

Sustainable small-scale harvesting of estuarine and coastal fish and invertebrates promotes household livelihoods and food security. Estuarine and coastal fish and invertebrates have been traditionally harvested as an important food source for, as well as promoting livelihoods of adjacent communities. Ad hoc and unplanned development of the sector in general, and international demand for key species such as abalone and west coast rock lobster, has resulted in over-harvesting, illegal harvesting and trade, and missed opportunities of economic scaling from formalised value-chains. There is a need for transformation of the sector, which is hindered by barriers to entry, including in access to fishing rights, capital, capacity, and distribution.

Action 3.3.: Develop and implement a small-scale Aquaculture strategy that addresses barriers to entry, ensures economies of scale, and promotes transformative value-chains.

Formalised and enabled small-scale aquaculture sector a key pillar of the marine and freshwater biodiversity economy. Challenges include the regulatory environment, limited access to resources, lack of knowledge, access to production inputs, and achieving economies of scale. There are challenges with

Action 4.3.: Scale up PDI/community-based mass cultivation of indigenous plants for commercial use in large land restoration/ rehabilitation and carbon sequestration programmes, with a pipeline to commercial horticulture/landscaping industries.

Leverage potential for large-scale indigenous plant production for sale for use in restoration and carbon sequestration programmes. There have been initiatives for PDI led nurseries to produce indigenous seedlings for restoration and carbon sequestration projects, such as for the 2010 World Cup Buffelsdraai carbon offset project in Ethekwini, and such models can be scaled for broad socio-economic impact. Enterprise economies of scale can be enhanced by plants produced feeding into multiple economic pipelines, into the commercial horticulture and landscaping industries.

Action 4.4.: Identify mechanisms, in consultation with traditional harvesters and healers, to scale cultivation of indigenous medicinal plants for sustainable use within the traditional medicine sector.

Through consultation and co-development with traditional harvesters and healers, leverage the potential for production of Traditional Medicinal Plants on natural lands for commercialisation and buffering of threatened species. While there have been some attempts to create traditional medicine plant nurseries, these have not been scaled to full potential. There is opportunity for this in community areas on natural lands.

Action 4.5.: "Crop wild relatives" identified and encouraged for genetic use and development for commercial crop production, especially for small-holder farmers.

Leverage the value of indigenous "Crop wild relatives" for beneficiation and food security. The National Plan for Conservation and Sustainable Use of Plant Genetic Resources for Food and Agriculture (2017) has a section on Promoting in situ conservation and management of Crop Wild Relatives and wild food plants. It indicates Crop Wild Relative, even of major crops, have received little attention relative to their potential importance in breeding. There has been a process to identify Crop wild relatives with potential (DFFE/SANBI/ DALRDD project), but no cohesive strategy to take this potential forward. This needs to be undertaken in partnership with DALRRD and ARC (and Agriculture Faculties).

Action 4.6.: Mainstream the informal traditional edible insect sector through formalising, scaling, and marketing natural products from sustainably harvested insects and their products.

Leverage the traditional insect food potential to empower community sustainable harvesting from natural lands, and promote conservation land-use. There is an extensive informal insect food sector, mainly based in Limpopo, which has great potential for scaling, as well as for added-value product development (such as protein enrichment). Insects are consumed in other areas, but markets are less common. Municipalities need to provide infrastructure in Limpopo, and there should be channels for marketing in other provinces. Linkages to food producers and supermarkets can create formal and sustainable value-chains. This can be especially empowering to women in communities, and for PDIs in commercial ventures. Apiculture, and harvesting of bee products. There may also be potential to commercialise use of insect silk, e.g. from Mopane worms. This would require the conservation of mopani trees across their range, noting such trees are under threat due to illegal logging for wood.

6.5 Cross-Cutting Imperative 1: Leverage the Biodiversity Economy to promote conservation and species and ecosystem management, thereby ensuring a positive feedback loop.

Action 5.1.: Expand the area of land under conservation land-use by acquisition, partnering, stewardship, and other OECMs.

