environmental affairs
Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

Biodiversity Economy

Background and rationale

Achievements and challenges

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Focus areas

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Performance indicators

ntroduction (defining wildlife economy)

South Africa is the third most biologically diverse country in the world, and therefore has one of the largest natural capital assets. This biodiversity is not only economically viable to the economic wellbeing of the country but can be used as a vehicle for social upliftment. This biodiversity comes with a number of challenges ranging from poaching to overexploitation. The Wildlife Economy in South Africa is centred on the sustainable utilisation of indigenous biological resources including biodiversity-derived products for trade and bio-prospecting, the hunting industry, agriculture and agro processing of indigenous crops and vegetables and livestock breeds and indigenous marine resources and fisheries. Wildlife Economy focus areas centred on the socio-economic benefits of eco-tourism, co-managed conservation areas and ancillary services to protected areas.

Biological diversity underpins ecosystem functioning and the provision of ecosystem services essential for human well-being. It provides for food security, human health, the provision of clean air and water; contributing to local livelihoods, economic development and is essential for the achievement of the Millennium Development Goals. In addition, conservation of biodiversity is a central component of many belief systems, worldviews and identities. Yet despite its fundamental importance, biodiversity continues to be lost, in particular when conservation and sustainable utilisation is considered to be mutually exclusive.

Sustainable use of South Africa's natural resources though biased currently, contribute to poverty reduction and economic growth. Harvesting indigenous biological resources is a significant source of income for communities as it does not require a minimum level of education or professional skills rather indigenous skills. In many cases, one harvester supports an entire household but the overdependence on these have led to the depletion and at the extreme the extinction of some of the biodiversity. Furthermore, women and the elderly traditionally hold knowledge associated with the use and application of the indigenous biological resources. This knowledge is often used as a basis for bio-prospecting, and in many instances the use of such knowledge is never compensated. Monetary benefits from the sale of the material which accrues to women who are most likely to be invested in the welfare and education of their children needs to be maximised.

For example, the existing commercial market for trade in South African bitter aloe, or Aloe ferox is well established, as is the trade in Pelargonium sidoides, buchu, rooibos, honey bush, Devil's Claw and crocodile fat/oil. These indigenous biological resources are predominantly used in the manufacturing of herbal medicines, cosmetics and food flavours and fragrances. In South Africa, utilising indigenous biological resources for the production of such products are defined as bio-prospecting. Other products with commercial potential for industrial or pharmaceutical application are micro-organisms, marine organisms, gums and resins and venoms.

Bio-prospecting is regulated in South Africa through domestic legislation, as envisaged in the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits arising from their utilisation to the Convention on Biological Diversity.

This legislation regulates the utilisation for bio-prospecting and the export of South African indigenous biological resources through a permit system. Integral to the permit system is the concept of prior informed consent, mutually agreed terms and fair and equitable sharing of benefits arising from the utilisation of indigenous biological resources and/ or associated traditional knowledge. Recently, the Minister of Water and Environmental Affairs has awarded 9 bio-prospecting permits for the use of indigenous biological resources.

Other significant drivers of the biodiversity economy include trophy hunting and the associated industry of taxidermy, sale of live game, and sale of game meat.(One example of the value of live game can be taken from an auction recently held where the total turnover of the auctions was R31 million (ZAR). The lowest average price paid for any animal at the auction was R10 000 and the highest price paid of a single animal was R800 000. The average price paid for any animal at the auction was R225 224. Further opportunities exist in the sale of game meat, skins for leather, bones and horns.

Another example of biodiversity based industry is in silk production. Wild silk is derived from caterpillars, and its harvesting, hand-spinning and weaving is undertaken by local communities. This practise is sustainable if only cocoons from which the moths have already emerged are harvested for production.

The supply of such cocoons could be a limiting factor in further developing this product if such moths are not commercially produced. Other biodiversity-based products include bee-keeping products (honey, wax, propollis and royal jelly), Mopane worms and ostrich egg shells and feathers.

