# State of the **Wildlife Economy** in Africa

## Case Study: Namibia

ALU SCHOOL OF WILDLIFE CONSERVATION

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**Photographers**
Thank you to all those who donated photographs for this report. Please see the credits on the photographs for details.

**Acknowledgements**
Special thanks to Philip Samura and Gloria Mugisha, ALU student research interns who assisted with the literature review. Thanks also to those who contributed data and/or reviewed various sections of the report (in alphabetical order): Angus Middleton, Gail Thomson, Leslie Bayanza, Richard Diggle and Sililo Godfrey Sitengu.

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**Suggested citation:** Mhlanga, I., Snyman, S., Samura, P. & Mugisha, G. (2026). State of the Wildlife Economy in Namibia. ©African Leadership University, Kigali, Rwanda.

**DISCLAIMER**
Although every attempt was made to collect data from as many sources as possible, both online and from numerous, varied other sources, this report is in no way exhaustive and there are a number of data gaps. For a number of the wildlife economy activities the 'latest' available data was often still 5-15 years old, highlighting a major gap in terms of relevant, recent, robust data to measure the value of the wildlife economy in Africa. The authors have taken care to ensure that the material presented in this report is accurate and correct. However, the authors do not guarantee the accuracy of the data or material contained in this report, and accept no legal liability or responsibility connected to its use or interpretation.

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***"Biodiversity is not only about plants and animals, but it is something fundamental to our survival and growth as a nation, that cuts across all sectors and levels in this country".***

Honourable Uahekua Herunga
Minister of Environment and Tourism

# List of acronyms

AAS – African Aquatic Systems

AGM – Annual General Meeting

ALU – African Leadership University

CAMPFIRE – Communal Areas Management Programme for Indigenous Resources

CBD – Convention on Biological Diversity

CBO – Community-Based Organisation

CBNRM – Community-Based Natural Resource Management

CGA – Common Good Analysis

CITES – Convention on International Trade in Endangered Species of Wild Fauna and Flora

CMS – Convention on the Conservation of Migratory Species of Wild Animals

CoM – City of Windhoek Council of Members

COP – Conference of the Parties

CPI – Consumer Price Index

CSO – Civil Society Organisation

DEA – Department of Environmental Affairs

DRFN – Desert Research Foundation of Namibia

DVS – Directorate of Veterinary Services

EA – Environmental Assessment

EIA – Environmental Impact Assessment

EMA – Environmental Management Act

EMT – Environmental Management Team

EU – European Union

FAO – Food and Agriculture Organization

GDP – Gross Domestic Product

GIS – Geographic Information Systems

GIZ – Deutsche Gesellschaft für Internationale Zusammenarbeit

GRN – Government of the Republic of Namibia

HWC – Human–Wildlife Conflict

IIAG – Ibrahim Index of African Governance

ILO – International Labour Organization

IPCC – Intergovernmental Panel on Climate Change

IUCN – International Union for Conservation of Nature

IWT – Illegal Wildlife Trade

KAZA – Kavango–Zambezi (TFCA)

MAWF – Ministry of Agriculture, Water and Forestry

MEFT – Ministry of Environment, Forestry and Tourism

MFMR – Ministry of Fisheries and Marine Resources

MTC – Mobile Telecommunications Company

MWT – Ministry of Works and Transport

NAD – Namibian Dollar

NACSO – Namibian Association of CBNRM Support Organisations

NBSAP – National Biodiversity Strategy and Action Plan

NCCSAP – National Climate Change Strategy and Action Plan

NDP – National Development Plan

NPC – National Planning Commission

NSA – Namibia Statistics Agency

NTB – Namibia Tourism Board

NTDP – National Tourism Development Plan

NTFPs – Non-Timber Forest Products

NWR – Namibia Wildlife Resorts

NWT – Namibia Wildlife Trust

ODC – Otjiwarongo District Council

PES – Payments for Ecosystem Services

PPP – Public–Private Partnership

REDD+ – Reducing Emissions from Deforestation and Forest Degradation (plus conservation, sustainable management of forests, and enhancement of forest carbon stocks)

SADC – Southern African Development Community

SDG – Sustainable Development Goal

SEA – Strategic Environmental Assessment

SLL – State of the Land in Namibia

SMART – Spatial Monitoring and Reporting Tool

TA – Traditional Authority

TFCA – Transfrontier Conservation Area

TOSCO – Tourism Supporting Conservation Trust

UNDP – United Nations Development Programme

UNEP – United Nations Environment Programme

UNEP-WCMC – United Nations Environment Programme – World Conservation Monitoring Centre

UNESCO – United Nations Educational, Scientific and Cultural Organization

UNFCCC – United Nations Framework Convention on Climate Change

USAID – United States Agency for International Development

VCS – Verified Carbon Standard

WATSAN – Water and Sanitation

WEII – Wildlife Economy Investment Index

WHC – World Heritage Convention

WWF – World Wide Fund for Nature

# CASE STUDY INTRODUCTION

## Overview of the research

Conservation of wildlife is frequently seen as a cost to governments, resulting in little investment in wildlife resources despite the extensive contributions that the wildlife economy can, and does, make in terms of employment and revenues. The African Leadership University's School of Wildlife Conservation received funding to conduct research and produce the inaugural State of the Wildlife Economy in Africa Report, as well as country case studies for all African countries, to illustrate the current and potential value of wildlife to economies in Africa and through this to encourage investment in this important economic asset. The report development process highlighted data gaps that should encourage the collection of robust data related to wildlife economies in order to better understand the vast contribution of wildlife resources to local, national and regional economies.

For the purposes of this research, the wildlife economy is defined as:

> ***"The Wildlife Economy uses wildlife, plants and animals (marine and terrestrial), as an economic asset to create value that aligns with conservation objectives and delivers sustainable growth and economic development"***

Wildlife economies can include a mix of consumptive and non-consumptive uses. The growth and development of the wildlife economy in Africa is influenced by a number of factors, including, amongst others:

- The enabling environment which either facilitates (or not) various stakeholders, including communities and the private sector, to engage in and benefit from the wildlife economy
- This includes policy, legislation and supporting institutions
- The stock of wildlife resources for use in the wildlife economy
- Investment in wildlife resources to 'grow' the asset base on which the wildlife economy depends
- Political will and support
- Infrastructure to support the wildlife economy, such as roads, airports, hotels, etc.

As the first comprehensive regional assessment of the wildlife economy in Africa, the State of the Wildlife Economy in Africa report had the following main objectives:

1. To provide an overview of the status of the wildlife economy in Africa, including country case studies
2. To provide an overview of the regulatory framework governing the wildlife economy, including country case studies
3. To highlight gaps in the data in terms of country data, as well as data specifically relating to different types of wildlife economy activities
4. To analyse and highlight best practices of particular relevance to the region, through the use of case studies
5. To provide facts and figures required by governments and investors to make informed decisions, track progress and provide guidance for implementation in terms of the wildlife economy
6. To raise the profile of the wildlife economy in Africa and to highlight the importance of seeing wildlife as an asset to invest in
7. To promote the learning of lessons between countries and organisations
8. Where possible, to provide key recommendations for policy and practice

The overall aim of the report was to highlight the potential of the wildlife economy and encourage more public and private investments in protected and conserved areas to improve biodiversity outcomes and support economic development.

Success would include turning conservation into a growth industry, attracting young, inspired leaders, increasing private sector investment in wildlife resources and related businesses, involving communities and increasing their benefits and nature/wildlife becoming more abundant. Ultimately, the aim of the ALU SOWC research is to ensure that governments see wildlife as a key strategic asset and, therefore, create an enabling environment for the wildlife economy and the conservation of related wildlife resources.

The first full report focused on five main wildlife economy activities: ecotourism, wildlife ranching, carbon finance and forest products. The activities included in the report had the criteria of having to contribute to both biodiversity conservation and social and/or economic development. For all ALU SOWC wildlife economy reports, the activities are defined as follows:

Ecotourism includes non-consumptive tourism related to nature/wildlife.

Hunting includes trophy hunting, game meat hunting, as well as some aspects of fishing, such as artisanal, small-scale and recreational fishing.

Wildlife ranching includes the breeding of wild/indigenous animals for hunting, game meat, products and other uses.

Other consumptive use includes forest products used commercially and for subsistence purposes.

The carbon market includes projects that earn income through REDD+ and other mechanisms that sequester carbon, reduce greenhouse gas emissions and conserve/preserve natural systems of carbon.

The full report covered 54 countries in Africa. Data for all 54 countries was, however, not available and a selection of case study countries, with diversity in terms of geographic location, biomes, wildlife economy activities, policy and socio-economic context were selected (based on criteria described below). Throughout the report, text boxes were included covering other countries in order to cover as many countries on the continent as possible and to provide examples of different approaches to the wildlife economy, as well as innovative examples and best practices. Wherever possible, attempt was made to allow for generalisations, and where not possible, caveats or specific enabling factors have been highlighted

The case study countries in the full report were selected based on the following criteria:

1. A diversity of regions: to ensure that we included one example from each of the regions: East Africa; Southern Africa; West Africa and Central Africa
2. Diversity of wildlife economy activities: to make sure that the case study countries included a diversity of activities rather than focusing on one activity such as ecotourism, and to make sure that as many different activities were covered as possible, including ecotourism, trophy hunting, game meat hunting, wildlife ranching, non-timber forest products, carbon projects (current and future), artisanal fisheries, etc.
3. Diversity of enabling environments: to enable an analysis of different policy, legislation and institutions and their effectiveness in supporting the wildlife economy
4. Diversity of biomes and ecosystems, including forest, marine, savannah, fynbos, miombo woodland, tropical rainforest, etc.
5. Availability of data: we chose countries where we had a number of in-country contacts to assist with on the ground research, given that the team couldn't travel due to the COVID pandemic.

## Data collection process

A research project of this magnitude requires a number of different approaches to gathering the data and information required to present analyses and a useful picture of the wildlife economy in Africa. Given various time and budget constraints, and limited access to printed documents, it was decided to largely focus on conducting a literature review, as well as desktop research and, where possible, contacting in-country sources to gather data.

Where possible, future research aims to conduct more primary research and data collection. Currency amounts have been converted to USD for comparison purposes, with the local currency amount still included, using the average annual USD rate for the year of the data. Some graphs and tables have, however, been kept in the local currency because fluctuations in the exchange rates can affect the USD amount in such a way that it does not reflect the true local and national economic impacts as well as the local currency amounts do.

During the research for the full report, it was found that very few countries in Africa have a good understanding of the value of the wildlife economy at a national level. For certain wildlife economy activities there was information and data available at a local, and often only a project level, and often this data was only collected for the duration of the project, or when funding was available. This resulted in data for the continent, as well as per country, largely being inconsistent, incomparable, and often quite old. The overall research project highlights a large gap in data on the value of the wildlife economy and the important need to have consistent, comparable data to ensure that the value of the wildlife economy is truly understood. This information would allow for better policy and investment decision making and would encourage greater investment in the wildlife economy once the true value is understood. Research for the case study countries includes contacting relevant contacts in the specific countries, an extensive literature review and engaging stakeholders to collect as much relevant, up-to-date data as possible. It also includes stakeholder workshops and external reviews of the case study by relevant experts.

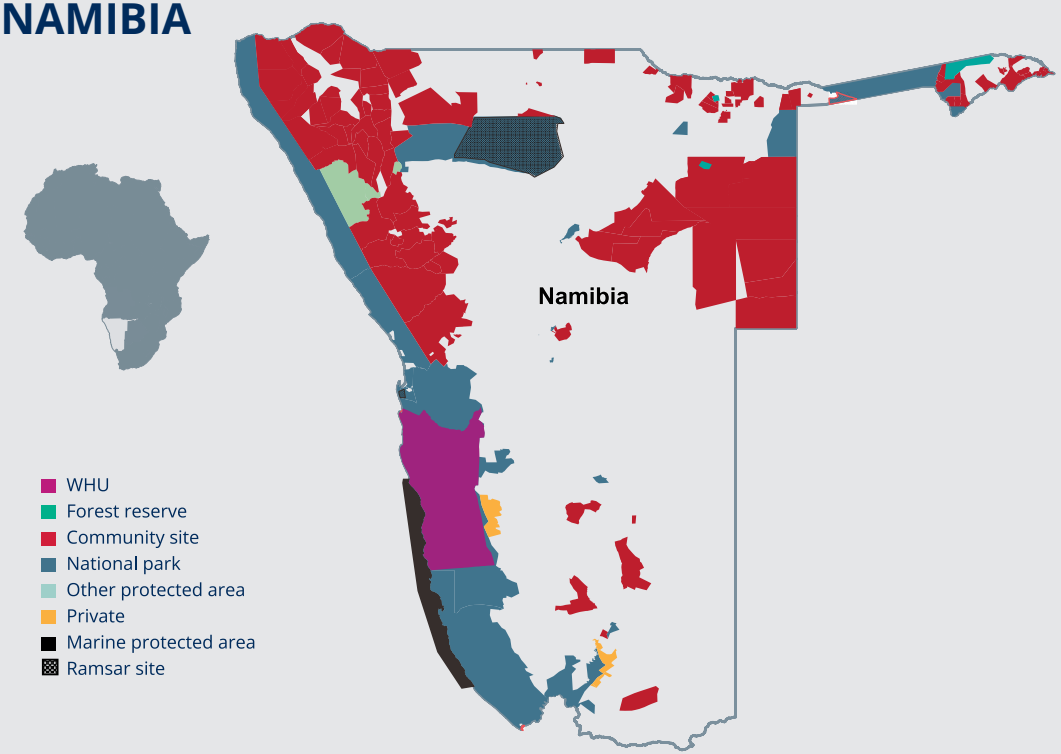
The complexity of stakeholders involved in the wildlife economy and the fact that a large amount of activity also occurs in the informal sector, also results in a difficulty in collecting and collating data that provides a true reflection of the value of the wildlife economy. The data collection process is in no way exhaustive and is done with the purpose of providing an illustrative overview of the wildlife economy. Following on from the full report, the Roadmap for Africa's Wildlife Economy report and numerous country case studies, this case study focuses on the state of the wildlife economy in Namibia. The data collection process for this case study followed the same steps as for the main report but also included a virtual stakeholder inception workshop.

All country case studies follow the same structure to allow for comparisons and ease of reading. The general structure is as follows:

- Country map with key statistics
- Wildlife economy summary graphic
- Key points related to the wildlife economy
- Introduction/background: conservation and socio-economic
- Regulatory framework/enabling environment
- Wildlife economy activities (where relevant):
  - Ecotourism
  - Wildlife ranching
  - Carbon
  - Forest products
  - Other activities
- Summary
- References

Please see https://sowc.alueducation.com/research/ for all publications to-date.

# NAMIBIA




## Socio-economic/governance

GDP per capita (USD)
**4,413.1**

Gini coefficient
**59.1**

Transparency International Corruption Perceptions Index
**Ranked 59th**
out of 180 countries

Total population
**3.02 million**

Mo Ibrahim Governance Index
**Scored 63.9**
out of 100

Mo Ibrahim Governance Index
**Ranked 6th**
out of 54 countries

## Protected areas

**823,998km² Total Land Area**

**177 Protected Areas**

**39.92% Terrestrial Protected Area**

**38 Community Forest**

**86 Communal Conservancies**

**3 Concessions**

**19 National Parks**

**19 Fish Protection Areas**

## Species numbers

**254 Reptiles**

**6,421 Insects**

**4,334 Plants**

**229 Mammals**

Sources: Irish, undated; Mo Ibrahim Foundation, 2025; Transparency International, 2025; UNEP-WCMC, 2025; UNFPA, 2024; World Bank, 2021; World Bank, 2025a

# Overview of the wildlife economy in Namibia

## Forest products

- Income from forest products supports approx. 346,455 households and is critical for gender empowerment.
- Forest products contributed approx. NAD 1.8 billion (approx. USD 288 million) to the Namibian economy in 2019, with Non-Timber Forest Products (NTFPs) making the main contribution.
- Community Forests generated over NAD 58.3 million (approx. USD 3.9 million) for local communities, created 6,477 jobs, and facilitated 99 enterprises based on natural resources.
- Approximately 2,500 Namibian women are involved in Marula (*Sclerocarya birrea)* fruit harvesting, generating approx. USD 158,000 per annum in sales.