Expand the conservation estate towards 30% by 2030 (30 x 30) by 2040. While there is extensive land outside of protected areas that is still natural resource based land-use (sustainable agriculture,

New business models need to be developed and implemented to achieve economies of scale for involvement of PDIs in biodiversity-based businesses. Existing models do not favour individuals in Communities or PDIs (or their SMMEs) to ensure enterprise success and sustainability. New enterprises may require some form of subsidisation (such as the game donation programme), and mechanisms to link SMMEs with existing industry players to create economies of scale (for example linking individual plant propagators into horticulture/landscaping distribution networks).

Action 6.2.: Identify and alleviate key barriers of entry into large and commercially scaled biodiversity-based value chains (Ecotourism, Trophy and Recreational Hunting, Game Meat Harvesting) to enable shift to large areas of community owned conservation land-use.

Large, biodiversity-economy based, conservation land-use areas developed with communities who wish to do so on their land, potentially as part of mega-living landscapes. There are key barriers to entry associated with different capital needs to establish viable enterprises that can sustain conservation-based land use within community areas. These may be different for the different components of Biodiversity Economy, and need tailored responses, but include capital for infrastructure (including lodges), capital for wildlife (see game donation programme, which should also be focused on creating economies of scale), and Human capital (capacity development). Communities have demonstrated willingness to provide land, but access to capital is their constraint.

Action 6.3.: Develop and implement innovations, strategies, mechanisms and tools to stimulate, capacitate and develop SMMEs within Communities and with PDIs.

Community and PDI SMMEs functioning effectively along all components of Biodiversity-based value chains. There are a range of opportunity spaces for SMMEs for which there is no comprehensive, strategic approach that leverages key advantage spaces. For example, Protected Areas associated ecotourism includes craft markets (hides), Transport tours, game drives, Bed and Breakfast and homestays, Cultural Tours and guesthouses/ lodges Accommodation. Hunting includes Professional Hunters, Skinners, processing etc.; similarly, for Game meat. This can also include privileged or unique access into protected areas such as Kruger/Addo for game drives from accommodation in community areas. Also, opportunities for Bioprospecting, Biotrade, and Biodiversity-based Harvesting and Production Sector. This action will require collaboration with, amongst others, DFFE, SANBI, Management Agencies, Provincial Economic development, tourism and environment departments, DTIC, DSBD, DALRRD, Tourism, DOH, COGTA, and district and local municipalities.

Action 6.4.: Develop and implement a framework with mechanisms and tools for a strong role of traditional authorities in conservation land-use management and sustainable biodiversity-based enterprises.

Elevate and mainstream the role of traditional authorities in conservation and sustainable use. The traditional authorities are key to the shift to conservation land use for traditional areas, including conservation agriculture. They are also critical in terms of the governance of both land, and biodiversity-based enterprises based on the land, and in promoting SMMEs within their communities. A cross-sectoral approach is needed, working with traditional leaders, DFFE, DALRRD, COGTA, National House of Traditional and Koi-San Leaders, CONTRALESA, and local municipalities.

Action 6.5.: Develop and implement benefit-sharing Agreements that are more inclusive/participatory for communities, and that support effective ecosystem management and conservation of community land.

Communities benefit from Biodiversity Economy and contribute to more effective conservation. The current approach to agreements with communities that own land in protected areas, or that are adjacent to protected areas and absorb costs of conservation do not provide for sufficient access or meaningful benefits to flow to communities. New models need to be explored that are more balanced to favour these communities. This should be primarily driven by the state, but requires private partnerships in key areas.

Mechanisms and tools enhance conservation and sustainable use reputation. Norms and Standards, guidelines, and codes of conduct for improved duty of care, animal wellbeing, and reputation. The Voluntary Wildlife Standards and Certification Scheme was approved by MINMEC for implementation. This voluntary scheme encourages sustainable land management practices in the wildlife sector; increases wildlife-based land users' contribution to biodiversity conservation at species and landscape levels; provides a transparent and systematic means of data and information collation to advocate for and showcase industry impact; and stimulate inclusive growth and development in the sector and support favourable reputation locally and internationally.

Action 7.3.: Review existing regulatory framework for simplification and streamlining to facilitate ongoing and new entrant biodiversity economy enterprises.