This support programme will focus on aspects of certification, quality standards, supply side capacity; benefit sharing, access to investment credit and other support for national and international bio-trade and green economy initiatives. The sector could benefit from further public and international support, especially in terms of market incentives and capacity building. A significant barrier to several Bio-trade sub-sectors is the inadequacy of available infrastructure.

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Achivements and challenges within wildlife economy

Major achievements of the wildlife economy sector include:

- The establishment of the Wildlife Forum which meets quarterly
- The first national Hunting Indaba was held in 2012
- Nine permits issued for bio prospecting; communities are already deriving benefits from the benefit sharing agreements associated with the bio prospecting permits
- An interpretative guide to the legislative provisions on bio prospecting
- Access and Benefit Sharing has been published and is being translated into other official languages.

Some of the key challenges in the wildlife economy eector include:

- Skewed beneficiation from the Wildlife Economy revenues
- Lack of transformation of the biodiversity economy sector including game ranching, hunting and associated industries; bio-trade and bio-prospecting activities
- Insufficient funding and capacity for implementation of skills development, technology transfer and income generating initiatives
- Lack of available equipment and skills to engage in the biotechnology aspect of bio-prospecting;
- Insufficient appreciation of the value and potential of the natural product sector in poverty alleviation.

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Vision and strategic objectives

Vision

Communities that support, uphold and thrive from conservation of biodiversity.

Mission

Through participation, ensure that natural assets are equitably and sustainably utilised to contribute to socio-economic development of communities.

Goal

To invest in infrastructure development and biodiversity conservation that ensures sustainable beneficiation of communities whilst ensuring their full participation.

Strategic objectives

- Fair access and equitable sharing of benefits arising from bio prospecting involving indigenous biological resources promoted.
- Biological resources sustainably utilized and regulated.

Legislative framework

The constitution of the Republic of South Africa under chapter 2 of the Bill of Rights stipulates that:

everyone has the constitutional right to have an environment that is not harmful to his or her health and to have the environment protected for the benefit of present and future generations through reasonable legislative and other measures that— … (a) prevent …ecological degradation;(b) promote conservation; and(c) secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development,"

In fulfilment of these Constitutional obligations, the department promulgated the National Environmental Management: Biodiversity Act, 2004 (Act 10 of 2004) (NEMBA) to manage, conserve and sustain South Africa's biodiversity and its components and genetic resources. In addition, the NEMBA also gives national effect to the international obligations of South Africa under the Convention on Biological Diversity, namely the management and conservation of biological diversity; the sustainable utilisation of indigenous biological resources; and the fair and equitable sharing of benefits arising from bio prospecting involving indigenous biological resources.

Chapter 4 of NEMBA provides for the protection of species that are threatened or in need of protection to ensure their survival in the wild; it gives effect to the national obligations under international agreements regulating international trade in specimens of endangered species; and ensures that the utilisation of biodiversity is managed in an ecologically sustainable way.

Chapter 6 of NEMBA provides for the regulation of bio-prospecting involving indigenous biological resources as well as the regulation of export of indigenous biological resources for the purpose of bio-prospecting or any other kind of research. Furthermore, the act provides for a fair and equitable sharing by stakeholders in benefits arising from bio prospecting involving indigenous biological resources. The following are the legislations that are applicable to the Wildlife Economy focus area:

- **Constitution of the Republic of South Africa, 1996**
- **National Environmental Management: Protected Areas Act (Act No. 57 of 2003)**
- **National Environmental Management: Biodiversity Act (Act No. 10 of 2004)**
- **World Heritage Convention Act (Act No. 49 of 1999)**
- **Marine and Living Resources Act (Act No. 18 of 1998)**

Hunting statistics

>> Hunting stats for 2014.