## Tourism

- Tourism in Namibia is heavily dependent on natural resources with approximately 50% of Namibia's visitors' being nature-based tourists, accounting for the bulk of holiday expenditures.
- In 2023, travel and tourism contributed NAD 31.6 billion (approx. USD 1.7 billion), representing 13.4% of the country's GDP.
- In 2023, the tourism sector generated employment for approx. 97,500 people.
- In 2023, 53 joint venture agreements generated NAD 111 million (approx. USD 6.1 million) in revenue for conservancies.

## Fisheries

- The Namibian fishery resources are the third largest source of foreign income after mining and tourism, and significantly contribute to the economy.
- The sector contributes 4.5% to Namibia's GDP generating NAD 10 billion (approx. USD 628 million) in 2021 in foreign currency earnings.
- In 2021, the Namibian government raised NAD 708 million (approx. USD 38 million) through the Governmental Objective Fish Quota auctions.

## Wildlife ranching

- Approximately 50% of all commercial farms' main income comes from the wildlife industry.
- The value of game meat product sales is approx. NAD 200 million annually, (approx. USD 10.5 million) and export meat production is valued at NAD 2 billion (approx. USD 105 million).
- Game meat is a significant contributor to food security and livelihoods in rural Namibia, supporting more than 33,000 farm workers and their families.
- Crocodile ranching has the potential to generate an estimated NAD 1.2 million (approx. USD 110,000) per annum.

## Wildlife trade

- In 2012, Namibia was among the top five suppliers of shark fins to Singapore, exporting 297 tonnes worth USD 4.5 million. Namibia also exported 2,290 tonnes of shark meat to Spain, valued at USD 4.1 million.
- For more than 15 years, Namibia has supplied over 90% of the global demand for devil's claw (*Harpagophytum spp*.), with annual exports valued at USD 1.44 million in 2009.
- Devil's claw generates important income for rural communities in Namibia, with earnings of NAD 300,000 (approx. USD 20,310) in Omaheke in 2021.

## Hunting

- A total of 5,001 trophy hunters visited Namibia in 2019.
- In 2020, conservancies generated NAD 31.63 million (approx. USD 1.66 million) from conservation hunting.
- A total of 15,286 permits worth NAD 2.28 million (approx. USD 119,499) were issued between 2019-2020.
- Trophy hunting on private farmland in Namibia generates NAD 350 million (approx. USD 18.4 million) per year and creates more than 3,500 jobs.
- In 2021, conservancy residents received 326,295 kg of game meat worth NAD 9.27 million (approx. USD 491,012) from trophy hunting.

Sources: GIZ, 2020; FAO, 2025; Gargallo & Kalvelage 2021; ILO, 2022; ITA, 2024; Kaure, 2022; Lendelvo et al., 2020; Martin & Stiles, 2017; MFMR, 2022; MEFT, 2021; MEFT/NACSO, 2022; MEFT, 2010; MEFT/NACSO 2020; Mo Ibrahim Foundation, 2025; Mundjego, 2022; NACSO, 2021; Namibian Government 2010; NSA, 2022; Transparency International, 2022; UNEP-WCMC, 2025; World Bank, 2025a; World Population Review, 2022.

## Key messages

- Namibia has several institutions, policies, and legislation that support biodiversity conservation, sustainable use, and environmental management.
- The country has rich biological diversity and already engages in various wildlife economy activities, but there is room for growth and unlocking the full potential of the wildlife economy.
- Tourism, fishing and hunting are currently the main wildlife economy activities in Namibia.
- Abundant forest products are mainly used for subsistence and/or livelihoods but use is largely unregulated and unreported, offering a huge opportunity for value addition.
- Trophy hunting in Namibia generates revenue for both the government and local communities, and it creates jobs, provides meat and supports local businesses.
- Collaboration among stakeholders across sectors is needed to enable growth and sustainability in the wildlife economy.
- Namibia currently has some of the best socio-economic data related to the wildlife economy on the continent, particularly from the community conservancies. Data and information on some of the wildlife economy activities was, however, found to be disaggregated, outdated and largely incomparable between sites as well as over time, particularly for specific forest products.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# Introduction to the natural resources and biodiversity in Namibia

Namibia's Second National Biodiversity Strategy and Action Plan (NBSAP) (2014) emphasises that biodiversity and the natural environment are of critical importance to Namibia, **with approx. 70% of Namibia's population being directly dependent on the natural resource base for income, food, medicine, health needs, fuel and shelter**. Other natural resource-based sectors important to the Namibian economy include fisheries, tourism, agriculture and mining (Ministry of Environment, Forest and Tourism (MEFT, 2014). Namibia is currently developing its new National Biodiversity Strategy and Action Plan (NBSAP) for the period 2025-2031, aligning with the Kunming-Montreal Global Biodiversity Framework.

In 2014 Namibia was **one of few countries in the world that included a clause in its constitution which targets the sustainable management of biodiversity** (MEFT, 2014). Article 95 (L) of the 1990 Constitution requires that the State take measures to promote and maintain the welfare of the people including *'the maintenance of ecosystems, essential ecological processes and biological diversity of Namibia and utilisation of living natural resources on a sustainable basis for the benefit of Namibians, both present and future..."*

**The diversity of Namibia's climate, topography, geology, and human influences shape its biodiversity** as it is the most arid country south of the Sahara (MEFT, 2014; MEFT, 2011). The country has limited and highly variable rainfall, which are likely the most important influences on biodiversity (Ibid.). Annual rainfall varies across the country and can be as low as 10 mm in the south-west and west, while averaging approx. 600 mm in the north-eastern areas (Mendelsohn et al., 2003 in MEFT, 2014). This results in the greatest overall terrestrial species diversity being found in the more tropical areas of the north-eastern part of the country, while areas of high endemism are mostly in the arid and semi-arid west, central and southern parts of the country (MEFT, 2014). This **provides for diverse wildlife economy opportunities across the country.**

Namibia has **four terrestrial biomes** – Desert, Nama and Succulent Karoo, Acacia Savanna, and Broad-leafed Savanna – and two aquatic biomes – Coastal Marine and Wetlands (MEFT, 2014, CBD n.d.). The variable environmental conditions in Namibia have resulted in a diversity of vegetation zones, which are divided into 29 units (MEFT, 2014). Although the arid conditions limit the number of species, **endemism is high, with approx. 20% of species classified as endemic** (Ibid.). **Endemism is particularly high in plants, invertebrates, reptiles and frogs** (see Table 1). **According to the Namibia Biodiversity Database, there are 21,723 species in Namibia (Irish, undated).**

**Table 1: Species found in Namibia and levels of endemism**

| Taxonomic group | Number of described species* | % endemic species |
|---|---|---|
| Reptiles | 256 | 28% |
| Insects | 6,421 | 24% |
| Plants | 4,334 | 17% |
| Amphibians | 50 | 12% |
| Arachnids | 618 | 11% |
| Fish | 114 | 8% |
| Mammals | 229 | 7% |
| Birds | 676 | 2% |

*Number of described species in Namibia and levels of endemism (compiled based on information from Simmons and Brown (in press), NNF (undated) and www.biodiversity.org.na
Source: MEFT, 2014

Namibia is **one of the few dryland countries in the world which has internationally recognised biodiversity hotspots** (MEFT, 2014). The most significant one is the Tsau/Khaeb (*Sperregebiet*) National Park, in the Succulent Karoo floral kingdom of southern Namibia (Ibid.). Forests and savannas cover approx. 22.8 million hectares of which a total area of 8.7 million hectares (38.2%) in 46 community forests were gazetted (MEFT/NACSO, 2022).

**Namibia has a total of 177 protected areas**, 18 of which have management effectiveness evaluations (UNEP-WCMC, 2025). Note that this report used protected area data from the World Database on Protected Areas (WDPA) which is the most comprehensive global database of marine and terrestrial protected areas. However, this might differ from those reported officially by countries due to differences in methodologies and datasets used to assess protected area coverage and differences in the base maps used. See Table 2 for a breakdown of the different types of protected areas. Namibia has a total land mass of 823,998km$^2$ of which 39.92% is covered by terrestrial and inland water protected areas (UNEP-WCMC, 2025). In terms of marine protected area coverage, the total marine and coastal area is 562,162km$^2$, with 9,505 km$^2$ protected (1.71%) (Ibid.). According to the then Ministry of Environment, Forest and Tourism (MEFT) (2014), conservation has emerged as an increasingly viable land use in Namibia, especially since rights to the conditional use of wildlife were devolved to local communities through conservancies in 1996 (see Text Box 1).

**Table 2: Protected area designations in Namibia**

| Designation | Number of protected areas |
|---|---|
| Communal conservancy | 86 |
| Community forest | 46 |
| Concession | 7 |
| Forest reserve | 1 |
| Marine protected area | 1 |
| National Park | 19 |
| Private reserve | 2 |
| Ramsar site | 5 |
| World Heritage site (natural or mixed) | 1 |

Sources: MEFT/NACSO, 2023; UNEP-WCMC, 2025

**Namibia recognises the importance of the transboundary management of natural resources** which is guided by the Southern African Development Community (SADC) protocols on energy, tourism, fisheries, watercourses, wildlife and law enforcement and forestry (MEFT, 2014). **Namibia is part of three transfrontier conservation areas** (TFCAs), see Table 3: the Kavango-Zambezi (KAZA) TFCA; the /Ai-/Ais Richtersveld TFCA and the Iona Skeleton Coast TFCA.

Text box 1

## Conservation in communal conservancies

Namibia's communal conservancies and community forests are self-governing entities legally recognised by the Ministry of Environment, Forestry and Tourism (MEFT) and receiving training and support from the Namibian Association of Community Based Natural Resource Management (CBNRM) Support Organisations (NACSO). Each conservancy and community forest has a constitution and elects a management committee. Conservancies and community forests work to conserve and protect the environment, and to earn revenue from the sustainable use of natural resources. **Community conservation covers 180,122km² in Namibia, which is 58.8% of all communal land, with an estimated 238,701 people directly involved.** As of 2022 there were 86 registered conservancies, two community associations, 46 registered community forests and 20 community fish reserves in six conservancies. From 1990 to 2022, community conservation contributed NAD 13.5 billion (approx. USD 722 million) to Namibia's net national income and facilitated 3,548 jobs in 2021 alone. **In 2021, CBNRM contributed NAD 913 million (approx. USD 49 million) to net national income.**

Wildlife populations in communal conservancies are monitored through game counts, waterhole counts, and the Event Book monitoring system. The Event Book monitoring system is a community-based natural resource monitoring programme that empowers local communities to track and analyse wildlife populations and related events within communal conservancies. Populations tend to vary from year to year in response to environmental changes such as drought, rainfall, diseases, predation, utilisation, and poaching. Human-wildlife conflict (HWC) is a key conservation issue in Namibia. In 2021, 79 conservancies reported HWC incidents, which included crop damage, livestock attacks, human attacks and other damage. Elephants (*Loxodonta Africana*) caused the most conflict in the Zambezi region and cheetah caused the most in the Kunene region.

Source: MEFT/NACSO, 2022

**Table 3: Transfrontier Conservation Areas in Namibia**

| TFCA | Countries | Size | Legal Status |
|---|---|---|---|
| /Ai-/Ais Richtersveld TFCA | Namibia - /Ai-/Ais Hot Springs Game Park<br><br>South Africa – Richtersveld National Park & Richtersveld World Heritage site | 5,920km² | Category A*: Treaty signed in 2013 |
| Kavango-Zambezi TFCA (world's largest TFCA) | Includes 36 formally proclaimed national parks in Angola, Botswana, Namibia, Zambia & Zimbabwe | 520,000km² | Category A: Treaty signed in 2011 |
| Iona Skeleton Coast TFCA | Angola – Iona National Park, 15,150km² & Namibie Partial Reserve, 4,450 km²<br><br>Namibia – Skeleton Coast National Park, 16,845km² | 47,698km² | Category A: Treaty signed in 2018 |

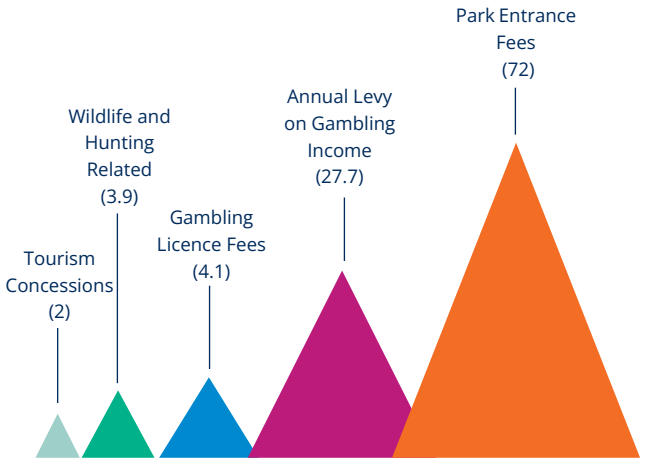
*Category A – Established TFCAs: These are TFCAs established through a Treaty or any other form of legal agreement between the participating countries

Source: SADC, undated

In terms of funding for the environment, the MEFT received a budgetary allocation of NAD 447,155,000 (approx. USD 30 million) for the 2019/20 financial year of which NAD 390,290,000 (approx. USD 26.2 million) was allocated to operational budget and NAD 56,874,420 (approx. USD 3.81 million) to the development budget during the review period (during 2019/20) (MEFT, 2020a).

The MEFT collected revenue for the State Revenue Fund (the State Revenue Fund in Namibia is the central account into which all public revenues collected by the government are deposited) totalling NAD 110 million (approx. USD 7.4 million) in 2019/20 (see Figure 1). Park entrance fees and the annual levy on gambling income (which falls under tourism) accounted for 90% of this total, with smaller contributions from gambling licence fees, wildlife and hunting related permits and registration fees, and tourism concessions (MEFT, 2020a). Filming fees, sales of bidding documents, fines and miscellaneous revenue are other categories of revenue. Namibia has embarked on the initial stage of its Wildlife Credits programme, employing sighting records of iconic wildlife species obtained from tourist lodges see Text box 2.

**Figure 1: The main sources of revenue collected in 2019/20 (NAD/millions)**




Source: MEFT, 2020a

Text box 2

## Wildlife credits in Namibia

**Wildlife Credits is a payment for ecosystem services where conservation performance payments are made to wildlife stewards based on verified conservation results.** Technology such as camera traps, satellite data and Spatial Monitoring and Reporting Tool (SMART) apps are used to monitor wildlife and landscape conservation metrics within conservancies to show conservation performance.

The Wildlife Credits verifications system has three phases:
- Phase 1 – Conservancy using smartphones, camera traps, and satellites to collect data on their wildlife and wildlife habitat.
- Phase 2 – Data is transferred, analysed, and automated, using desktop computers, Artificial Intelligence (AI), and cloud data-based platforms.
- Phase 3 – Includes the use of outputs from the data to produce bankable products, i.e., "credit" certificates that can attract buyers willing to pay for conservation performance.

Wildlife Credits are being piloted in six conservancies but have been shared with 45 conservancies who are all interested in joining the initiative, particularly with the new product called Wildlife Zones. This product could potentially be applied by all conservancies that have set aside land for conservation and would include monitoring using platforms such as Artificial Intelligence (AI) performance dashboards.

Source: MEFT/NACSO, 2022

In terms of threats to biodiversity, the NBSAP (MEFT, 2014) highlights the following as the **most critical threats to biodiversity in Namibia**:

- Unsustainable water uses;
- Expansion of urban areas and increasing industrialisation;
- Threats and impacts of climate change;
- Rapid expansion of mining and prospecting;
- Unsustainable land management practices;
- Uncontrolled bush fires;
- Alien invasive species;
- Illegal harvesting and trade of wildlife and forest and plant resources; and
- Human-wildlife conflict.

## Socio-economic overview

Namibia is a **sparsely populated country**, with the 2023 population census estimating Namibia's population as 3.02 million (UNFPA, 2024). Females constitute 51.2% of the population, while young people under 35 account for 71.1%. The population aged 0–14 stands at 37%, 15–59 years (working age) is 56.1%, 60+ years stands at 6.8%, and 15–34 years (youth) is 34.1% (Ibid.). The **population density in 2020 was estimated at 3.6 people per km²** (World Bank, 2025b). Namibia is **a middle-income country** (World Bank, 2022) with a Gross Domestic Product (GDP) of approx. USD 12.31 billion, and a GDP per capita of USD 4,413 in 2024 (World Bank, 2025a). In 2024, GDP growth was 3.7% increasing from -8.1% in 2020

(World Bank, 2025c) (see Figure 2). Namibia has had a **steady improvement in terms of human development.** From 1990 to 2019, Namibia's Human Development Index (HDI) value went from 0.581 to 0.646 (0=lowest and 1=highest), and the country was ranked 130 out of 189 countries in 2019 (United Nations Development Programme (UNDP, 2020). The HDI value consists of life expectancy at birth, expected years of schooling, mean years of schooling, and gross national income (GNI) per capita (UNDP, 2021).