Improve the ease of doing business for Biodiversity-economy enterprises. Areas of activity of the Biodiversity Economy often cut across sectors, and levels of government. The legislation is complicated, often contradictory, and implemented inconsistently across provinces or sectors. This would apply across areas which face similar challenges, for example, to game ranching or to the small-scale aquaculture sector.

Action 7.3.: Mechanisms and tools for effective intergovernmental co-ordination across sectors and levels of government, including integration into municipal IDPs.

Mainstream Biodiversity Economy programmes and mechanisms and tools across spheres of government. Improved governance requires horizontal and vertical strategic partnership for effective and efficient biodiversity conservation and sustainable use, mainstreaming of the Biodiversity Economy, and the conservation land use on which this is based, across and within sectors, and leveraging on existing resources and capabilities.

6.8 Enabler 2: Increased capacity, innovation and technological support

Action 8.1.: Enhanced biodiversity conservation and sustainable use content expertise and service within mandated state agencies and departments.

Enhanced state capacity to support and drive the Biodiversity Economy Sector. The state is a key role-player in delivering the Biodiversity Economy Strategy but lacks capacity in key areas. This not only effects state initiatives, but can hinder private sector and community enterprises. Challenges include unfilled positions, poor planning of resource use, gaps in content knowledge, lack, or poor implementation, of management support tools such as Biodiversity Management Plans, harvesting guidelines, Non-Detrimental Findings, sustainability planning tools, etc. There is poor extension service support targeting biodiversity management; in addition, there is poor coordination of extension services across sectors, e.g. Agriculture, Water, Environment, Tourism etc, and some integration could be explored.

Action 8.2.: Skills development, retention, and transfer, and staff retention strategy across the sector enhanced. Development of transformative biodiversity qualifications and curricula influenced, with multidisciplinary approaches, for effective biodiversity education and training at all levels.

Capacity development, especially for PDIs and Communities unlocks participation and influence within the Biodiversity Economy. The full value chain for each of the identified goals and their objectives to be defined, and capacity development needs identified. These should be prioritised for those that can be scaled for effectiveness. This will require partnerships with DSI, DHET, DTIC, DALRRD, Tourism, and with the private sector, e.g. training of community bird guides by Birdlife SA; working with hunting associations for developing capacity for components of the hunting value chain.

An integrated and holistic approach to leveraging funding streams for a sustainable Biodiversity Economy. There are a wide range of external funding sources that the state can draw on to give effect to the Biodiversity Economy Strategy. These are often dealt with in isolation, focused on a particular issue, when the impact could be leveraged more broadly if strategically consolidated for effectiveness and efficiency. Some examples include: Carbon sequestration – GEF 8 Peatlands; GEF - \$8m for 5 years (WB, Sanparks) - nodes, Isimangaliso, Kruger, Addo; GEF 8 - \$10 m Eastern Cape Grasslands; Maluleke; \$4m business and biodiversity (CBD - SANBI); \$6.2m – Bioprospecting and Biotrade; \$3.4m – alien invasives – ecosystem management; DSI Fund under CBD; Traditional Health Practitioners to accredit and scientifically test – R100m Nedbank; Partnerships – G12/Seco.

Action 9.5.: Gain approval for Biodiversity Trust fund, and develop a transparent framework for the investment of funds into, and the investment of funds out of, the Fund, such that funded projects are priorities within the Biodiversity Economy Strategy.

Lobby Treasury to approve the establishment of a Biodiversity Trust fund as proposed by SANBI, and then put in place an integrated and holistic approach to growing and leveraging this fund for targeted investment into a transformed Biodiversity Economy. Biodiversity Trust Fund would provide an opportunity for the state to harness and create critical mass of resources for key investments into the Biodiversity Economy, especially for those that would empower and unlock community and PDI ventures.

Action 9.6.: Develop and implement key financial mechanisms based on successful conservation of threatened species or ecosystem, which can be invested in conservation and sustainable use more broadly.

Develop innovative funding tools based on conservation and sustainable use of threatened species or ecosystems. There may be opportunities for raising funding internationally (and locally) based on achieving specific conservation targets for key threatened species and ecosystems. The GEF Wildlife Conservation Bond (Rhino Bond) is one example, linked to increasing rhino numbers. There are opportunities for tax relief for conservation actions, such as conservation of threatened species being led by the Sustainable Finance Coalition. There is much potential, including for iconic marine species.