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Wildlife Economy focus areas

Specific key intervention areas by EPIP will include but not limited to the following:

- **Game ranching and game breeding facilities**

  The programme will work with relevant stakeholders, including Community Property Associations and Community Based Organizations with appropriate properties to:

- Assess the potential use of the land for breeding of (rare) game species / game ranching
- Develop game ranching and breeding infrastructure
- Assistance in acquiring breeding stock (Purchasing of game)
- Assistance in implementation of breeding programmes
- Provide support for organic and other required certification of stock (venison, leather)
- Support for development of ancillary services such as taxidermy of trophies, provision of leather to furnishing manufacturer, production of designer interior items such as lampshades from (guinea fowl) feathers and ostrich eggs

- **Hunting outfitters**

  The programme will work with relevant stakeholders, including Conservation Agencies, Community Property Associations and Community Based Organizations to:

  - Assist on registration as hunting outfitter
  - Provide capital for required equipment
  - Facilitate relationships between game ranchers, professional hunters and hunting outfitters
  - Provide support to market services internationally (attendance of international hunting conventions)

- **Venison processing**

  The programme will work with relevant stakeholders and other spheres of government in particular Municipalities to:

  - Support the certification of the abattoir for international meat markets
  - Construct new game abattoirs
  - Upgrade existing abattoirs to deal with game

- **Bio-trade and Bio-prospecting**

  The programme will work with relevant stakeholders to:

  - Development of commercial assets for communities to engage in bio-trade and bio-prospecting
  - Construction of processing plants for bio-trade and bio-prospecting to add value to raw materials
  - Facilitate the establishment of ethical biotrade initiatives / buying and selling of indigenous plant materials for commercial utilisation
  - Support development of ancillary services for bio-prospecting products such as packaging, distribution and selling

- **Environmental Monitors**

  The key focus is on accredited training of beneficiaries to support rangers in daily activities. This includes armed and un-armed Environmental Monitors that are operating in and around protected areas. Environmental Monitors are deployed to perform the following duties in their respective areas:

  - Patrolling to curb illegal activities i.e poaching
  - Assistance in game ranging activities
  - Monitoring of biodiversity integrity

For more information on the Biodiversity Economy and the current pilot projects visit: **http://thegamechanger.co.za/**

Performance indicators

- Number of BEE hunting outfitters capacitated to operate
- Number of PPP bio-prospecting / bio-trade initiatives with communities as partner supported
- Number of abattoirs upgraded / constructed to deal with game meat
- Number of BEE taxidermists facilities established
- Number of BEE game ranching facilities with purchased game
- Number of processing facilities established for hunting and bio trade / bio prospecting industries
- Number of game ranchers / game breeders facilities established

- Amount of venison from supported initiatives offered on market
- Number of facilities certified (organic, medicinal, food) for production
- Number of Environmental Monitors deployed in protected areas

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THE WILDLIFE ECONOMY

The Wildlife Industry value chain is centred around game and wildlife farming / ranching activities that relate to the stocking; trading; breeding and hunting of game. As well as all the services and goods required to support this value chain.

The key drivers of this, include **domestic and international hunters** as well as a growing retail market demand for **wildlife products**, such as venison and taxidermy products. Currently the contributing factors to the sector is a fascinating mix of **agriculture, eco-tourism and conservation characteristics.**

In recent years, a thriving market has evolved in the sales of live indigenous wildlife species; the trading of species, particularly surplus stock from wildlife farms; wildlife ranches; public and private conservation areas, this largely through wildlife auctions.

Five methods are used in South Africa for trading with wildlife, namely:

1. Private sales negotiated between the buyer and the seller (Professional wildlife catchers play an important role in the translocation of the animals)
2. Live public wildlife auctions
3. Public wildlife catalogue auctions
4. A tender system (This method is used mainly by SANPARKS, provinces and municipalities that own wildlife and nature reserves)
5. Electronic auctions

The Department of Environmental Affairs (and their stakeholders) objectives in this sector include:

- To actively facilitate transformation of the sector through land access and support programmes for new entrants.
- To drive growth through unlocking demand, and promoting and expanding value chains and products (i.e. game meat) establishing new markets.
- To create new projects, zones and nodes that are integrated and include other sectors that synergise with biodiversity.
- To create an enabling environment for the emerging farmers in the wildlife sector.
- To address the reputational and conservational risks of the sector.
- To focus on game and wildlife farming/ranching activities that relate to the stocking, trading, breeding, and hunting of game, and all the services and goods required to support this value chain.