Namibia's **economic growth has been unstable.** As can be seen in Figure 2, between 2011 and 2015, Namibia experienced an average growth of more than 5% (African Development Bank, 2018). However, this economic growth fell to 0.7% in 2016, due to a surge in debt levels and falls in external demand and investment (African Development Bank, 2018). In 2016, Namibia's economy stagnated, and the country fell into a recession (World Bank, 2021). **Since 2016, three out of the last five years have been marked by recession**, with a sharp contraction in 2020 amid the COVID-19 crisis (World Bank, 2022).

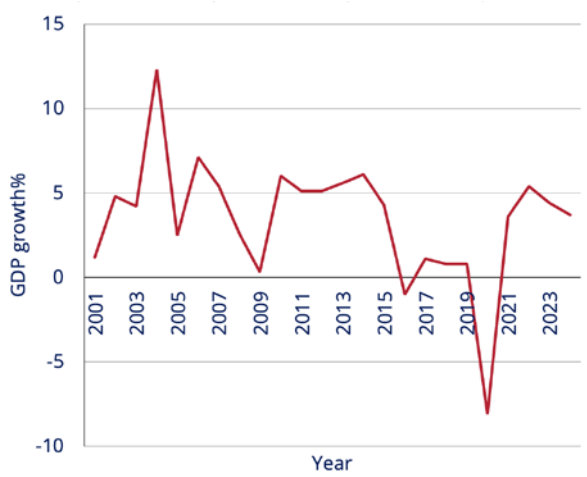
The **extractive industry remains a significant driver of Namibia's economy** (World Bank, 2021). The economy's exports rely on mining (more than half of earnings derived from foreign exchange), contributing an average of 9% to the country's total GDP between 2015 and 2019 (World Bank, 2021). **Copper, diamonds, gold, and uranium are the main minerals** derived from mining in Namibia (African Development Bank, 2018). The economy grew by 4.2% in 2023, driven by the mining sector, including investments in oil exploration (World Bank, 2024). From 2011 to 2017, agriculture and fisheries' contribution to Namibia's GDP declined by 7.8% (African Development Bank, 2018).

**Unemployment remains a challenge in Namibia.** In 2016, the rate of unemployment increased to 23.4% from 20.9% in 2015; accounting for the highest rate of unemployment since 2000 (World Bank, 2021). In 2021, the unemployment rate was 21.7% (World Bank, 2021). The **rural area unemployment rate is about 15% greater than urban areas**; men are less likely to be unemployed than their female counterparts, who are 6% more likely, and youth unemployment is high, accounting for approx. 46.1% of the total unemployment (World Bank Group, 2021). There is a **mismatch between skills demand and skills offered by people seeking jobs**, hence the high rate of unemployment in Namibia and it is ranked as the seventh **highest unemployment rate globally** (World Bank, 2021). The high unemployment rate in rural areas can, to some extent, be improved through unlocking and growing wildlife economy activities and the related multipliers and value chains.

The Mo Ibrahim Foundation (2025) ranked **Namibia's overall governance in the Ibrahim Index of African Governance (IIAG) sixth out of 54 countries in Africa,** with a score of 63.9 out of 100 (where 100 is the best possible score), with an increasing trend since 2012. The 2022 ranking showed a deterioration in terms of security and rule of law and participation, rights and inclusion (Mo Ibrahim Foundation, 2023). There was, however, increasing improvement in terms of foundations for economic opportunity and human development (Mo Ibrahim Foundation, 2023). Corruption still, however, remains a threat to good governance in Namibia. In 2024, Namibia scored 49 out of 100 in the **Corruption Perception Index** (where 100 denotes very clean and 0 is highly corrupt), giving the country a ranking of 59 out of 180 countries (Transparency International, 2025).

Namibia is **one of the world's most unequal countries in the world**, with a Gini coefficient in 2015 of 59.1; it was second only to South Africa (The Global Economy, 2023). The Gini coefficient measures the distribution of income across a population, with a higher score (out of 100) indicating greater inequality. In terms of the wildlife economy, the Wildlife Economy Investment Index (WEII) measures the investment potential in Africa's wildlife economy and Namibia ranked 4th in Africa see Text box 3.

**Figure 2: GDP annual growth (2001 – 2024)**




Source: World Bank, 2025c

© Credit Gregoire Dubois

Text box 3

## Wildlife Economy Investment Index (WEII) results for Namibia

Source: Mpakairi et al., 2024

The Wildlife Economy Investment Index (WEII), developed by the African Leadership University's School of Wildlife Conservation, aims to evaluate the potential of African countries in terms of their wildlife assets and the investment-enabling environments related to the wildlife economy. It is a comprehensive tool that gauges five fundamental pillars: wildlife assets, wildlife management, ease of doing business, public sector capacity, and investment safety.

In the overall WEII rankings, Namibia was 4th out of 53 countries (São Tomé and Príncipe were not included in the overall WEII score due to insufficient data), with a score of 58.58. For the Wildlife Status Sub-Index the country was ranked 15th (score of 46.21) and for the Investment-Enabling Environment Sub-Index, the country was ranked 7th in Africa (score of 70.96). See Figure 3 for an overview of the country's scores across the WEII, with green denoting positioned in the upper third of African countries, yellow in the middle third and red in the lower third.

According to the WEII report for Namibia the country only scored in the bottom third in terms of ecological habitats. The country performed very well in terms of ease of doing business, public sector capacity and investment safety. However, the country performed averagely in a number of indicators including access to finance, money growth and wildlife legal framework.

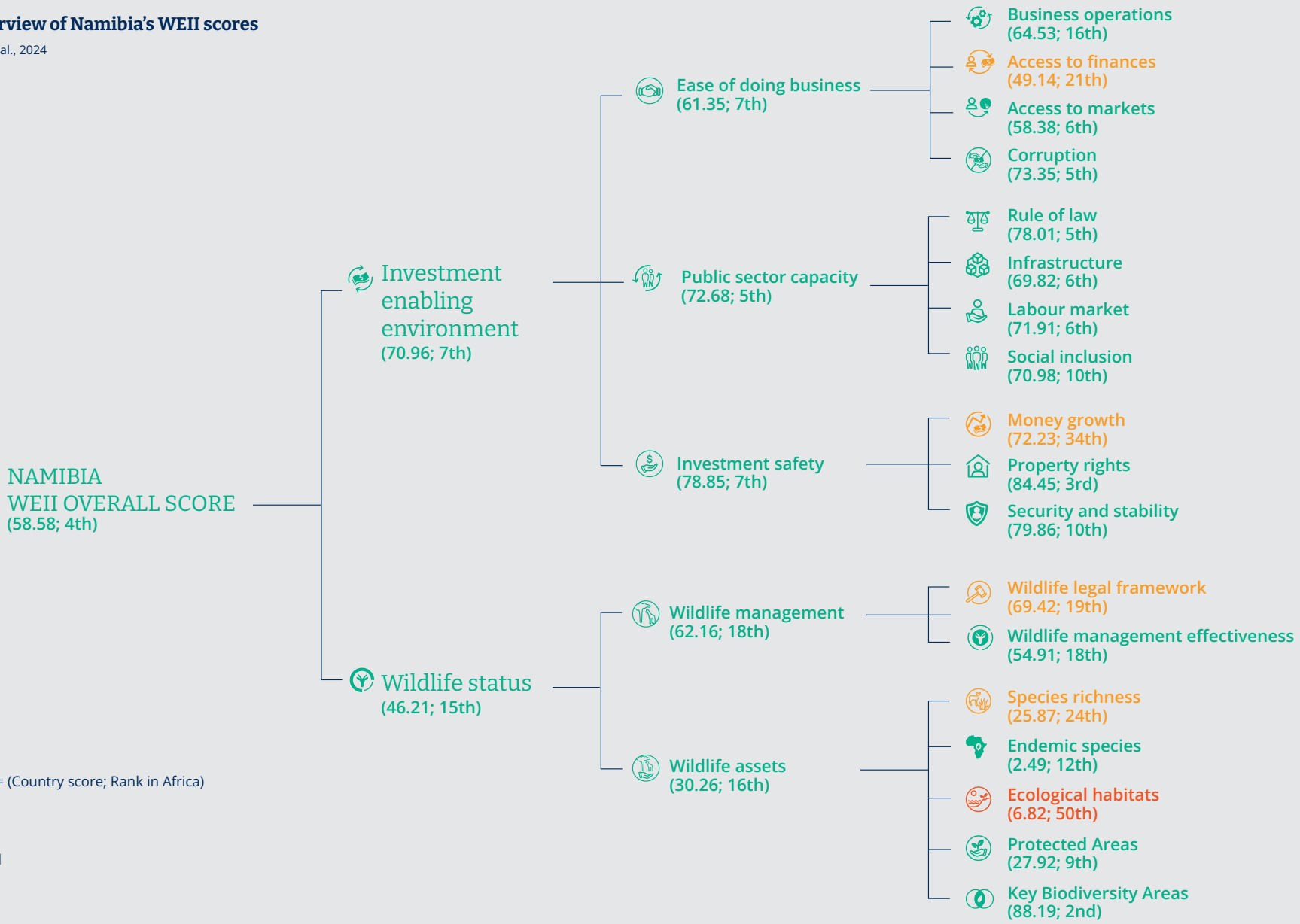
In terms of recommendations from the WEII report, the below were highlighted:

- To improve wildlife management and conservation;
- To improve the business environment;
- To ensure access to land for businesses;
- To promote good governance and lower corruption;
- To increase money growth;

For more detail on these recommendations and for the full scorecard for Namibia on all 280 indicators, please see Namibia's WEII report.

**Figure 3: Overview of Namibia's WEII scores**

Source: Mpakairi et al., 2024




Text in brackets = (Country score; Rank in Africa)

Key:

- Upper third
- Middle third
- Lower third

## Regulatory framework for the wildlife economy

Namibia has a **strong existing policy and legislative framework** governing the wildlife economy in the country. It was among the first African countries to integrate environmental protection into its Constitution in 1990, along with Benin, Guinea, Mozambique and São Tomé and Príncipe (Boyd, undated). **Namibia's Constitution of 1990, as amended in 2014, provides a legal basis for biodiversity conservation**, **natural resource management, and/or environmental protection.** According to the Constitution (2022), Chapter 2, Article 95, paragraph l as amended in 2014:

> ***"Maintenance of ecosystems, essential ecological processes and biological diversity of Namibia and utilisation of living natural resources on a sustainable basis for the benefit of all Namibians, both present and future; in particular, the Government shall provide measures against the dumping or recycling of foreign nuclear and toxic waste on Namibian territory."***

Significantly, the Constitution gives the Ombudsman legal power to "*investigate complaints concerning the over-utilisation of living natural resources, the irrational exploitation of non-renewable resources, the degradation and destruction of ecosystems and failure to protect the beauty and character of Namibia*" (Adenauer & Windhoek, 2018). The natural environment and biodiversity are of special importance to the people of Namibia; thus, Namibia is one of the few countries which integrated a protection clause for its natural environment and biodiversity into its Constitution (CBD, 2014).

Namibia is **party to many international conventions and treaties** including, amongst others, the Ramsar Convention on Wetlands of International Importance, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), International Treaty on Plant and Genetic Resources (ITPGR), the World Heritage Convention (WHC), United Nations Framework Convention on Climate Change (UNFCC), and the Convention on the Conservation of Migratory Species of Wild Animals (CMS).

As a member of the Southern African Development Community (SADC), **Namibia is also a party to the related SADC wildlife protocols and strategies**, for example the Protocol on Wildlife Conservation and Law Enforcement (1999), the Protocol on the Development of Tourism (1998) and the Law Enforcement and Anti-Poaching (LEAP) Strategy (2015), as well as the recently launched SADC Wildlife-based Economy Strategy Framework.

Namibia's environmental sustainability and biodiversity are key factors considered when formulating policies, measuring the extent to which the translation of these policies into action is, however, challenging (CBD, 2014). The **extensive implementation of Namibia's progressive policies remains a challenge due to insufficient resources (financial and human) and an inadequate decentralisation** (Ibid.). Table 4 provides a non-exhaustive overview of the regulatory environment governing the wildlife economy.

## Institutions for managing the wildlife economy

Namibia has numerous Ministries and related Directorates which oversee different elements of the wildlife economy in the country. The Ministry of Environment, Forestry and Tourism (MEFT) is the one which oversees a number of different elements.

*Note: Ministry of Environment and Tourism (MET) and Ministry of Environment, Forestry and Tourism (MEFT) refer to the same Namibian government body, with MEFT being the current name (since around 2020) that expanded its mandate to include Forestry, while MET was the older name. In this report we will use MEFT.*

Along with government institutions, there are also a number of civil society organisations (CSO) operating on the ground in Namibia and working closely with communities, including the World Wide Fund for Nature (WWF), Desert Research Foundation of Namibia (DRFN), Namibia Nature Foundation (NNF), Integrated Rural Development and Nature Conservation (IRDNC) and the umbrella body – Namibian Association of CBNRM Support Organisations (NACSO), amongst others (MEFT, 2014).

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**Table 4: Non-exhaustive overview of the regulatory environment governing the wildlife economy**

| Regulatory framework | Description | Source |
|---|---|---|
| Nature Conservation Ordinance 4 of 1975 | This Ordinance consolidates and amends the laws relating to the conservation of nature; the establishment of game parks and nature reserves; the control of problem animals; and to provide for matters incidental thereto. | Available at https://www.meft.gov.na/files/files/Nature%20Conservation%20Ordinance%204%20Of%201975.pdf [Accessed 6th April 2023] |
| Namibia's Constitution of 1990, as amended in 2014 | Article 91(c), Article 95(l), Article 100, and Article 144 directly relate to environmental protection and natural resources management, empowering the ombudsman to investigate overutilisation, degradation and destruction of natural resources; protection of ecosystems; state and private ownership of natural resources, and the connection between international laws and national laws. | Adenauer & Windhoek, 2018; Ruppel, & Ruppel-Schlichting, 2016 |
| Nature Conservation Amendment Act (Act 5 of 1996) | The Act amends the Nature Conservation Ordinance, 1975, so as to provide for an economically based system of sustainable management and utilisation of game in communal areas; to delete references to representative authorities; and to provide for matters incidental thereto. | Available at https://www.meft.gov.na/files/files/Nature_Conservation_Amendment_Act.pdf [Accessed 6th April 2023] |
| Traditional Authorities Act, 2000 | The Act provides for the establishment of traditional authorities and the designation, election, appointment and recognition of traditional leaders; to define the powers, duties and functions of traditional authorities and traditional leaders; and to provide for matters incidental thereto. | Available at https://www.ecolex.org/details/legislation/traditional-authorities-act-2000-no-25-of-2000-lex-faoc066435/?q=namibia+Traditional+Authorities+Act%2C+2000&xdate_min=&xdate_max= [Accessed 8th June 2023] |
| The Marine Resource Act (Act 27 of 2000) | Provides the institutional framework for the operation and management of the fishery sector, including the granting of non-transferable quota rights, the setting of total allowable catches (TACs), and the directing of data collection and research on marine resource. The Act is supported by Regulation No. 241 of 2001, outlining compliance and control measures, applicable offences and penalties. | ILO, 2022 |
| Environment Investment Fund of Namibia Act, 2001 | The Act establishes the Environmental Investment Fund of Namibia which finances projects that promote sustainable environmental and natural resources management in Namibia and establishes a board that constitutes the management of finance. | FAO, 2022 |
| Forest Act, 2001 (No. 12 of 2001) | The Act provides for the establishment of a Forestry Council and the appointment of certain officials; to consolidate the laws relating to the management and use of forests and forest produce; to provide for the protection of the environment and the control and management of forest fires; to repeal the Preservation of Bees and Honey Proclamation 1923 (Proclamation No. 1 of 1023), Preservation of Trees and Forests Ordinance, 1952 (Ordinance No. 37 of 1952) and the Forest Act, 1968 (Act No. 72 of 1968); and to deal with incidental matters. | Available at https://www.ecolex.org/details/legislation/forest-act-2001-no-12-of-2001-lex-faoc046518/ [Accessed 8th June 2023] |
| Aquaculture Act (Act 1 of 2002) | The Act determines licensing, disease monitoring, water quality monitoring, import/export, and aquaculture development zones. The Act appoints members to the Aquaculture Advisory Council and aquaculture inspectors, with the Permanent Secretary responsible for maintaining a register of all issued licenses. Offences and penalties are also outlined within the Act. | ILO, 2022 |
| Inland Fisheries Resources Act, 2003 (No. 1 of 2003) | The Act provides for the conservation and protection of aquatic ecosystems and the sustainable development of inland fisheries resources; to provide for the control and regulation of inland fishing; and to provide for related matters. | Available at https://www.ecolex.org/details/legislation/inland-fisheries-resources-act-2003-no-1-of-2003-lex-faoc050450/?q=namibia+fisheries+policy [Accessed 13th April 2023] |