Action 9.7.: Identify key elements within Natural Capital Accounting, Payment for Ecosystem Services, and Carbon Sequestration, which can be incorporated as part of the Biodiversity Economy.

Incorporate innovations for financing based on offset approaches: Natural Capital Accounting (SANBI); Payment for Ecosystem services; and Carbon Sequestration amongst others.

6.10 Enabler 4: Market access for Previously Disadvantaged Individuals and Communities

Action 10.1. Integrate community and PDI SMMEs into State Protected Area booking systems to profile and provide opportunity of integrated package bookings.

Increase market access for Ecotourism-based Community and PDI SMMEs. Integrated booking system for a park and surrounding community areas linked into SANParks, and provincial booking systems. Integrated booking system for nature-based tourism accommodation across small reserves, community areas, and activity types (e.g. game drives, walks)

Action 10.2.: Mechanisms developed and implemented to ensure community based and PDI SMMEs are embedded along the trophy and recreational hunting value chains.

Increase market access for fair-chase hunting-based Community and PDI SMMEs. There are insufficient individuals of the big 5 to hunt on community owned land, and barriers to effectively permitting these.

8 APPENDIX: DRAFT IMPLEMENTATION PLAN

An implementation plan for the revised NBES would need to be co-developed with all stakeholders being involved in the process. Each action will require identification of a 2036 NBES Outcome, as well as periodic targets to be achieved along the way. Because the NBES builds on the previous strategy, and integrates a range of activities that are already underway or planned, some of these elements may currently be better resolved. To give better understanding to what each of the actions may entail, a draft Implementation Table has been developed. The intention of this is that there is greater clarity as to the intent of the action, as well as highlighting the challenging work that is required to meaningfully grow the Biodiversity Economy in a sustainable manner the also grows the conservation land, and the management of the species and ecosystems on which the Biodiversity Economy is based. In addition, the details in the table provide understanding of what outcomes, and targets to meet these, would be required for meaningful transformation of the sector. As part of the implementation process, the responsible and contributing role-players for each element would need to be identified.

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

1. The development of a detailed implementation plan based on engagements with relevant stakeholders, including broad consultation with key stakeholder groupings and the general public, to develop the programme of work to implement the NBES, and example of which is included in the Table below. 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 plan.
- 1.6. Finalise and adopt the implementation plan.
- 1.7. Implement the plan.
- 1.8. Mainstream the plan across spheres of government.

Action	Targets 2026	Targets 2029	Targets 2032	Targets 2035	2036 NBES Outcome
and private game reserves					
Action 1.3.: Develop Ecotourism infrastructure in priority locations in existing and developing large conservation areas with high potential for community involvement.	Integrated infrastructure development plan 5 camps underway 10 camps planned	5 camps operating 10 camps underway 20 camps planned 1000 new beds 2000 planned beds	15 camps operating 20 camps underway 1500 new beds (2500 total) 2500 beds planned	35 camps operating 2500 new beds (5000 total)	5000 new daily bed nights in non-big-5 conservation areas in adjacent community land by 2036
Action 1.4.: Develop themed and packaged ecotourism infrastructure across small state and private conservation areas, and community areas with high potential.	Strategy for themed and packaged tourism developed.	Strategy implemented Infrastructure developed in 10 small areas (40 planned) 5 new niche areas (25 planned)	Infrastructure developed in 30 small areas (20 planned) 15 new niche areas (15 planned)	Infrastructure developed in 20 small areas (50 total) 15 new niche areas (total 30)	50 priority small conservation areas self-funding and 30 new niche destinations in community areas. by 2036;
Action 1.5.: Extend and develop infrastructure in four key TFCAs	Integrated infrastructure development plan 3 camps underway 10 camps planned	3 camps operating 5 camps underway 5 camps planned 600 new beds 1400 planned beds	8 camps operating 5 camps underway 800 new beds (1400 total)	13 camps operating 600 new beds (2000 total beds)	2000 new daily bed nights in key TFCAs by 2036.
Goal 2: Consumptive use of game from extensive wildlife systems at scale that drives transformation and expanded sustainable conservation compatible land-use.					
Action 2.1.: Increase the number of Big five animals available for fair-chase trophy hunting, especially in community owned areas and larger	Plan for expanded hunting of big 5 implemented 5 new hunting destinations with value chains (10 planned)	10 new hunting destinations with value chains (total 15; 20 planned)	20 new hunting destinations with value chains (total 35; 25 planned)	25 new hunting destinations with value chains (total 60)	150 wild lion and elephant hunted per annum, with associated value chains by 2036.