It is important to remember that there are opportunities in wildlife tourism, as an expansion of a project or part of an economic node (especially if the node has linkage back to a protected area).

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WILDLIFE ECONOMIC GOALS

GOALS FOR THE NEXT 5 YEARS

- By the year 2020 – Establish, develop and support new wildlife ranching aspirants through infrastructure support and game donation programmes – 60 projects completed
- By the year 2021 – Operationalise 11 biodiversity economy nodes
- By the year 2021 – Formalise the game meat market and create an integrated network of game meat processing facilities – 2,500 jobs created, 18,500 tons of game meat produced

- **To re-position** the Wildlife Section as an efficient interdepartmental / industry collaboration and co-ordination mechanism to promote the benefits of the Wildlife Economy.
- **To serve as a structured interdepartmental / industry platform** with a mandate to specifically direct the implementation of projects, as well as future identified integrated projects relevant to the wildlife industry.

- **To allow the forum to monitor and evaluate the implementation of projects** and the impacts thereof through progress reports; economic indicators; collaboration; governance and accountability.
- **To allow this initiative to capacitate senior people** within government departments to make informed decisions regarding the protection and conservation of biological resources, as well as sustainable economic growth, including transformation.

THE VISION FOR THE WILDLIFE ECONOMY

Through the biodiversity economy lab, the vision is to **better establish an economy that contributes to the well being of all South Africans, whilst harnessing South Africa's natural resources potential.**

Economic growth

- Average yearly Gross Domestic Product (GDP) contribution increase of 15%
- Create 100,000 new jobs before 2030

Transformation

- 30% equity in hands of Previously Disadvantaged Individual (PDI) (including 2 million ha land) and equitable revenue contribution from these assets
- 4000 new SMMEs across the value chain