**Table 4: Non-exhaustive overview of the regulatory environment governing the wildlife economy (continued)**

| Regulatory framework | Description | Source |
|---|---|---|
| Inland Fisheries Policy, 1995 | The Policy guarantees sustainable utilisation of inland fish for the benefit of the present and future Namibians. Furthermore, the management systems must be based on sound scientific knowledge and the responsibility of the management is vested at local level rather than at a centralised institution. A consultative and transparent process is followed through the involvement of local communities and the traditional authorities. | Available at https://www.researchgate.net/publication/359956763_Chapter_14_Fisheries_Related_Statutory_Law_and_Policy_in_Namibia [Accessed 11th December 2025]. |
| Namibia Marine Resources Policy, 2004 | The main objective of this Policy is to ensure responsible marine fisheries in order to utilise the country's fisheries resources on a sustainable basis and to ensure their contribution to the country's economy and overall development objectives in the long-run. | Available at https://www.fao.org/faolex/results/details/en/c/LEX-FAOC199556/ [Accessed 13th April 2023] |
| Water Resources Management Act, 2004 | This Act provides for the management and conservation of all water resources of Namibia, including inland waters, the sea and meteoric water, that is water that occurs in or is delivered from the atmosphere. The Act regulates the abstraction, use and supply of water, lays down rules relative to water pollution, defines water rights and sets up an administrative framework to implement the purposes of the Act." | FAO, 2022 |
| Namibia's Marine Resources Policy, 2004 | This Policy, provides a strategic framework for the responsible development and sustainable management of Namibia's marine resources. It emphasizes ecosystem-based management, scientific research, stakeholder participation, and regional cooperation especially with Angola and South Africa. The policy supports long-term conservation, economic viability of fisheries, and food security. | Available at https://www.npc.gov.na/wp-content/uploads/2022/06/Namibia-Marine-Resources-PolicyWhitepaper-Aug-2004.pdf [Accessed 11th December 2025] |
| Biosafety Act, 2006 | This Act provides for measures to regulate activities involving the research, development, production, marketing, transport, application and other uses of genetically modified organisms and specified products derived from genetically modified organisms; to establish a Biosafety Council and define its powers, functions and duties; and to make provision for incidental matters. | Available at https://www.lac.org.na/laws/annoSTAT/Biosafety%20Act%207%20of%202006.pdf [Accessed 18th October 2023] |
| Environmental Management Act, 2007 | This Act aims "to promote the sustainable management of the environment and the use of natural resources by establishing principles for decision making on matters affecting the environment; to establish the Sustainable Development Advisory Council; to provide for the appointment of the Environmental Commissioner and environmental officers; to provide for a process of assessment and control of activities which may have significant effects on the environment; and to provide for incidental matters." | Available at https://namiblii.org/akn/na/act/2007/7/eng@2007-12-27 [Accessed 18th October 2023] |
| National Policy on Tourism and Wildlife Concessions on State Land, 2007 | This Policy specifically creates opportunities for business development and the economic empowerment of formerly disadvantaged Namibians through access to tourism and hunting. | Available at https://www.meft.gov.na/files/files/National%20Policy%20on%20Tourism%20and%20Wildlife%20Concessions%20On%20State%20Land%202007.pdf [Accessed 6th April, 2023] |
| Controlled Wildlife Products and Trade Act, 2008 | This Act provides for the implementation of the Convention on International Trade in Endangered Species of Wild Fauna and Flora by regulating the possession of and dealing in controlled wildlife products, i.e. any animal or plant (or any portion thereof), as well as any product or substance derived from any plant or animal as set out in Schedule 1. The Act also establishes a technical committee that must perform the duties and which has the powers assigned to the Scientific Authority by the Convention. | Available at https://www.meft.gov.na/files/files/Controlled%20Wildlife%20Products%20and%20Trade%20Act,%202008%20(Act%20No_%209%20of%202008).pdf [Accessed 6th April 2023] |

**Table 4: Non-exhaustive overview of the regulatory environment governing the wildlife economy (continued)**

| Regulatory framework | Description | Source |
|---|---|---|
| National Tourism Policy, 2008 | This Policy aims to provide a framework for the mobilisation of tourism resources to realise long term national goals defined in Vision 2030 and the more specific targets of the Third National Development Plan, namely, sustained economic growth, employment creation, reduced inequalities in income, gender as well as between the various regions, reduced poverty and the promotion of economic empowerment. | Available at https://www.meft.gov.na/files/files/National%20Policy%20on%20Tourism%20for%20Namibia.pdf [Accessed 6th April 2023] |
| National Policy on the Utilisation of Devil's Claw (*Harpagophytum)* products, 2010 | The objective of this Policy is to outline a control mechanism that will allow the Ministry of Environment, Forest and Tourism (MEFT):<br>• To closely monitor the utilisation of Devil's Claw;<br>• To ensure that sustainable harvesting methods are used;<br>• To collect information to facilitate management of, and appropriate trade in, Devil's Claw resources; and<br>• To promote value addition in Namibia. | Available at https://www.meft.gov.na/files/files/FINAL%20Devil's%20Claw%20Policy.pdf [Accessed 6th April 2023] |
| National Policy on Climate Change for Namibia, 2011 | Aim of the Policy: Namibia strives for excellence to address climate change as a challenge by responding in a timely, effective and appropriate manner via exploring adaptation and mitigation approaches relevant to different sectors at local, regional and national level in order to improve the quality of life of its citizens. | Available at https://www.meft.gov.na/files/files/National%20Policy%20on%20Climate%20Change%20for%20Namibia%202011(1).pdf [Accessed 6th April 2023] |
| National Rangeland Policy and Strategy, 2012 | This Policy seeks to enable rangeland managers to manage their rangelands in such a way as to restore and maintain productivity and biodiversity. | MEFT, 2014 |
| National Policy on Community-Based Natural Resource Management, 2013 | The main aim of the Policy is to provide a framework that promotes the wise and sustainable use of natural resources on State land outside Protected Areas as well as the promotion of integrated land and natural resource planning and decision making that considers the most appropriate land uses based on land capability, optimum economic return, environmental and human needs. | Available at https://www.meft.gov.na/files/files/CBNRM_20Policy%20Approved.pdf [Accessed 6th April 2023] |
| National Policy on Filming and Photography in Protected Areas, 2013 | The aim of the Policy is to promote the sustainable development of Namibia by guiding filming and photography in protected areas. | Available at https://www.meft.gov.na/files/files/National%20Policy%20on%20Filming%20and%20Photography%20in%20Protected%20Areas.pdf [Accessed 6th April 2023] |
| National Climate Change Strategy and Action Plan, 2013 | This National Climate Change Strategy & Action Plan (NCCSAP) 2013 – 2020 is a cross-sectoral policy document. The goal of the NCCSAP is to further facilitate building the adaptive capacity of Namibia to increase climate change resilience and to optimise mitigation opportunities toward a sustainable development path, guided by the National Climate Change Policy. Four adaptation key themes are identified: 1. Food security and sustainable biological resource base 2. Sustainable water resources base 3. Human health and well being 4. Infrastructure development. | Available at https://www.ecolex.org/details/legislation/national-climate-change-strategy-action-plan-2013-2020-lex-faoc191143/?q=namibia+National+Climate+Change+Strategy+and+Action+Plan%2C+2013&xdate_min=&xdate_max= [Accessed 8th June 2023] |
| Revised National Strategy on Wildlife Protection and Law Enforcement (2021-2025) | The primary objective of this Strategy is to establish within the country, and within the framework of the national laws, common approaches to the protection and conservation of wildlife and to ensure the effective enforcement of laws governing wildlife resources. | Available at https://www.meft.gov.na/files/downloads/072_National-Strategy_Wildlife-Protection&Law-Enforcement_F_re1_201209s%20(2).pdf [Accessed 9th December 2025] |

**Table 4: Non-exhaustive overview of the regulatory environment governing the wildlife economy (continued)**

| Regulatory framework | Description | Source |
|---|---|---|
| Third National Action Programme to Combat Desertification, 2014- 2024 | The objective of the third National Action Programme to Combat Desertification is to: Prevent and reverse desertification and land degradation in affected areas and to mitigate the effects of drought in Namibia in support of poverty reduction and environmental sustainability. It seeks to build on the foundations laid by its earlier national action programmes (NAPCOD) and the CPP Programme) as well as ongoing good practices in the area of sustainable land management. | Available at https://www.unccd.int/sites/default/files/naps/Namibia-2014-2024-eng.pdf [Accessed 18th October 2023] |
| Species Management Plan – Nile Crocodile (*Crocodylis niloticus)* , 2014 | Vision: To conserve and manage the national crocodile population at biologically viable levels consistent with the demands imposed and opportunities offered by the larger socio-economic setting in which crocodiles occur in Namibia. | Available at https://www.meft.gov.na/files/files/Crocodile%20Management%20Plan%20-2014.pdf [Accessed 6th April 2023] |
| Access to Biological and Genetic Resources and Associated Traditional Knowledge Bill, 2017 | The proposed legislation has various objectives:<br>1. To ensure the recognition and protection of the rights of local communities over their genetic resources and associated traditional knowledge, the latter being defined as "the accumulated individual or collective knowledge, practices, innovations or technologies associated with biological and genetic resources which is created or developed over generations by local communities, vital for conservation, sustainable utilisation of biological and genetic resources and of socioeconomic value."<br>2. "To develop and promote appropriate mechanisms for a fair and equitable sharing of benefits arising from the use of genetic resources and associated traditional knowledge."<br>3. To ensure the provision of "arrangements and procedures including measures for accessing biological or genetic resources of Namibia and associated traditional knowledge, their products and derivatives". | Available at https://www.loc.gov/item/global-legal-monitor/2017-06-01/namibia-bill-on-access-to-biological-and-genetic-resources-and-associated-traditional-knowledge/ [Accessed 8th June 2023] |
| Revised National Policy on Human-Wildlife Conflict Management, 2018 | To provide measures and approaches to manage and reduce human wildlife conflict in Namibia from the current incidents of about five thousand per year to less than one thousand incidents by 2026. | Available at https://www.meft.gov.na/files/files/HWC%20revise%20Policy.pdf [Accessed 6th April 2023] |
| | The rationale for this policy is to create a blue economy governance framework that is aimed at unlocking the full potential of the blue economy that will contribute to alleviate poverty, sustain economic growth, enhance social inclusion, improve human welfare and creating opportunities for employment. The policy further aims to strengthen linkages, minimize conflict, and enhance coordination amongst stakeholders that operate in the same aquatic ecosystem space and ensure ecosystem health and environmental protection. | Available at https://blueeconomysummit.africa/wp-content/uploads/2025/05/REPUBLIC-OF-NAMIBIA-NAMIBIA-BLUE-ECONOMY-POLICY-Ministry-of-Fisheries-and-Marine-Resources-Implementation-Period-2022-2031.pdf [Accessed 11th December 2025] |
| Wildlife and Protected Areas Management Bill, 2019 | This proposed new law introduces new approaches to nature conservation based around eight key principles: (1) maintaining and restoring biological diversity; (2) maintaining and restoring essential ecological processes; (3) promoting the sustainable use of wildlife; (4) providing State incentives for land rights holders to promote conservation and to maintain or rehabilitate ecosystems; (5) providing equitable access to the benefits of wildlife and other indigenous biological resources; (6) vesting ownership of wildlife in the State, unless otherwise provided in the law; (7) giving authority over the use of wildlife to the appropriate levels of society to ensure sustainable use and effective conservation of biodiversity and ecosystems; and (8) sharing responsibilities for managing shared resources. | Available at http://www.lac.org.na/news/probono/ProBono_48-WILDLIFE&PROTECTED_AREAS_MANAGEMENT_BILL.pdf [Accessed 6th April 2023] |
| The Elephant Conservation and Management Plan for 2020/2021-2030/2031 | This Management Plan outlines the objectives, principles, and strategies for elephant conservation in Namibia, ensuring all interventions are coordinated and aligned. Issued by MEFT, it serves as a commitment to guide its personnel in managing elephants according to its provisions. Additionally, it holds all stakeholders including government entities, conservancies, NGOs, and the private sector accountable for ensuring their activities support and comply with the plan's directives. | Available at https://www.namibia-forum.ch/media/kunena/attachments/102/Nationalelephantconservationandmanagementplan PartB_10_noBLEED.pdf [Accessed 4th March 2025] |

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**Table 5: Institutions for managing the wildlife economy**

| Institution | Description | Source |
|---|---|---|
| Ministry of Environment, Forestry and Tourism (MEFT) | The mission of the Ministry of Environment, Forestry and Tourism is to promote biodiversity conservation in the Namibian environment through the sustainable utilisation of natural resources and tourism development for the maximum social and economic benefit of its citizens. | Available at https://www.meft.gov.na [Accessed 13th April 2023]. |
| Ministry of Agriculture, Water and Forestry (MAWF) | The Ministry of Agriculture, Water and Forestry's mandate is to promote, develop, manage and sustainably utilise Agriculture, Water and Forestry resources. | Available at https://mawf.gov.na [Accessed 13th April 2023]. |
| Ministry of Fisheries and Marine Resources (MFMR) | Ministry of Fisheries and Marine Resources' (MFMR) mission is "to responsibly manage living aquatic resources to continuously ensure a conducive environment for the fishing and aquaculture sector to prosper. | Available at https://mfmr.gov.na/home [Accessed 13th April 2023]. |
| Ministry of Mines and Energy (MME) | The Ministry of Mines and Energy (MME) is the State's lead agency in attracting private investment in resources exploration and development through the provision of geoscientific information on minerals and energy resources, and management of equitable and secure titles systems for the mining, petroleum and geothermal industries. | Ministry of Mines and Energy, 2022 |
| Ministry of Land Reform (MLR) | The Ministry of Land Reform's mandate is to administer and ensure equitable access to Namibia's land resource. | Available at https://mlr.gov.na [Accessed 13th April 2023]. |
| Directorate of Forestry | To promote a well-organised forestry sector that is socially, environmentally and economically sustainable, while creating significant and equitable wealth and opportunities. | Available at https://www.meft.gov.na/about-meft/forestry/273/ [Accessed 13th April 2023]. |
| Directorate of Wildlife and National Parks (DWNP) | The mission of DWNP is to promote the conservation of natural resources and wildlife habitat in Namibia and to ensure the sustainable use of wildlife resources. It has the following objectives: improve and monitor the implementation of Park and wildlife management plans through the collection, analysis and dissemination of biological monitoring data; provide all DWNP staff with the skills they need to carry out their jobs and advance their careers; sustainably manage Namibia's Protected Areas; manage and regulate the utilisation of renewable natural resources on a sustainable basis and to strive for biodiversity conservation, maintenance and restoration; protect and facilitate the sustainable use of biodiversity outside of protected areas (in commercial and communal areas) as a basis for sustainable development; increase revenue earned by MEFT, as well as other public sector agencies and the private sector through the expansion of tourism and activities that promote the sustainable utilisation of natural resources; community Based Natural Resource Management, specifically conservancy formation and management; enhance the effective prevention of wildlife crime, and the enforcement of national wildlife protection legislation in Namibia, in collaboration with other partners; human wildlife conflict management. | Available at https://www.meft.gov.na/about-meft/wildlife-and-national-parks/272/ [Accessed 13th April 2023]. |
| Directorate of Tourism and Gaming (DTG) | Responsible for the formulation of legislation, plans and policies for tourism and gaming, regulation of the tourism and gaming sectors, including national lottery, revenue collection from gaming, publication of tourism statistics. | Available at https://www.meft.gov.na/about-meft/tourism-and-gaming/276/ [Accessed 13th April 2023]. |
| Directorate of Scientific Services | Provision of specialised functions and research services for the sustainable management of wildlife species and indigenous plant products, issuance of permits relating to utilisation of wildlife and indigenous plants, wildlife capture and translocation, facilitation of wildlife-related economic development through concessions and other means. | MEFT, 2020a |
| Directorate of Environmental Affairs | Responsible for sustainable management of natural resources and protection of the environment, implementation of multilateral environmental agreements relating to climate change, biodiversity, desertification, waste and chemicals management, environmental awareness and information. | MEFT, 2020a |