Action	Targets 2026	Targets 2029	Targets 2032	Targets 2035	2036 NBES Outcome
economies of scale, and promotes transformative value-chains.					
Action 3.3.: Develop and implement a small-scale Aquaculture strategy that addresses barriers to entry, ensures economies of scale, and promotes transformative value-chains.	To be developed				A viable and transformative small-scale aquaculture (freshwater and marine) sector by 2035.
Action 3.4.: Effective implementation of the National Freshwater (Inland) Wild Capture Fisheries Policy	To be developed				Inland fisheries contribute community food security and livelihoods.
Goal 4: Well structured, inclusive, integrated and formalised Bioprospecting, Biotrading, and Biodiversity-based Harvesting and Production Sector that benefits communities.					
Action 4.1.: Develop a "virtual" institute for discovery phase bioprospecting that feeds into an inclusive value-chain.	Upington Research and Development Hub operating. Plan for virtual institute developed, and institute "established" Integration of the work of the institute integrated into BioPANZA.	Hub and Virtual Institute functioning. Revised targets for BioPANZA to align with Revised NBES. 10 new potential products identified	5 products developed, 5 under development, 20 identified	15 products developed (20 total), 15 under development, 15 identified	Functioning "Virtual" Institute for Bioprospecting Discovery that has facilitated 20 (plus 30 potential) bioproducts into the Bioeconomy value chain by 2036.
Action 4.2.: Develop and implement a well structured, inclusive, integrated and	National Strategy for communities to benefit from biotrading implemented.	10 potential products identified	5 products developed, 5 under development, 20 identified	15 products developed (20 total), 15 under development, 15 identified	20 new (plus 30 potential) bioproducts brought to market by enterprises inclusive of communities and PDIs by 2036.

Action	Targets 2026	Targets 2029	Targets 2032	Targets 2035	2036 NBES Outcome
Action 4.6.: Mainstream the informal traditional edible insect sector through formalising, scaling, and marketing natural harvested products sustainably harvested insects and their products.	Strategy developed for mainstreaming traditional insect food, including incorporating into value added products	3 upgraded insect food markets (3 planned) 5 insect derived protein fortified products under development	3 upgraded insect food markets (6 total, 3 planned) 3 insect derived protein fortified product marketed (2 under development)	3 upgraded insect food markets (9 total) 5 insect derived protein fortified products marketed	Indigenous insect based food products mainstreamed by 2035
Cross-Cutting Imperative 1: Leverage the Biodiversity Economy to promote conservation and species and ecosystem management, thereby ensuring a positive feedback loop					
Action 5.1.: Expand the area of land under conservation land-use by acquisition, partnering, stewardship, and other OECMs	To be inserted				30% of land under audited conservation land-use by 2040 (insert correct % by 2036).
Action 5.2.: Broaden the participation of the private sector and communities in conservation and ecosystem management	Strategy to integrate				30% of land under audited conservation land-use by 2040. (insert correct % by 2036).
Action 5.3.: Cross-subsidise conservation and ecosystem management from Biodiversity Economy enterprises.					By 2036, Biodiversity Economy income streams fully subsidise sustainable conservation land use on which they are based.