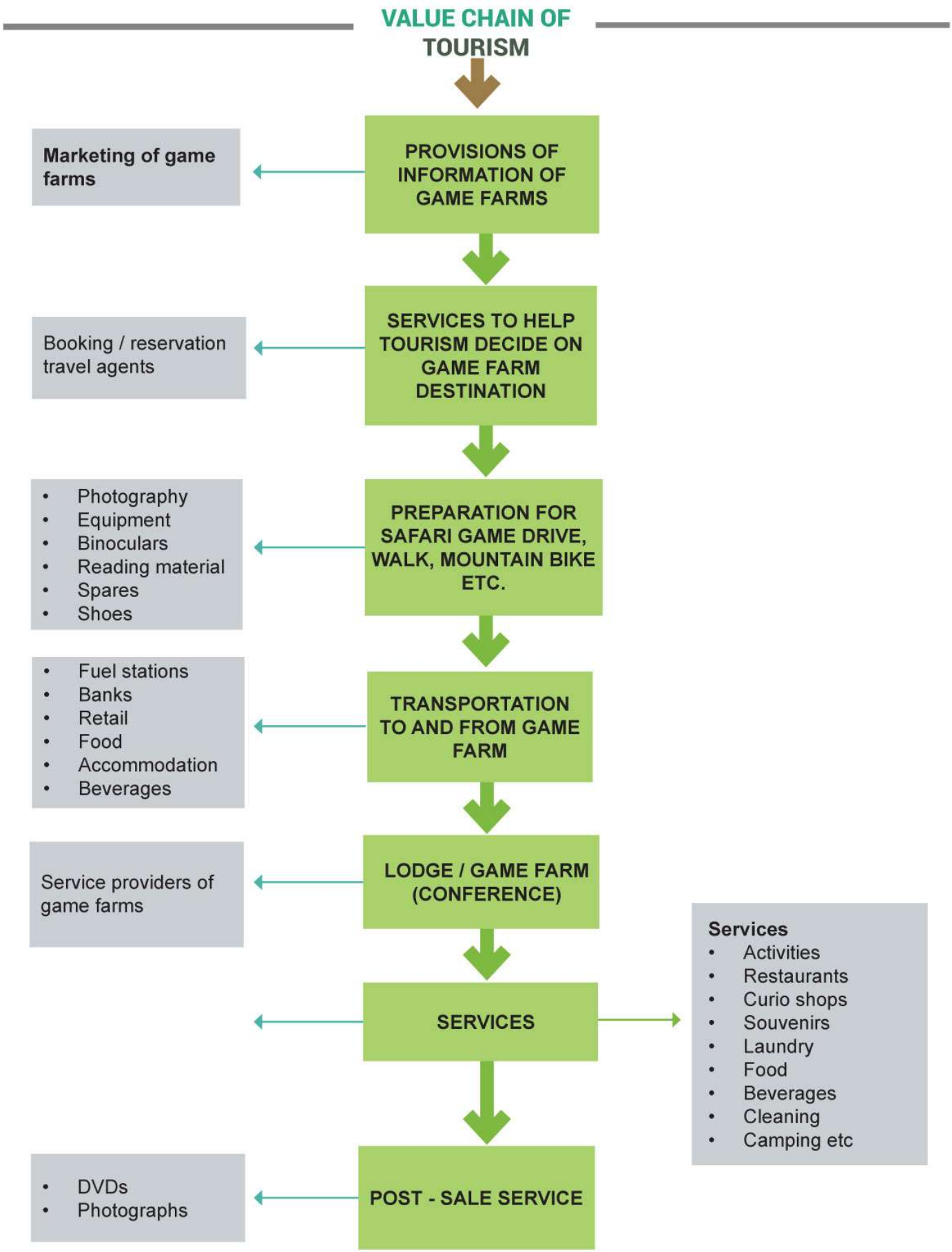
Sustainability

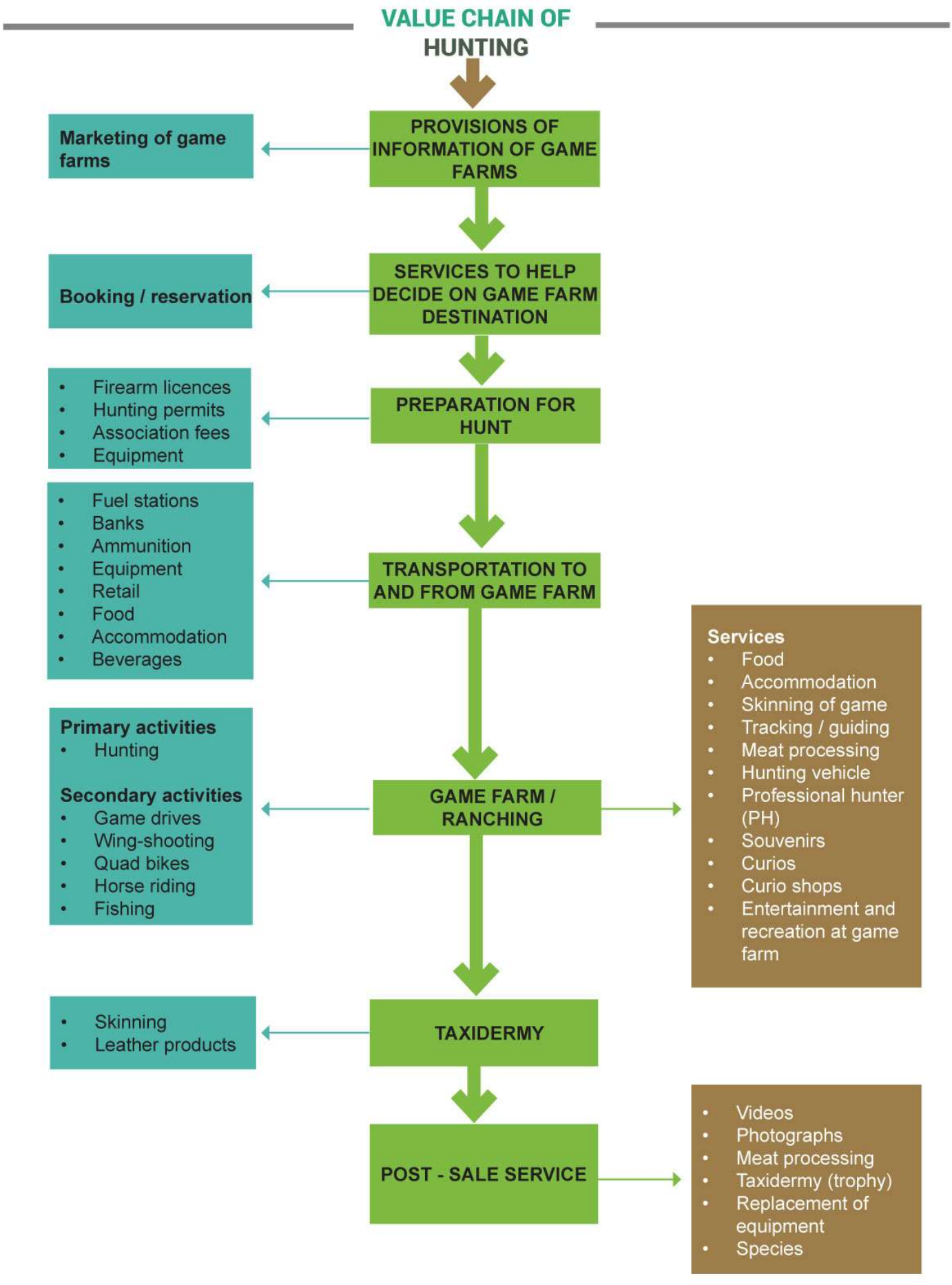
- 5 million ha of land utilised contributing towards conservation target
- 3.5% animal population net growth p.a