**Table 5: Institutions for managing the wildlife economy (continued)**

| Institution | Description | Source |
|---|---|---|
| Sustainable Development Advisory Council | Promotes cooperation and coordination on environmental issues relating to sustainable development in Namibia. | SDAC, 2023 |
| Game Products Trust Fund (GPTF) | The GPTF is mandated by an act of parliament to collect revenue from wildlife and wildlife products recovered on state land and reinvest it into wildlife conservation, communal conservation and rural development programmes in Namibia. | GPTF, 2022 |
| The Hospitality Association of Namibia (HAN) | HAN represents the full spectrum of the hospitality industry, from hotels, to guest houses, guest farms, lodges, rest camps, restaurants, conference centres and catering services. It was founded in 1987 and has close to 400 members. | HAN, 2022 |
| Namibian Association of Community Based Natural Resources Management Support Organisations (NACSO) | The Namibian Association of Community Based Natural Resource Management (CBNRM) Support Organisations (NACSO) is an association that connects the communities and organisations that manage and conserve Namibia's natural resources Here is the link (https://www.nacso.org.na/) to all the members of NACSO.<br>The purpose of NACSO is to provide quality services to rural communities seeking to manage and utilise their natural resources in a sustainable manner. | NACSO, 2015 |
| Federation of Namibian Tourism Associations (FENATA) | FENATA was founded to organise the cooperation and coordination of tourism companies. This umbrella organisation of tourism associations acts as a communication bridge between the government and FENATA members and serves as the "voice" of the Namibian tourism industry. | GIZ, 2020 |
| Namibia Professional Hunting Association (NAPHA) | The Namibia Professional Hunting Association was founded in 1974 in order to promote Namibia as a hunting destination internationally and protect the right to hunt locally. NAPHA has over 300 Hunting Professionals as registered members. | NAPHA, 2022 |
| Conservancy Association of Namibia (CANAM) | CANAM was established in 1996 with the following objectives:<br>1. To represent as many properly established conservancies as possible in Namibia and to act as the coordinating body of these conservancies.<br>2. To liaise and endeavour to cooperate with the relevant authorities for the establishment, recognition and enforcement of legal implications in respect of conservancies and conservation in general in Namibia.<br>3. To actively encourage members to generate the interest and active participation of landowners, *bona fide* land occupiers and their employees in the conservation of fauna and the environment in general.<br>4. To encourage and coordinate research and projects in respect of natural resource management.<br>5. To protect, regulate and improve the quality of the total environment.<br>6. To facilitate and coordinate development of a marketing strategy and conservancies.<br>7. To create awareness, both locally and internationally of the objectives and activities of CANAM.<br>8. To raise funds for the promotion and implementation of the objectives of CANAM. | NACSO 2023. Available at https://www.nacso.org.na/freehold-conservancies [Accessed 13th April 2023]. |
| Integrated Rural Development and Nature Conservation (IRDNC) | IRDNC strives to improve the lives of rural people by diversifying the socio-economy in Namibia's communal areas to include wildlife and other valuable natural resources. | Available at https://irdnc.org.na/ [Accessed 9th December 2025]. |
| Fisheries Observer Agency (FOA) | FOA is a key body monitoring the country's marine resources by placing observers on fishing vessels to ensure compliance with laws, collect scientific data for stock assessments, and combat Illegal, Unreported and Unregulated (IUU) fishing. | Available at https://foa.com.na/ [Accessed 11th December 2025] |
| National Marine Information and Research Centre (NatMIRC) | The National Marine Information and Research Centre (NatMIRC) is a prominent research institution dedicated to advance marine science and promoting sustainable management of marine resources. It was established to address the unique challenges and opportunities presented by Namibia's rich marine environment, NatMIRC plays a crucial role in marine research, data collection, and the dissemination of knowledge related to oceanographic and ecological studies. | Available at https://www.fao.org/agris/data-provider/national-marine-information-and-research-centre [Accessed 11th December 2025] |

## Wildlife economy activities in the country

As a result of a robust legislative and regulatory framework, as well as institutional support, Namibia has a number of thriving wildlife economy activities. This section will focus on the 'Big Five' of tourism, hunting, wildlife ranching, forest products and the carbon market, but will also look at others, including film and photography and wildlife trade. In general, Namibia collects regular, consistent data related to the main wildlife economy activities, though there were still some gaps found, particularly in terms of the value of specific forest products.

### Tourism

Namibia has a **unique combination of wildlife, diverse cultures, and exceptional scenery making it an attractive tourism destination** (ITA, 2024). In 2018, the tourism sector directly contributed NAD 5.2 billion (approx. USD 268 million) constituting 3.5% of the overall GDP (GIZ, 2020). The industry also generated 44,700 direct employment opportunities, with over 2,900 jobs specifically originating in community conservation areas (Ibid.). **In 2022 Namibia's tourism industry contributed 6.9% to the country's GDP, while direct employment accounted for approx. 8% of the country's workforce** (Namibia Trade Network, 2024). In 2023, travel and tourism contributed NAD 31.6 billion (approx. USD 1.7 billion), representing 13.4% of the country's GDP, and generated employment for approx. 97,500 people (WTTC, 2024). Travel and tourism are important pillars in the Namibian economy. According to the Ministry of Environment, Forestry, and Tourism (MEFT) (2024), **Namibia had 1,054,181 foreign arrivals in 2023 compared to 539,601 in 2022.** Tourists accounted for the bulk of foreign arrivals with 81.9%, followed by excursionists or same-day visitors (14%) and returning residents 3.3% (5,413) and others 0.7% (MEFT, 2024).

Visitors' spending in Namibia is categorised into domestic and international and business and leisure. In 2022, the international tourism spending contributed approx. USD 322.9 million and approx. USD 397.1 million in 2023 (WTTC, 2023; WTTC 2024). Whereas domestic spending was approx. USD 1.2 billion in 2022 and approx. USD 1.1 billion in 2023 (Ibid.). Leisure spending in 2022 was approx. USD 1 billion accounting for 83.6% of the total spending and business spending was approx. USD 253 million accounting for 16.4% of the total spending. In 2023, a WTTC report revealed that leisure spending was approx. USD 957 million (84%) and business spending was approx. USD 182 million (16%); leisure spending increased by 0.6% and business spending decreased by 0.4%.

Namibia is one of few African countries to have developed a Tourism Satellite Account (TSA) to measure the economic impact of tourism. The first TSA, using the United Nations World Tourism Organization (UNWTO) methodology, was launched in 2022, marking a significant step in improving tourism statistics and understanding the sector's contribution to the Namibian economy (see Text box 4).

### Ecotourism

Protected areas in Namibia serve as the home for much of the country's wildlife, of both domestic and international importance, thereby protecting wildlife habitat and conserving biodiversity and ecosystems (MEFT, 2022). **The protected area network contributes significantly to Namibia's economy because it serves as a strong pillar to promote ecotourism which is among the largest contributors to national income and growing faster than any other economic sector in Namibia** (Aribeb et al., 2016; Letley & Turpie 2018). Activities that are related to nature-based tourism are the primary reasons for inbound tourism, and **more than half of Namibia's visitors are nature-based tourists**, accounting for the bulk of holiday expenditures in Namibia (Letley & Turpie, 2018).

According to the MEFT (2022a), national parks in Namibia are regarded as one of the fundamental pillars of conserving wildlife species and the Government of Namibia uses the "Parks and People" initiative to promote tourism. **Etosha National Park, Namib Naukluft National Park, Waterberg Plateau Park, Skeleton Coast National Park, and Mudumu National Park are identified as the five biggest and most sought-after national parks in Namibia** (MEFT, n.d & GIZ, 2020).

**Namibia is one of few African countries to have an official Tourism Concession Policy,** with the Policy on Tourism and Wildlife Concessions on State Land being approved in 2007 to guide the fair, transparent and efficient awarding of concessions on state lands (NACSO, 2023c).

### Text box 4

### Tourism Satellite Account

Namibia launched the National Tourism Satellite Account in May 2022, anchored under Strategic Objective number two of its National Strategy on Sustainable Heritage Tourism Development and Employment Creation Opportunities at the Community Level (2020-2030). The Tourism Satellite Account (TSA) is a standard statistical framework and the primary instrument for measuring tourism's economic impact. It gives data on the direct contributions of tourism consumption to a country's GDP, employment, exports, and capital expenditures. **According to the TSA, Namibia's tourism sector contributed an estimated NAD 5.2 billion (approx. USD 337.2 million) (equivalent to 3.5% of GDP) in added value and more than 44,700 jobs representing 6.5% employment directly in 2015**. Using the broader economy approach (which accounts for indirect effects and investment spending in support of tourism activities), the contribution increases to NAD 15.1 billion (approx. USD 979.3 million) (10.2% of total GDP) and 100,700 jobs (14.5%).

Sources: Namibia Tourism Board, 2016; United Nations Namibia, 2022

There are **four broad types of tourism concession in Namibia**: lodge-based tourism, camp site-based tourism, trophy hunting, and traversing rights (whereby a communal conservancy or tour operator may have rights to traverse national park areas with tourists) (NACSO, 2023c). According to NACSO (2023c), there are currently 15 concessions in Namibia: one for hunting, 11 for lodges, and three for activities such as ballooning. The concessions granted to conservancies are called 'head concessions' and are conditional upon conservancies tendering out management of tourism in concession areas to private sector operators with both experience and capacity, with the income then going to conservancies, the private sector, and to government, stimulating the economy both locally and nationally (NACSO, 2023c). **In general, 75% of the income, after costs, from a tourism operation will go to one or more conservancies operating a concession, and 25% to the government** (Ibid.). The existing concessions have created more than 340 jobs in rural areas, and new concessions promise to increase that number to over 600 (NACSO, 2023c).

**Nature-based tourism is dominated by non-consumptive activities (approx. 87-89%)** (Briceno & Perche, 2021). **Wildlife-based tourism fuels the tourism economy** in the country which is large and diverse (Ibid.). Having one of the world's largest populations of black and white rhino (*Diceros bicornis*, *Ceratotherium simum*) Namibia is a popular tourist destination for unique opportunities to view and track rhino ((Briceno & Perche, 2021). In 2019 Joint Venture (JV) tourism contributed NAD 96,895,376 (approx. USD 509,488) to conservancies and community members (SOCC, 2022). Data for 2018 from the Ministry of Environment, Forestry and Tourism and the Namibian Association of CBNRM Support Organisations (NACSO) (MEFT/NACSO 2020) indicate that: 38 conservancies were directly involved with tourism activities, including 61 JV tourism agreements with enterprises employing 1,175 full-time and 50 part-time staff; conservancies hosted 48 conservation hunting concessions with 159 full-time and 119 part-time staff members; and community-based conservation through conservancies. Community-forests had a return of NAD 147 million (approx. USD 9,872,111), of which JV tourism accounted for approx. 64% of cash income and in-kind benefits to these local institutions and their members (Lendelvo et al., 2020). See Text box 5 for more details about JV tourism. **As of 2023, 53 joint venture agreements generated NAD 111 million (approx. USD 6.1 million) in revenue for conservancies** and created significant employment opportunities, with 1,026 full-time and 104 part-time jobs (WWF, 2024).

Namibia's national tourism policies have increasingly promoted cultural heritage tourism, signifying its potential to aid with poverty reduction targets and community revitalisation. For example Omba Arts Trust assists marginalised communities by providing them with a platform to generate revenue from their traditional handicrafts. See Text box 6 which shows local communities' role in ecotourism through wildlife economy initiatives and cultural art.

Text box 5

## Communal conservancies: Joint venture tourism

Joint venture (JV) tourism is an innovative approach to tourism that is transforming Namibia. It is a **partnership between rural communities and private sector tourism operators that is providing economic opportunities** for people who were once marginalised. Many conservancy JVs are located next to or inside protected areas or national parks, such as Bwabwata, Etendeka, Etosha, Hobatere, Nkasa Rupara, Palmwag, and the Skeleton Coast. Support to conservancies from JV partners goes beyond the lodge and its activities to encompass support for education, nutrition and health care, culture heritage and community-based conservation initiatives.

Joint venture partners also support anti-poaching units that monitor and protect rare and endangered species, often in unfenced wilderness areas, which has provided space for expansion in range and numbers of wildlife populations. Joint venture partners proactively respond to human-wildlife conflict. The symbiotic nature of these partnerships has created trust, care and concern that has been strengthened over time. Joint venture partners also share the communities' sense of pride in working through these challenges and protecting wildlife for future generations.

The first conservancy joint venture lodge (Damaraland Lodge) was established in 1996. **In 2023 there were 77 joint venture tourism agreements that generated 934 full time and 104 part time/seasonal employees.** The economic impact of joint venture tourism and the value it adds to wildlife conservation on the land cannot be underestimated, particularly in rural areas where there is little opportunity for economic growth or employment.

Joint venture tourism in Namibia is a model for conservation and community development that shows the power of collaboration. By working together, local communities, private sector partners, and other stakeholders can achieve more for conservation than any of them could alone. Local communities are at the forefront of conservation efforts, and when they have the financial and technical support they need, they can deliver impressive results. Namibia's innovative approach to joint venture tourism has the potential to be replicated in other countries, helping to protect wildlife and support communities around the world.

Source: Community Conservation Namibia, 2018; NASCO, 2023

Text box 6

## Biodiversity Economy initiative empowers local communities through art

A new initiative in Namibia is empowering local communities through art and ecotourism. The Biodiversity Economy initiative, implemented in partnership with the Ministry of Environment, Forestry and Tourism, the Namibian Craft Centre, and the Community Skills Development Foundation, has trained 12 community members from diverse ethnic backgrounds in various traditional craft techniques, placing a strong emphasis on sustainable development. The initiative aims to connect core conservation areas across 40 conservancies spanning 78,000 km$^2$, including Twyfelfontein, Namibia's first World Heritage site. Artists involved in the initiative are using their skills to create unique items from palm tree nuts, hats, jewellery, and T-shirts featuring local wildlife and cultural elements. The Initiative is helping artists to market their products and explore new markets, such as partnerships with art shops across the country. The Biodiversity Economy initiative is a win-win for both local communities and the environment. It provides economic opportunities for impoverished communities while conserving Namibia's wildlife and natural heritage.

Source: Xinhua, 2023

## Hunting

Hunting in Namibia is well regulated and enshrined in the Constitution (Uys, 2017). The Ministry of Environment, Forestry and Tourism regulates consumptive wildlife use in Namibia through the Nature Conservation Ordinance No. 4 of 1975 (McNamara et al., 2015): see Text box 7. This legislation was amended in 1996 with the Nature Conservation Amendment Act, which extended user rights to residents of communal land conservancies (Barnett & Patterson, 2006). The Amendment allowed legal and regulated wildlife use to residents of conservancies, which are management units in communal areas (Hewitson & Sullivan, 2021; Jones & Weaver, 2009). **These rights include consumptive and non-consumptive use and the sustainable management of wildlife,** enabling members to derive benefits and offset the costs of living alongside wildlife that may affect their livelihoods through death, crop raiding and livestock predation (GRN, 1996; Drake et al., 2021).

**The fundamental principle of Namibia's Community-Based Natural Resource Management (CBNRM) initiatives is that local communities will have incentives to use natural resources sustainably if they have economic value conferred through rights of use, benefit, and management** (Naidoo et al., 2016): see Text box 8. **There are 86 communal conservancies in Namibia, covering over 20% of the country's land area and benefiting nearly 223,000 people** (MET/NACSO, 2024).