Action	Targets 2026	Targets 2029	Targets 2032	Targets 2035	2036 NBES Outcome
Action 6.3.: Develop and implement innovations, strategies, mechanisms and tools to stimulate, capacitate and develop SMMEs within Communities and PDIs	20 Generic Business plans developed for conservation-based community and PDI SMMEs 30 SMMEs incubated	90 new SMMEs incubated (120 total)	90 new SMMEs incubated (210 total)	90 new SMMEs incubated (300 total)	30 SMMEs incubated per annum by 2036 (total 300)
Action 6.4.: Develop and implement a framework with mechanisms and tools for a strong role of traditional authorities in conservation land-use management and sustainable biodiversity-based enterprises.	Framework developed and implemented. 10 community areas identified for transformative empowerment	10 new community areas empowered 20 community areas identified for transformative empowerment	20 new community areas empowered (30 total) 20 community areas identified for transformative empowerment	20 new community areas empowered (50 total)	50 Empowered communities take ownership, and benefit from Biodiversity Economy and conservation outcomes.
Action 6.5.: Develop and implement benefit-sharing Agreements that are more inclusive/participatory for communities, and that support effective ecosystem management and conservation of community land.	Develop 5 different generic co-ownership/management agreements. 5 co-owned areas identified for implementation	5 new co-ownership/management agreements operating 12 co-owned areas identified for implementation	12 new co-ownership/management agreements operating (total 17) 13 co-owned areas identified for implementation	13 new co-ownership/management agreements operating (total 30)	By 2036, 30 new co-ownership/management agreements delivering meaningful income, livelihoods and ownership value.
Action 6.6.: Develop and implement innovative benefit-sharing agreements, through Access and Benefit	Develop 5 different ABS agreements, some which include shareholding.	5 new ABS agreements operating	12 new ABS agreements operating (total 17) 13 opportunities for implementation	13 new ABS agreements operating (total 30)	By 2036, 30 new ABS agreements delivering meaningful income and ownership value.

Action	Targets 2026	Targets 2029	Targets 2032	Targets 2035	2036 NBES Outcome
Action 6.9.: Mechanisms and tools developed and implemented to ensure access, empowerment, and participation of communities and PDIs in inland fisheries and recreational fishing.	15 Generic Business plans developed for inland fisheries/recreational fishing community and PDI SMMEs 30 SMMEs incubated	90 new SMMEs incubated (120 total)	90 new SMMEs incubated (210 total)	90 new SMMEs incubated (300 total)	300 SMMEs functioning for a transformed inland fisheries sector promotes community and PDI livelihoods and well-being by 2035.
Enabler 1: Effective and Efficient regulation and policy implementation					
Action 7.1.: Effectively implement the Game Meat Strategy	Implementation plan for Game Meat strategy developed and implemented.	Insert targets from GMS	Insert targets from GMS	Insert targets from GMS	Well directed process for growing the game meat sector with all the benefits envisaged in the strategy as outlined above.
Action 7.2.: Develop and implement mechanisms and tools to improve duty of care, animal well-being and ethical and effective practices.	Norms and Standards developed and implemented for key Management and Sustainable aspects, with associated guidelines Implement the voluntary Wildlife Standards and Certification Scheme	Norms and standards effectively implemented Pilot certification for processes ecotourism, hunting, and harvesting operations. Additional areas for certification identified	Norms and standards Reviewed. Certification systems effectiveness reviewed, and schemes revised. Revised certification processes applied generally.	Revised norms and standard and certification schemes functioning effectively.	Enhanced global reputation for conservation and sustainable use drives ecotourism, fair-chase trophy hunting, and game meat consumption.
Action 7.3.: Review existing regulatory framework simplification and streamlining to facilitate	On-line permitting system in place. Revised NEMBA, NEMPAA, TOPS, BABS in place.	Online permitting system reviewed for improvement Revised provincial legislation in place.	Revised On-line permitting system in place.	Revised legislation in place.	Simplified and streamlined processes promote investment and success across the Biodiversity Economy.