Aspiration

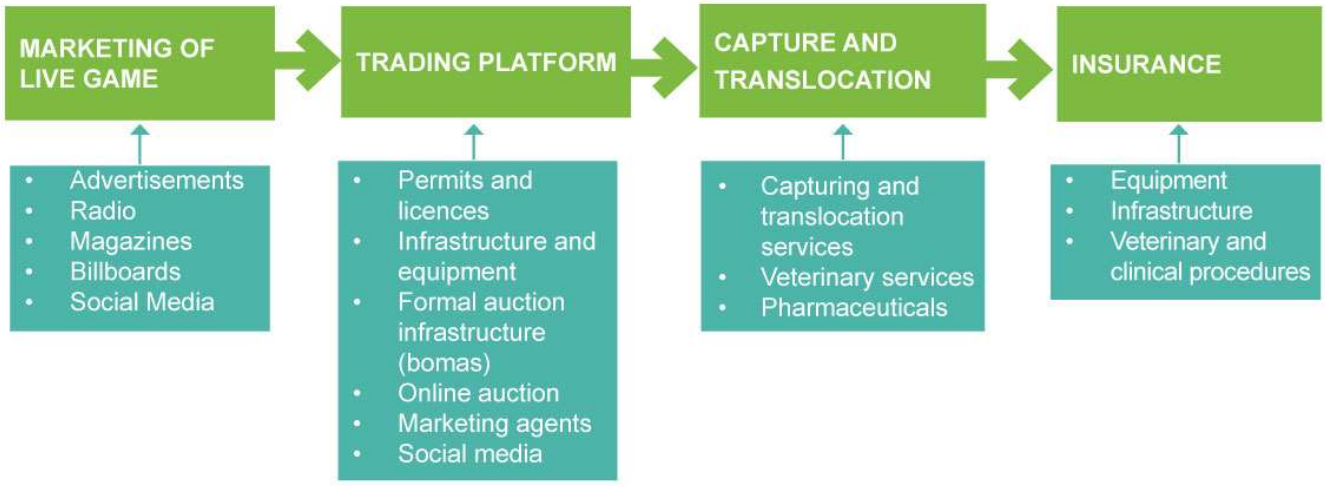
- An inclusive, sustainable and responsive wildlife economy that grows at 15% p.a until at least 2030, while providing a foundation for social well-being and maintaining the ecological resource base.