**Permits for consumptive use are allocated by the Ministry of Environment, Forestry and Tourism** following submission of management plans by farmers and field inspections/wildlife counts (Gödde, 2008). According to Ruddle (2022), **hunting licences are referred to as hunting permits in Namibia** and are issued on the following conditions:

- Permits must be issued before the hunt commences.
- A separate permit must be issued for each hunting client.
- An extra, special permit is required for large cats (leopard, cheetah and lion).
- A permit must be completed in full by the hunting client and the hunting professional (wounded or lost animals must also be indicated on the permit).
- Permits are issued by the Ministry of Environment, Forestry and Tourism (MEFT) only.
- A maximum of two trophies per species may be harvested, per hunting client, per permit.
- All trophy-hunting operators must be registered with the Namibia Tourism Board (NTB).
- Hunting with dogs is not permitted.

According to McNamara et al. (2015), in Namibia, trophy hunting takes place mainly in three ways; 1) through private operators on private land, 2) in conservancies which are operated by local communities on public land and 3) in some cases through partnerships between the private operators and local communities. The hunting season for trophy hunting in Namibia spans 10 months, starting from 1st February and ending on 30th November, with specific authorised hunting hours from 30 minutes before sunrise to 30 minutes after sunset (McNamara et al., 2015; Grahl, 2011; Turpie et al., 2004). **All trophy hunting expeditions require a licensed or registered guide,** referred to as a Professional Hunter (PH), and a valid permit issued by the Ministry of Environment and Tourism (MET). Each PH is limited to accompanying a maximum of two clients during a hunt and must be present throughout the entire process (McNamara et al., 2015).

**According to NAPHA (2020), different types of conservation hunting serve different purposes:** meat or biltong hunting contributes to food security and generates income from the meat sold and trophy hunting involves selling animals at premium prices primarily to international hunting clients (see Text box 9 for more on conservation hunting).

Text box 7

## The Nature Conservation Ordinance No.4 of 1975

The Nature Conservation Ordinance No. 4 of 1975 (NCO) is the primary Namibian legislation governing the prevention of wildlife crime and sustainable conservation. It prohibits the hunting of any animal in any national game park or any nature reserve without the written permission of the State (Section 20). In relation to private game ranches, the owner of the land may hunt wildlife and wild birds (except protected and specially protected wildlife, as defined below) without the written permission of the State (Section 23).

The NCO divides animal species into three protective categories:

1. specially protected wildlife (schedule 3); which includes elephant *(Loxodonta africana)* and rhinoceros (*Diceros bicornis)*.
2. protected wildlife, such as leopard (*Panthera pardus*) (schedule 4); and
3. huntable wildlife, such as buffalo *(Syncerus caffer)* and springbok (*Antidorcas marsupialis*) (schedule 5).

Permits could be issued to hunt specially protected wildlife and protected wildlife. The severity of the punishment for an infringement of the NCO depends upon the protected status of the species that is the subject of the crime. Penalties under the NCO generally operate on a sliding scale of severity according to the following categories of animal. From most severe to least, the penalties relate to elephant and rhinoceros, other specially protected wildlife and protected wildlife.

The NCO generally provides for additional enhanced penalties to apply in respect of offences involving elephant and rhinoceros, in addition to the penalties that otherwise apply to offences involving all specially protected animals.

The penalty increases as per Government Gazette 6344, 28 June 2017 are as follows:

- Section 26(3)(a) the poaching of a rhino or an elephant is punishable by a fine of up to NAD 25 million (approx. USD 1.3 million) or 25 years in prison,
- Section 26(3)(b) the penalties for illegal hunting of any other specially protected wildlife increased from a minimum fine of NAD 20,000 (approx. USD 1,055) to a maximum fine of NAD 10 million (approx. USD 527,983) with the maximum potential imprisonment being raised from five years to ten years.
- Section 30(1)(c) penalties for illegal hunting of huntable wildlife under owner's authority without a permit increased from NAD 2,000 (approx. USD 105.60) to NAD 50,000 (approx. USD 2,639) and from two years to five years imprisonment.
- Increased penalties have also been set for illegal hunting at night.
- Another important new provision provides that a foreign national convicted of any offence under the NCO will be automatically declared a prohibited immigrant and deported.

Source: Odendaal, 2022

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Text box 8

## Community-Based Natural Resource Management programme and hunting

**Community-Based Natural Resource Management (CBNRM) plays a significant role in both economic development and environmental conservation in Namibia's rural communal areas.** The programme has become central to the country's conservation and development goals and is widely recognised for its contribution to the recovery of wildlife populations. Specifically, Namibia's elephant population has experienced a substantial increase from approx. 7,500 at the formal inception of CBNRM in 1995 to over 24,000 in 2023. Namibia is committed to leveraging its wildlife resources through private sector enterprises, particularly in ecotourism and consumptive use, such as trophy hunting. The hunting of large game, including elephant, is a central aspect of the conservancy model, as highlighted by Drake et al. (2021), and Thomsen et al. (2021). The vision of CBNRM places significant emphasis on realising the full economic potential of charismatic species at the national level. Tourism enterprises have been the primary source of cash income at the household level, while conservation hunting has directly provided cash to conservancies and additional benefits such as game meat. The funds that are provided to conservancies are used to pay game guards and undertake NRM activities. Therefore if one had a tourist lodge, but no hunting, there would be little/ no money to invest in monitoring wildlife, reporting human wildlife conflict and other activities that game guards do. However, it is important to note that recent research for the Zambezi Region suggests that approx. 20% of the value generated by the tourism and hunting sectors reaches the conservancy communities, mainly in the form of staff salaries or investments in local infrastructure projects (Kalvelage et al., 2020). A significant portion of this income comes from elephant hunting, contributing over 50% of all conservancy hunting revenue at the national scale and nearly 70% in Zambezi's conservancies. **Namibia's hunting industry through CBNRM does not only contribute to the conservation of its iconic wildlife but also provides real and lasting benefits to the local communities.**

Sources: Naidoo et al., 2016; Jacobsohn et al., 2019 and MEFT/NACSO, 2023

Text box 9

## Conservation hunting and wildlife utilisation quotas

The MEFT assists conservancies in terms of hunting. For example, through the renewal of contracts, the acquisition of hunting rifles, ensuring financial compliance by operators, the evaluation of conservation hunting bids, etc.. Table 6 projects the amount of meat, as well as the value of the meat, generated through various activities. Regarding the already existing concessions, revenue of NAD 3.7 million (approx. USD 218,628) was collected from hunting concession related activities and ecotourism through lodge concessions.

Source: MEFT, 2020a

**Table 6: Value of the meat generated through various activities (2019)**

| Activity | Kilogram | NAD | USD |
|---|---|---|---|
| Conservation hunting | 248,706 | 5,968,944 | 400,857 |
| Own use hunting | 175,130 | 4,203,120 | 282,269 |
| Traditional authority | 39,513 | 948,312 | 63,686 |
| Problem animal control | 23,793 | 571,032 | 38,348 |
| Drought programme | 5,788 | 138,912 | 9,328 |
| **Total** | **492,930** | **11,830,320** | **794,488** |

Novelli and Humavindu (2005) note that, although communal areas belong to the state, legislation and policy allow for the transfer of property rights, for management and use of wildlife and other natural resources, to communities. These conservancies are entitled to allocate a count-derived quota of wildlife to trophy hunting (Becker, 2022). The quotas of wildlife that can be utilised are set in agreement with the MEFT and according to annual game counts (Briceno & Perche 2021; Uys, 2017).

**Leopard hunting is one of the mainstays of safari hunting in Namibia;** it attracts tourists and hunters which in turn brings income to the landholders on both freehold land and communal conservancies (CITES, 2019). Revenue generated from trophy hunting within the conservancies is directly used by the local communities for their own benefit. Moreover, many disadvantaged local communities in Namibia have benefited from trophy hunting because some trophy hunting operators have built schools, clinics, tourism facilities, and erected communal structures such as community halls (NACSO, 2021). Furthermore, hunting safari operators also create employment, provide financial support to anti-poaching, and meat to local communities (Ibid.). In terms of revenues from trophy hunting, anyone who wishes to hunt an elephant pays up to USD 50,000 in Kwandu Conservancy, Namibia's remote north-eastern Zambezi region (Hewitson & Sullivan, 2021). See Text box 10 for information on this.

**Trophy hunting on private farmland in Namibia generates NAD 350 million (approx. USD 18.4 million) per year and creates more than 3,500 jobs** (Schmitt, 2019; NAPHA, 2016). **Between 2004 and 2007, the value of the trophy hunting industry in Namibia as a whole was believed to have increased from USD 28.5 million to almost USD 45 million** (MacLaren et al., 2019).

**Trophy hunting plays a significant role within community conservation in Namibia**, and it has been calculated as **representing 0.27% of the country's GDP** (Gargallo and Kalvelage 2021, Koot, 2019). It is believed that each Namibian dollar expended on hunting makes a direct contribution of NAD 0.47 to Gross National Product (GNP) and an indirect contribution of NAD 0.43 by way of an income multiplier (Novelli & Humavindu, 2005). Data suggest that operational costs, conservancy employee salaries, and the various benefits to the community at large were mostly derived from hunting because hunting operators paid fees of approx. USD 5.41 million (72% of the total), whereas tourism operators paid USD 2.13 million (28%) (Naidoo et al., 2016). Approximately 21% of income generated in trophy hunting is through trophy fees and taxes (Ibid.). Table 7 and 8 show the 2023 trophy fees for Zambezi conservancy hunts and trophy fees for different species found in the Omujeve hunting safari (private game farm).

**Table 7: Zambezi conservancy hunts**

| Species | Minimum days | Per day | Total |
|---|---|---|---|
| Elephant/leopard/ buffalo & plains game | 21 | USD 2,250 | USD 47,250 |
| Leopard/buffalo & plains game | 14 | USD 1,850 | USD 25,900 |
| Elephant/buffalo & plains game | 10 | USD 1,850 | USD 18,500 |
| Buffalo/hippo/ crocodile & plains game | 14 | USD 1,850 | USD 25,900 |
| Own use elephant & plains game | 10 | USD 1,250 | USD 12,500 |
| Buffalo/hippo or crocodile & plains game | 10 | USD 1,650 | USD 16,500 |
| Buffalo & plains game | 7 | USD 1,350 | USD 9,450 |
| Plains game | 7 | USD 850 | USD 5,950 |
| Observer | 1 | USD 350 | USD 350 |

Source: Omujeve hunting safaris, 2023

Text box 10

## Trophy elephant hunting in Kwandu: Costs and benefits

Jamy Traut Hunting Safaris (JTHS) has had the exclusive right to organise hunting trips in Kwandu's concession for many years. The contract between JTHS and Kwandu is renegotiated every few years. JTHS pays Kwandu USD 12,376 for each trophy elephant hunted carrying a tusk weight above 40lbs (18.1kg), or USD 8,415 for those with tusks weighing less than that. For comparison, neighbouring Mashi Conservancy receives a slightly higher fee of USD 13,100 from its safari operator for each elephant hunted (Drake et al., 2021). Given the difficulty of hunting 'trophy' elephants in Kwandu, JTHS also guarantees payment for two trophy bulls each year, irrespective of whether the animals are actually utilised. JTHS markets these elephant hunts at industry trade shows and auctions held by organisations such as the Dallas Safari Club. Clients wishing to hunt trophy elephants in Kwandu pay JTHS a USD 24,000 trophy fee, as well as a minimum of USD 25,900 in daily rates for fourteen days spent on the elephant trail (JTHS, 2020). Altogether, anyone hunting a trophy elephant in Kwandu can expect to pay upwards of USD 50,000 to do so. Whereas the daily rates largely cover JTHS's operational costs including accommodation upkeep and staff salaries, the trophy fee is shared with the conservancy. Accordingly, Kwandu receives just over 50% of the trophy fee paid by the client to JTHS, assuming the tusk weight is above 40lbs (18.1kg), supporting observations that conservancies typically receive anywhere from 30-75% of the trophy price (Naidoo et al., 2016).

Source: Hewitson & Sullivan, 2021

**Table 8: Trophy fees in Omujeve hunting safari in Namibia**

| Species (english name) | Species (scientific name) | Trophy fee in USD |
|---|---|---|
| Baboon | *Papio ursinus* | 250 |
| Blesbuck-Common | *Damaliscus pygargus phillipsi* | 850 |
| Blesbuck-white | *Damaliscus dorcas phillipsi* | 1,250 |
| Damara Dik-Dik | *Madoqua kirkii* | 2,500 |
| Caracal cat | *Caracal caracal* | 1,200 |
| Cheetah | *Acinonyx jubatus* | 12,000 |
| White flank Impala | *Aepyceros melampus* | 4,500 |
| Duiker | *Cephalophinae* | 450 |
| Eland-Cape | *Taurotragus oryx* | 2,850 |
| Gemsbok-Kalahari | *Oryx gazella* | 850 |
| Gemsbok-Golden | *Oryx gazella* | 3,500 |
| Giraffe | *Giraffa giraffa* | 4,000 |
| Impala-Black-faced | *Aepyceros melampus petersi* | 1,500 |
| Impala-common | *Aepyceros melampus* | 650 |
| Impala-black | *Aepyceros melampus petersi* | 2,500 |
| Kudu-Southern Greater | *Tragelaphus strepsiceros* | 3,500 |
| Lechwe | *Kobus leche* | 3,500 |
| Nyala | *Tragelaphus angasii* | 4,500 |
| Red Hartebeest | *Alcelaphus buselaphus caama* | 950 |
| Roan | *Hippotragus equinus* | 8,500 |
| Sable | *Martes zibellina* | 6,000 |
| Springbok | *Antidorcas marsupialis* | 950 |
| Springbok-Kalahari | *Antidorcas marsupialis* | 550 |
| Springbok-White | *Antidorcas marsupialis* | 1,800 |
| Springbok-Copper | *Antidorcas marsupialis* | 1,250 |
| Steenbok | *Raphicerus campestris* | 500 |
| Tsessebe | *Damaliscus lunatus lunatus* | 4,000 |
| Warthog | *Phacochoerus africanus* | 500 |
| Waterbuck | *Kobus ellipsiprymnus* | 1,750 |
| Wildbeest-Black | *Connochaetes gnou* | 1,750 |
| Wildbeest- Blue | *Connochaetes taurinus* | 900 |
| Zebra-Burchell | *Equus quagga burchellii* | 1,150 |
| Zebra-Hartmann | *Equus zebra* | 1,500 |
| Game Birds | *Galliformes* | 25 |

Source: Omujeve hunting safaris, 2023

**Trophy hunting in Namibia provides employment opportunities and accounts for one fifth of all employment opportunities in tourism** (Wenborn et al., 2022). A study by Kalvelage et al., (2023) found that, in total, 225 conservancy staff are employed to manage the 15 conservancies in the Zambezi region. In 2019, all the conservancies in Zambezi combined employed 140 game guards and 46 staff to monitor wildlife (NACSO 2019). Text box 11 shows the socio-economic value of trophy hunting through communal conservancies. The duties of conservancy game guards and other staff include the prevention of poaching and the removal of traps, the screening of human-wildlife conflict incidents, and the identification of problem animals (Kalvelage et al., 2023).

**As can be seen from the above, trophy hunting in Namibia generates revenue for both the government and local communities, and it creates jobs and supports local businesses**. It also contributes to wildlife conservation by funding anti-poaching and other wildlife management activities (NAPHA, 2020). The CBNRM model is a successful model in Namibia that promotes sustainable wildlife utilisation with benefits to local communities (MEFT/NASCO 2022). Trophy hunting also provides non-financial benefits, such as game meat for local communities (Ibid.). In conclusion, **trophy hunting in Namibia plays a multifaceted role in supporting local communities, contributing to wildlife conservation, and providing non-financial benefits, making it a valuable component of Namibia's conservation strategy.**

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Text box 11

# The socio-economic value of trophy hunting in Namibia

A 2020 annual report on the state of community conservation in Namibia indicated that communal conservancies cover approx. 20% of the country, expanding the conservation footprint beyond what can be accomplished by national parks alone. These communal conservancies benefit from conservation to ensure long-term sustainability, thereby allowing them to engage in various activities related to the sustainable utilisation of fauna and flora, with trophy hunting being one of those activities.

In 2021, conservancies generated a total income of NAD 92.5 million (approx. USD 6.2 million), marking a significant decrease compared to the NAD 155.7 million (approx. USD 10.7 million) generated in 2019. However, compared to the NAD 82.5 million (approx. USD 5 million) generated in 2020, it's evident that progress has been achieved since the COVID-19 pandemic.