Action	Targets 2026	Targets 2029	Targets 2032	Targets 2035	2036 NBES Outcome
retention strategy across the sector enhanced. Development of transformative biodiversity qualifications and curricula influenced, with multidisciplinary approaches, for effective biodiversity education and training at all levels.	strategy across the sector developed 3 key areas for training of SMMEs identified and plan/materials developed. Process of engagement with HEIs developed and initiated.	7 additional key areas for training of SMMEs identified and plan/materials developed. 3 qualifications approved, and 7 under review, by SAQA. Students enrolled within 3 qualifications.	7 new qualification approved by SAQA. Students enrolled within 10 qualifications.	1000 students graduated from qualifications.	700 SMMEs trained and capacitated to manage and operate their own business by 2036 15 Institutions of higher learning supporting SMMEs with accredited courses in Biodiversity based business ventures
Action 8.3.: "Virtual" institute of Biodiversity Economy Research and Innovation across private sector, communities, and government undertakes priority research, development, and innovation.	Business developed for virtual institute aligned with stakeholder needs.	Virtual institute in place and functioning effectively	Review of virtual institute, and improved governance arrangements and business plan implemented	Virtual institute in place and functioning effectively	Sound evidence base for key strategic pathways ensures successful ventures.
Enabler 3: Financial support sustains conservation and grows the Biodiversity Economy					
Action 9.1.: Develop a range of models for park fees, conservation concession fees etc. that can be implemented to sustain the underlying costs of conservation	Strategy for full cross-subsidisation of conservation and environmental management costs by economic activities developed and implemented.	Implement and monitor 15 pilot projects across the different reserve types.	Evaluate pilot projects, refine reserve business plans. Fully implement revised business plans in 15 reserve	Evaluate pilot projects, refine reserve business plans. Implement appropriate reserve business plans	State protected areas effectively resourced by 2036.

Action	Targets 2026	Targets 2029	Targets 2032	Targets 2035	2036 NBES Outcome
facilitate access to capital, and financial training and support, for new entrants to the biodiversity sector.	business capacity development. Identify 10 areas to pilot capital deployment. for Ecotourism/hunting development.	Identify 50 potential sites for development. Pilot business skills development training.	associated business plans. Pilot refined plans in 50 additional conservation areas. Identify 100 additional potential areas for engagement for new approaches. Implement business skills training as required.	Mainstream funding across the Biodiversity economy.	
Action 9.4.: Leverage existing and in process funding streams to support key elements of the Biodiversity Economy, and underlying conservation land and required environmental management.	Develop and implement a strategy for identifying potential funding sources, and approaches to leverage them for impact on conservation and environmental management. Evaluate current large projects for opportunity to leverage for impact. Identify key needs to develop proposals tailored to large funding streams.	\$75 million leveraged.	\$150 million leveraged	\$200 million leveraged	External funding streams deliver key outcomes of Biodiversity Economy strategy.

Action	Targets 2026	Targets 2029	Targets 2032	Targets 2035	2036 NBES Outcome
Enabler 4: Market access for community and Previously Disadvantaged Individuals					
Action 10.1. Integrate community and PDI SMMEs into State Protected Area booking systems to profile and provide opportunity of integrated package bookings	Develop and implement a plan for opening up state protected booking systems to activities of community and PDI SMMEs. 5 Pilot SANParks case studies.	Evaluate pilot case studies, improve plans. Implement across SANParks. Pilot in Northwest Parks, Ezemvelo, Eastern Cape Parks, Cape Nature	Evaluate pilots, refine plans. Roll out across state conservation entities.		Fast-tracked Community and PDI ecotourism start-up success, with 200 new SMMEs established and sustained per annum.
Action 10.2.: Mechanisms developed and implemented to ensure community based and PDI SMMEs are embedded along the trophy and recreational hunting value chains.	Develop and implement a plan for embedding communities and PDI SMMEs into value chains. Pilot 5 case study SMMEs in Trophy hunting value chain.	Evaluate case studies, refine plans. 20 SMMEs in trophy hunting incubated. 5 SMMEs in recreational hunting incubated.	20 new SMMEs in trophy hunting incubated (total 40). 10 new SMMEs in recreational hunting incubated (15 total).	40 new SMMEs in trophy hunting incubated (total 80). 30 new SMMEs in recreational hunting incubated (45 total).	By 2036, Fast-tracked Community and PDI hunting industry start-up success, with 125 new SMMEs established and sustained
Action 10.3.: Mechanisms developed and implemented to communities and PDIs are embedded along the Bioprospecting, Biotrade, Bioeconomy, harvesting, and plant production value chains.	Develop and implement a plan for embedding communities and PDI SMMEs into value chains. Pilot 5 case study SMMEs in value chains.	Evaluate case studies, refine plans. 20 SMMEs incubated.	23 new SMMEs incubated (total 50).	40 new SMMEs incubated (total 90).	By 2036, 90 new SMMEs established and sustained