WILDLIFE ECONOMY VALUE CHAIN

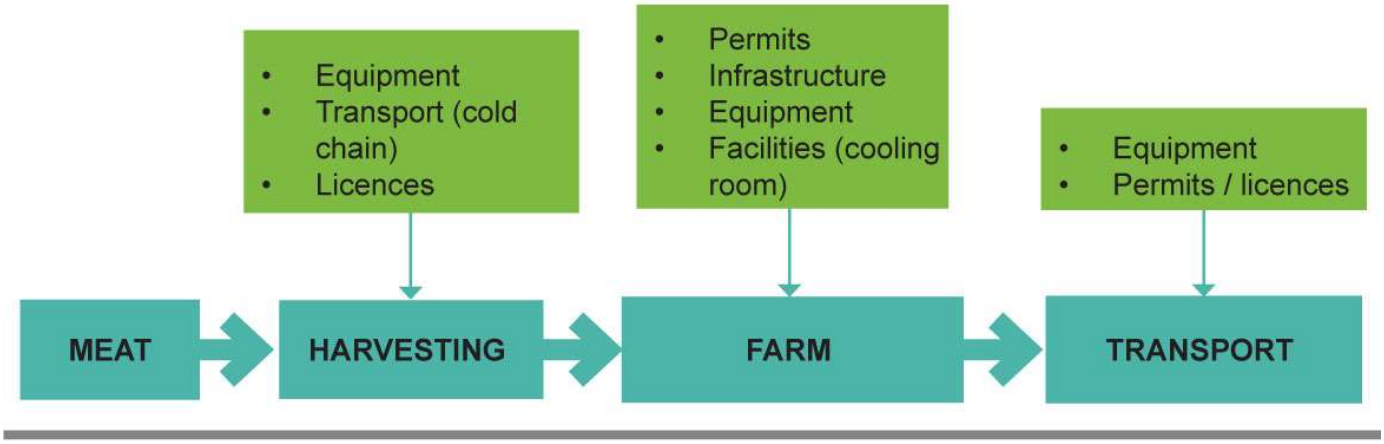

VALUE CHAIN OF TOURISM
PROVISIONS OF INFORMATION OF GAME FARMS
Marketing of game farms
SERVICES TO HELP TOURISM DECIDE ON GAME FARM DESTINATION
Booking / reservation travel agents
PREPARATION FOR SAFARI GAME DRIVE, WALK, MOUNTAIN BIKE ETC.
Photography
Equipment
Binoculars
Reading material
Spares
Shoes
TRANSPORTATION TO AND FROM GAME FARM
Fuel stations
Banks
Retail
Food
Accommodation
Beverages
LODGE / GAME FARM (CONFERENCE)
Service providers of game farms
SERVICES
Services
Activities
Restaurants
Curio shops
Souvenirs
Laundry
Food
Beverages
Cleaning
Camping etc
POST - SALE SERVICE
DVDs
Photographs


VALUE CHAIN OF HUNTING
PROVISIONS OF INFORMATION OF GAME FARMS
Marketing of game farms
SERVICES TO HELP DECIDE ON GAME FARM DESTINATION
Booking / reservation
PREPARATION FOR HUNT
Firearm licences
Hunting permits
Association fees
Equipment
TRANSPORTATION TO AND FROM GAME FARM
Fuel stations
Banks
Ammunition
Equipment
Retail
Food
Accommodation
Beverages
GAME FARM / RANCHING
Primary activities
Hunting
Secondary activities
Game drives
Wing-shooting
Quad bikes
Horse riding
Fishing
Services
Food
Accommodation
Skinning of game
Tracking / guiding
Meat processing
Hunting vehicle
Professional hunter (PH)
Souvenirs
Curios
Curio shops
Entertainment and recreation at game farm
TAXIDERMY
Skinning
Leather products
POST - SALE SERVICE
Videos
Photographs
Meat processing
Taxidermy (trophy)
Replacement of equipment
Species

VALUE CHAIN OF LIVE GAME TRADE



VALUE CHAIN OF MEAT SALES



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