The 2020 annual report on the status of community conservation in Namibia indicated that COVID-19 impacted hunting and photographic tourism, with hunting being less severely affected. **Conservancy operating costs rely more on hunting fees, while tourism is vital for providing employment.** Meat distribution from hunting activities benefits a wider group, including non-employees, while tourism's in-kind benefits mainly reach lodge staff. Consequently, **hunting and photographic tourism are seen as complementary income sources,** with one unable to entirely replace the other.

A total of 5,001 trophy hunters visited Namibia in 2019. In 2020, conservancies generated total cash income of NAD 96.3 million (approx. USD 5.8 million) and in-kind benefits to rural communities, of this conservation hunting generated NAD 31.63 million (approx. USD 1.6 million) with a meat value of NAD 7.83 million (approx. USD 410,966). However, there was a slight drop in 2021 when conservation hunting generated NAD 25.95 million (approx. USD 1.3 million). In 2019/2020 communal conservancies generated 272,491 kg of meat and conservancy residents earned a total cash income of NAD 2.97 million (approx. USD 156,566) from conservation hunting in the same period. In 2021 this increased to 326,295 kg of game meat worth NAD 9.27 million (approx. USD 491,011) distributed to conservancy residents. **The distribution of game meat adds value to local economies, as well as providing an important source of protein for local communities.** The 2021 report on the state of community conservation in Namibia, found that most conservancies are reliant on consumptive wildlife use for income generation. Without these activities, many conservancies that do not have photographic tourism would no longer be able to cover their operational costs.

Non-financial benefits include the provision of game meat obtained through trophy hunting and personal use (Grahl, 2011). **In 2014, 522,104 kgs of game meat, valued at NAD 10,510,880 (approx. USD 705,881), were provided to conservancy residents** (NACSO 2015, Gargallo & Kalvelage, 2021). This meat addition significantly contributed to the diets of rural households, particularly benefiting those without the means or expertise to hunt for themselves (Mosimane et al., 2007:18–19). **The Namibian government therefore refers to good hunting practices as "conservation hunting" in recognition of its clear benefits for wildlife conservation and the economy** (NAPHA, 2020).

In 2020, 45 conservation hunting concessions employed 109 full-time and 45 part-time workers. This number subsequently increased in 2023 to 57 hunting concessions operating across conservancies, providing jobs for 165 full-time employees and 80 seasonal workers (MEFT/NACSO, 2024). Table 9 shows a breakdown of revenue collected by MEFT from permit fees and licences issued in 2019/2020 for various wildlife utilisation activities and related registration requirements in Namibia. A total of 15,286 licences worth NAD 2.28 million (approx. USD 119,499) were issued in 2019/2020. Trophy hunting permits account for the largest contribution (nearly 30%), followed by game proof fence registrations (20%) and permits to hunt game for biltong production (15%). The direct total revenue for MEFT of NAD 2.27 million (approx. USD 120,517) for a single year is a significant amount, especially when considering that this does not encompass the additional value chains, economic multipliers, or the employment impacts associated with the hunting industry. Hunting generated NAD 48.99 million (approx. USD 2.8 million) in cash income, supplemented by 90,116 kg of game meat valued at NAD 2.43 million (approx. USD 1.37 million), which was distributed to conservancy residents. Direct wages from conservation hunting contributed NAD 1.98 million (approx. USD 111,649) to household incomes (Ibid.).

**The Game Product Trust Fund (GPTF)**, a statutory body established by an Act of Parliament (Act No. 7 of 1997), receives revenue from hunting and live wildlife sales. In 2020–2021, the GPTF spent approx. USD 1.27 million on conservation programmes. Of this amount, 73% was dedicated to anti-poaching and other wildlife management activities, including rhino conservation and protected area management (Nangara, 2022).

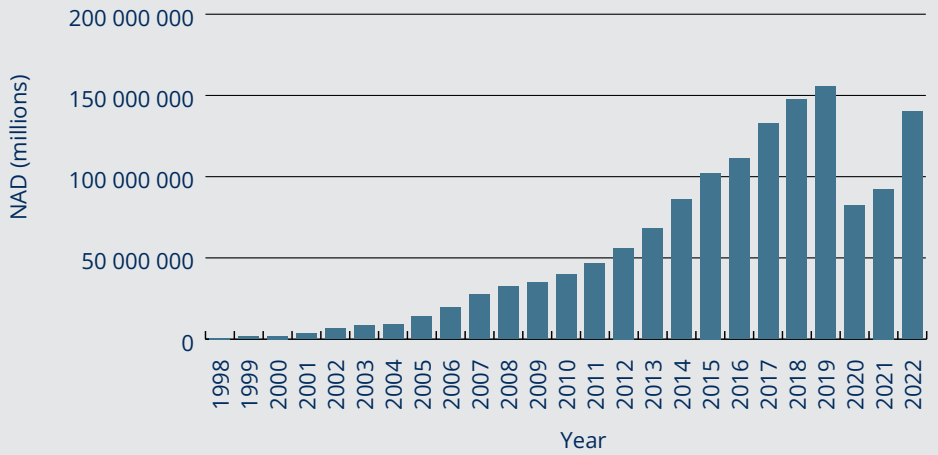
Sources: MEFT/NACSO, 2022 & 2021

**Table 9: Permits/registrations issued, and revenue accrued for April 2019 to March 2020**

| Registration professional hunters | Numbers of permits/ registrations Issued | Revenue accrued (NAD) | Revenue accrued (USD) |
|---|---|---|---|
| Big game | 147 | 147,000 | 9,627.42 |
| Small game | 157 | 78,500 | 5,140.63 |
| **Registration culling team** | | | |
| Night cropping team/Units | 21 | 10,500 | 687.59 |
| **Wildlife registration licences** | | | |
| Hunting guide | 110 | 11,000 | 720.44 |
| Master hunting guide | 252 | 75,600 | 4,948.18 |
| Hunting farm | 350 | 35,000 | 2,290.80 |
| Game proof fence | 231 | 462,000 | 30,238.99 |
| Trophy dealer | 38 | 19,000 | 1,243.59 |
| Game dealer | 26 | 2,600 | 170.54 |
| Trophy manufacturer | 16 | 800 | 51.90 |
| Game dealer birds | 96 | 9,600 | 628.10 |
| Skin dealer | 8 | 400 | 26.48 |
| Nursery | 14 | 700 | 45.55 |
| Butcheries | 150 | 7,500 | 491.48 |
| **Total registrations** | **1,616** | | |
| **Wildlife utilisation permits** | | | |
| Biltong hunting permit | 3,313 | 331,300 | 21,687.08 |
| Catch, keep, and sell | 208 | 10,400 | 681.10 |
| Export live game | 135 | 13,500 | 883.41 |
| Export permit | 2,422 | 242,200 | 15,854.18 |
| Import permit | 43 | 4,300 | 281.75 |
| Keep and sell permit | 78 | 3,900 | 255.27 |
| Keep permit | 33 | 1,652 | 108.02 |
| Shoot and sell | 1,335 | 66,750 | 4,369.14 |
| Shoot for own use | 341 | 17,050 | 1,116.58 |
| Transport | 14 | 700 | 45.55 |
| Trophy hunting | 6,459 | 645,900 | 42,286.87 |
| Trophy meat | 101 | 5,050 | 330.56 |
| Trophy predator | 691 | 69,100 | 4,524.02 |
| Buy and sell game meat | 63 | 3,150 | 206.60 |
| Night culling permit | 50 | 2,500 | 164.21 |
| **TOTAL PERMITS** | **15,286** | | |
| **Total revenue** | | **2,277,652** | **149,112.34** |

Source: MEFT, 2021

**Figure 4: Total returns to conservancies and members excluding relief grants**




Source: MEFT/NACSO, 2022

## Fisheries

Namibia's coastline lies in the Benguela current system, one of the four eastern boundary upwelling systems in the world (ATLAFCO, 2012; FAO, 2015). This system is highly productive due to high plankton growth, supporting an abundance of pelagic and demersal fish populations (Weidlic, 2019). **The Benguela Current System has the potential to sustainably yield over 1.5 million metric tonnes of fish per year** (Namibian Government 2010; Mundjego, 2022).

**The fishery sector consists of a primary sub-sector that harvests fish and a manufacturing sub-sector that processes fish for both the local and export markets** (Chiripanhura & Teweldemedhin, 2016). The sector can also be divided into two sub-sectors by resource type, namely marine-based resource utilisation and aquaculture. The marine-based sub sector is mainly concentrated at Walvis Bay and Luderitz, and dominated by private enterprises with no direct government financial support (Ibid.). It is internationally competitive, while aquaculture is concentrated in the northern and southern part of the country and strongly supported by the government in order to create jobs and improve food security and nutrition within the country (Chiripanhura & Teweldemedhin, 2016).

**The fisheries industry in Namibia comprises industrialised marine capture fisheries, recreational fisheries, inland capture fisheries, mariculture and freshwater aquaculture** (ILO, 2022). Community-based cooperatives and private, small-scale fish farms dominate freshwater fisheries, while the more capital-intensive marine fisheries are mainly run by private export-oriented enterprises (ILO, 2021).

**Namibia's commercial fishing and fish processing sector is experiencing rapid growth and is a significant contributor to the country's economy** in terms of employment, export earnings, and GDP (ITA, 2022). Namibia commercially utilises nearly 20 different species, with the majority being regulated by Total Allowable Catches (TACs) (Namibia Trade directory, 2019; Mundjego, 2022). Commonly harvested species in Namibian coastal waters include hake (*merlucciuscapensis* and *merlucciusparadoxus*), horse mackerel (*trachuruscapensis*), pilchards/sardine (*sardinopsocellatus*), anchovy (*engrauliscapensis*), snoek (*thyrsitesatun*) and monk (*lophiusvomerinus*) (Mundjego 2022; Huggins, 2011). Among these species, hake, horse mackerel, and monkfish dominate Namibia's commercial fishing industry (Haimbala, 2021).

**Namibia possesses an extensive Exclusive Economic Zone (EEZ) spanning 504,000 km², with a 1,572 km** coastline along the South Atlantic Ocean (MFMR, 2015, FAO fisheries, 2015). This vast maritime area, coupled with the presence of abundant commercial marine fish species, has attracted numerous fishing companies, including those from South Africa and other international entities (Mundjego, 2022). According to Amaechi (2022) **a total number of 30 marine resources processing plants** operate in Namibia.

The Ministry of Fisheries and Marine Resources (MFMR), with headquarters in Windhoek and other offices in Luderitz (for aquaculture), Swakopmund (for fisheries management and research), and Walvis Bay (for monitoring, control, and surveillance), is in charge of managing Namibia's fisheries (FAO, 2021). According to the ILO, (2022) **the MFMR Directorate of Operations is responsible for monitoring, control and surveillance (MCS) of the EEZ.** This is done through two inspectorates in Walvis Bay and Lüderitz, which deploy inspectors on patrol vessels and fixed-wing planes, monitor and control off-loadings, coastal and inland activities, and contract observers on all fishing vessels (Ibid.). MFMR employs 70 countrywide inspectors to ensure compliance with licensing, crew lists and living conditions. Inspections may be conducted on any vessel by external surveyors (ILO, 2022).

## The legal framework governing the fish industry in Namibia

*This section of the Namibia legal framework on Fisheries is largely drawn from Iitembu, et al., 2023, ILO,2022 and Haimbala, 2021*

As mentioned above, Namibia's fishery sector and its legal framework can be divided into two main components**: one part focuses on the utilisation and management of marine resources, while the other governs the aquaculture sector** (Chiripanhura, & Teweldemedhin, 2016). The Namibian Constitution, specifically Article 100, establishes that the country has exclusive ownership of its fisheries resources (Iitembu, et al., 2023). **The Government of Namibia is also mandated by Article 95(l) of the Constitution to adopt fisheries management policies that prioritise the conservation of ecosystems, essential ecological processes, and biological diversity while promoting the sustainable utilisation of natural resources for the benefit of all Namibians, present and future** (Ibid.). In accordance with the Marine Resources Act (MRA) 27 of 2000 and its regulations, other governmental agencies, such as the Fisheries Observer Agency (FOA), play complementary roles (Erasmus et al., 2022).

Some important legal documents that govern the sector include:

- **Policy statement on granting of rights of utilisation to utilise marine resources** and on the allocation of fishing quotas (1993);
- **The Marine Resource Act (Act 27 of 2000); provides the institutional framework for the operation and management of the fishery sector,** including the granting of non-transferable quota rights, the setting of total allowable catches (TACs), and the directing of data collection and research on marine resource (ILO, 2022). The Act also led to the establishment of a Marine Resource Advisory Council, which provides advice to the Minister on fisheries policy, the annual allocation of TAC, management measures, and development issues. The Act is supported by Regulation No. 241 of 2001, outlining compliance and control measures, applicable offences and penalties;
- **Aquaculture Act (Act 1 of 2002); determines licensing, disease monitoring, water quality monitoring, import/export, and aquaculture development zones (ILO, 2022)**. The Act appoints members to the Aquaculture Advisory Council and aquaculture inspectors, with the Permanent Secretary responsible for maintaining a register of all issued licenses. Offences and penalties are also outlined within the Act. Section 43 of the Act specifically addresses licensing, emphasising health and disease control measures, reporting, and eradication in compliance with Namibia's obligations as a member of the World Trade Organization (WTO) and the World Organization for Animal Health (OIE) (ILO, 2022);
- **Inland Fisheries Resources Act (Act 1 of 2003); amended by 12/2004 and 80/2006, governs inland fisheries** and established that only Namibian citizens and permanent residents who are of the age 18 and above can register fishing nets (maximum 4; 100x3m; mesh size depends on river) (ILO, 2022).

- **Inland Fisheries Policy (1995);** The Policy guarantees sustainable utilisation of inland fish for the benefit of the present and future Namibians. Furthermore, the management systems must be based on sound scientific knowledge and the responsibility of the management is vested at local level rather than at a centralised institution. A consultative and transparent process is followed through the involvement of local communities and the traditional authorities.
- **Namibia's Marine Resources Policy (2004)**; This Policy, provides a strategic framework for the responsible development and sustainable management of Namibia's marine resources. It emphasises ecosystem-based management, scientific research, stakeholder participation, and regional cooperation especially with Angola and South Africa. The Policy supports long-term conservation, economic viability of fisheries, and food security.

**The Namibian fishing industry is perceived as difficult to access, especially for poor and disadvantaged communities** (ILO, 2022). However, in 2015 Namibia adopted the New Equitable Economic Empowerment Framework (NEEEF) aimed to facilitate socio-economic transformation by promoting equity, social justice, and empowerment of the previously disadvantaged majority (Ibid). Despite foreign-owned companies still occupying a significant presence in the fishing market, **the Namibian government has taken steps to promote the Namibianisation of the industry (ILO, 2022).** This includes implementing affirmative action measures, restricting the number of licenses granted to foreign trawlers in Namibian waters, and encouraging partnerships between foreign and local entities (Ibid.).

**Namibia's EEZ contains approx. 20 different species:** small pelagic species and lobster; as well as large pelagic species, including adult mackerel, demersal hake and other deep-sea species (monkfish, sole and crab) in the waters further offshore (Negroni and Mwanja, 2016). This includes **eight species regulated through Total Allowable Catch (TACs)** (shown in Table 10), including hake, monk and kingklip (ILO 2022). All fish are landed in the two ports of Walvis Bay and Lüderitz, with hake and horse mackerel accounting for 87% of landed catches, 82% of the average annual landed volume, and 60% of the total fisheries export value (ILO, 2022).

## Fishery projects

**In 2006, Namibia received USD 145.3 million of Official Development Assistance (ODA),** from the United States as the largest donor, followed by Germany (World Bank, 2009). Projects funded by international partners to the fisheries and seafood sector include the European Union (EU) Integrated Fisheries Data Management (IFDM) programme, mandating Vessel Monitoring Systems (VMS) on industrial fishing vessels to prevent Illegal, Unreported, and Unregulated (IUU) fishing (ILO, 2022). Other investments include two fish processing factories in Walvis Bay and the expansion of an existing aquaculture farm in Lüderitz growing abalone shellfish, which rely on a well-functioning transport sector (Remmert, 2018). Table 11 shows the fishery projects that were being implemented in Namibia under the Community Fisheries Programme.

**Table 10: Total Allowable Catches (in metric tonnes)**

| Season | Period | Pilchard | Hake | Horse Mackerel | Crab | Rock Lobster | Monk |
|---|---|---|---|---|---|---|---|
| 2016/17 | 2016 | 14,000 | 140,000 | 335,000 | 3,446 | 268 | 10,000 |
| 2017/18 | 2017 | 14,000 | 154,000 | 340,000 | 3,446 | 230 | 9,600 |
| 2018/19 | 2018 | 0 | 154 000 | 340 000 | 3 446 | 200 | 8 000 |
| 2019/20 | 2019 | 0 | 154 000 | 349 000 | 3 900 | 180 | 7 200 |
| 2020/21 | 2020 | 0 | 160 000 | 330 000 | 3 900 | 180 | 7 300 |
| 2021/22 | 2021 | 0 | 154 000 | 330 000 | 3 900 | 200 | 7 300 |

Source: ILO, 2022

**Table 11: A number of projects that are being implemented under the Community Fisheries Programme**

| Project Title | Timeframe | Donor |
|---|---|---|
| Community Conservation Fisheries in KAZA | 2013 – 2018 | EU |
| Sustainable fisheries along the Kwando | 2018 – 2021 | WWF / Morby Charitable Foundation |
| Transboundary restoration on the Zambezi | 2019 – 2022 | Peace Parks Foundation/ Common Foundation |
| Joseph Mbambangandu Demo Site | 2019 – 2020 | Okacom |
| Strengthening Community Fisheries in KAZA | 2020 – 2023 | EU Mauritius & the Seychelles |
| Fisheries conservation in the upper Okavango River basin | 2021 – 2022 | TNC |
| Implementing an integrated approach to Natural Resource Management in the Middle Cubango-Okavango Basin to mitigate land degradation | 2021 – 2022 | Okacom/EU |

Source: NACSO, 2023

## Economic value of the fisheries sector

**Please note that the majority of commercial fisheries in Namibia are not necessarily aligned with conservation objectives and therefore not included in the wildlife economy, but included here to illustrate the size of the sector.**

The fisheries sector plays an important role in the daily livelihood of rural people and makes an important contribution to the livelihoods of almost 20% of the estimated two million people in the Kavango Zambezi Transfrontier Conservation Area (KAZA TFCA) (NACSO, 2023).

**The Namibian fishery resources make a significant contribution to its economy** and **it is the third largest source of foreign income after mining and tourism** (MFMR, 2022, Leandrea Louw, 2019). It **contributes approx. 15% to export earnings,** in particular the commercial fishing of horse mackerel and hake (Iitembu et al., 2023; MFMR, 2022; Kaure, 2022; AFDB, 2020). **The sector contributes 4.5% to Namibia's GDP** (Namibia Statistics Agency (NSA), 2022), **generating NAD 10 billion in 2021 (approx. USD 628 million) in foreign currency earnings** (ILO, 2022, Kaure, 2022). Namibia's Government through its "Vision 2030" identifies fisheries as one of the industries with potential for growth through sustainable strategies (Chiripanhura & Teweldemedhin, 2016).

**During the period 2012-2016, the Namibian fishery sector made significant contributions to the country's economy,** reports from MFMR (2017), Iitembu et al. (2021), and Iitembu et al. (2023) indicate that the sector generated an annual average of NAD 10 billion (approx. USD 671.6 million) in foreign exchange earnings. Additionally, it played a vital role in job creation, **providing employment opportunities for approx. 16,970 people during the period 2012 to 2016**. These findings highlight the significant economic impact of the fishery sector in Namibia during this period.

**In 2021, Namibia successfully raised USD 38 million through the Governmental Objective Fish Quota auctions** (ITA, 2022). Throughout the year, a total of six auctions were conducted, **resulting in the auctioning of 86,040 metric tonnes of fish quota.** This approach aligns with the Government of Namibia's decision in 2020 to implement a competitive auction system, where the fish quota is sold to the highest bidder (ITA, 2022). The objective behind this strategy was to ensure that Namibia maximises the value of its fishery resources and fully benefits from its natural resources.

## Fish exports in Namibia

Namibia is a major fish exporting country and fish continues to be Namibia's number one export revenue earner in terms of food items. According to the ILO (2022), **more than 90% of both processed and unprocessed fish products are exported,** with the European Union (EU) being a key market for Namibia. Approximately half of the harvested fish is exported to the Southern African Development Community (SADC) region, while **domestic consumption accounts for approx. 10% of the total harvest** (ILO, 2022). FAO (2015) notes that frozen horse mackerel is mainly sold in the African market, whereas hake and anglerfish production are predominantly exported to the European Union.

The Namibian Government implemented incentives such as subsidies and tax exemptions for the manufacturing sector, including fisheries, to support exports. **Free trade agreements, such as with the Southern African Development Community (SADC) region, were signed to expand the consumer base** (FAO, 2015).

**In 2012, the value of fish exports experienced a significant increase of 42% attributed to larger catches and enhanced value addition** (MFMR, 2013). In 2021, more than 70% of Namibia's hake (*merluccius capensis*) exports were destined for European countries, particularly Spain, Portugal, Italy, and France, where hake is the preferred white fish species, and consumers willingly pay premium price for it (Haimbala, 2021).

NSA (2022) reported that Namibia's export earnings from commodities of 'Agriculture, Forestry and Fishing' sector for the fourth quarter of 2021 amounted to NAD 3.7 billion (approx. USD 248.5 million) whereas the import bill was at NAD 1.2 billion (approx. USD 80.6 million). **The Fisheries products accounted for the highest foreign earnings at NAD 2.1 billion (approx. USD 141 million)** followed by the agriculture commodities that brought income of NAD 1.3 billion (approx. USD 87.3 million) (NSA, 2022). **Namibia's fish export industry reached an unprecedented milestone in May 2023,** with the export bill surging to NAD 1.1 billion (approx. USD 73.9 million) compared to NAD 697 million (approx. USD 46.8 million) in the same month of the previous year (May 2022) (The Farmers Journal, 2023). **This remarkable growth of 60.2%** marks the ninth consecutive increase in fish exports (The Brief 2023). This may be attributed to improved catches with regard to sizes, favourable exchange rates, increased value addition, better prices in some markets and increased exports of horse mackerel (Namibia Trade Directory, 2019). Additionally, according to NSA, (2023), **the trade of fish products recorded surpluses in the first quarter of 2023, improving from NAD 2.9 billion (approx. USD 194.8 million) witnessed in the first quarter of 2022 to NAD 3.8 billion (approx. USD 255.2 million)** recorded during the first quarter of 2023. The widening of the surplus is owed to the fact that export value increased whereas the import bill decreased for the same period (NSA, 2023).

**While the fish export industry is flourishing, there has been a concern regarding fish inflation,** which was at 11.7% in June 2023 (The Farmers Journal, 2023). Although it is lower than the 13.3% recorded in May 2023 (which was the highest annual rate since October 2017 at 18.2%), it remains subject to monitoring. Table 12 indicates that for the period between fourth quarter of 2020 to fourth quarter of 2021, hake dominated the export products recording earnings of NAD 813.1 million (approx. USD 54.6 million).

## Value chain

**The fisheries supply chain in Namibia covers the full range of activities required to bring fish or fishery products to final consumers**, from catch to plate, including handling, processing and delivery (ILO, 2022). It comprises industrialised marine capture fisheries, recreational fisheries, inland capture fisheries, mariculture, and freshwater aquaculture (Ibid). According to Haimbala (2019), **one way to generate revenues and create job opportunities is to make all the total landings of fish to be processed and exported as highly valued additional products.** A report by De Klerk (2019), shows that **only 70% of all hake landing is value added in Namibia**. This makes up approx. 120 000 metric tonnes which includes 70% of the total hake catches and less than 10% of horse mackerel landings (De Klerk, 2019). Figure 5 shows the extensive value chain map for seafood in Namibia.

Some of the value additions are filleting, canning, packaging, smoking, fish oil and fishmeal production are summarised in Table 13.

**Table 12: Export of fish fillets and other fish meat**

| Type | Q4 2020 | Q1 2021 | Q2 2021 | Q3 2021 | Q4 2021 |
|---|---|---|---|---|---|
| Hake | 960.5 | 1,135.0 | 1,130.3 | 1,191.5 | 813.1 |
| Salmon | - | 0.0 | 0.0 | 0.1 | 0.5 |
| Other fish fillets and fish meat | 93.3 | 194.3 | 210.3 | 181.0 | 160.4 |
| **Total fish fillets and other fish meat (million NAD)** | **1,055.3** | **1,329.3** | **1,342.0** | **1,374.9** | **978.1** |
| **Total fish fillets and other fish meat (USD)** | **71,448** | **90,000** | **90,859** | **93.087** | **66,222** |

Source: NSA, 2022

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**Figure 5: Value chain map seafood in Namibia**
Source: ILO, 2022

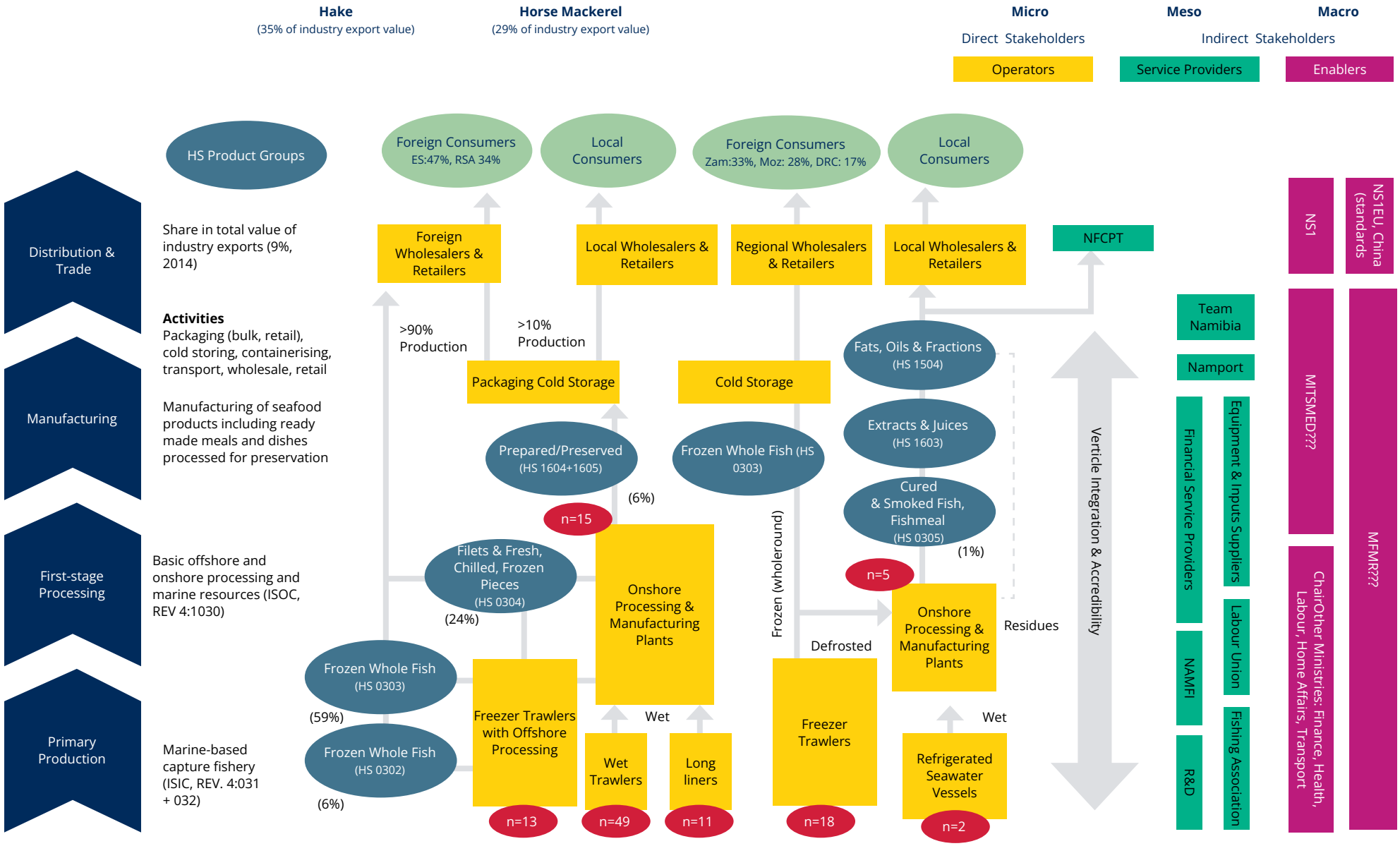


**Table 13: Value-added products per sub-sector in 2015/16**

| Sub-sector | Products | 2015/16 (Prices ) | 2015/16 (Prices USD) |
|---|---|---|---|
| Seals | Seal Oil | 300/litre | 20.10/litre |
| | Seal Skins | 116/skin | 7.77/skin |
| | Seal Organs | 350/kg | 23.45/kg |
| Crab | Frozen whole round | 42.50/kg | 2.85/kg |
| | Crab meat | 178/kg | 11.9/kg |
| | Crab flakes | 58.91/kg | 3.96/kg |
| | Crab sections | 87.39/kg | 5.86/kg |
| | Crab legs | 95/kg | 6.36/kg |
| Pilchard | Canned Pilchard | 108/tray | 7.24/tray |
| | Fish meal | 11.74/kg | 7.24/kg |
| | Fish oil | 13.19/litre | 0.88/litre |
| | Cutlets and bait | 20/kg | 1.34/kg |
| Monk | Monk Tails Sea Frozen | 112.14/kg | 7.52/kg |
| | Monk Fillets Land Frozen | 123.83/kg | 8.31/kg |
| | Monk Tails shrink wrapped | 123.00/kg | 8.24/kg |
| | Monk tails land frozen | 89.80/kg | 6.05/kg |
| Rock Lobster | Whole cooked and Raw lobster | 310.00/kg | 20.77/kg |
| | Live Lobster | 430.78/kg | 28.83/kg |
| Hake | Headed & Gutted | 24.86/kg | 1.67/kg |
| | Frozen Hake fillets | 50.08/kg | 3.35/kg |
| | Prime Cuts, Medallions, Blocks, Steaks, Sausages, Loins, Prime Quality (PQ) | 35.52/kg | 2.38/kg |
| Horse Mackerel | Overland Frozen whole | 9.32/kg | 0.625 |
| | Transhipment Frozen whole | 11.35/kg | 0.76 |
| Tuna | Polling whole round Tuna | 21.50/kg | 1.44 |
| | Longline whole round | 31.60/kg | 2.12 |
| Swordfish | Whole round (WR) | 52.10/kg | 3.49 |

Source: Haimbala, 2021

## Marine products

According to the Ministry of Fisheries (2020), **marine product exports (excluding aquarium products) in the 2019-2020 fiscal year reached 2,015 metric tonnes, indicating a 13% increase compared to the previous year**. The significant growth was driven by a substantial rise in **tuna exports, valued at approx. USD 9,6 million**, marking an 11.7% increase (see Table 14). In the fiscal year 2019/2020, tuna exports reached 1,787 metric tonnes, a 12% increase from the previous year.

**Table 14: Total weight and value of marine export (July 2019 – June 2020)**

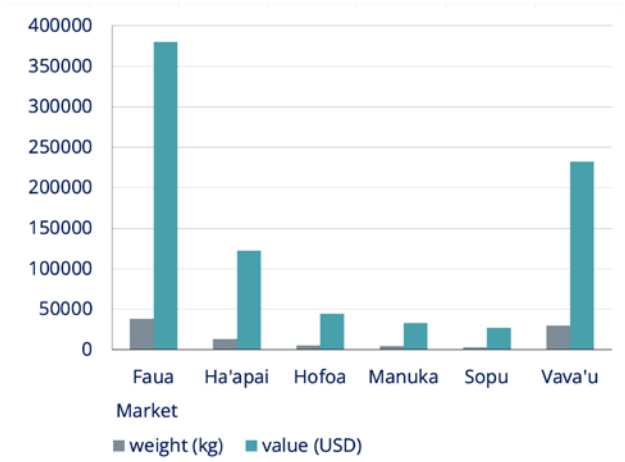
| Species | Weight (Kg) | Value (USD) |
|---|---|---|
| Seaweed (*Kappaphycus*) | 15 | 7.50 |
| Seaweed (*Mozuku*) | 102,155 | 51,077.50 |
| Shark Fin | 1,005 | 80,400.00 |
| Shark Meat | 67,424 | 337,192.00 |
| Snapper | 57,426 | 378,511.80 |
| Tuna | 1,787,247 | 9,638,955.00 |
| **Total** | **2,015,272** | **10,486,143.80** |

Source: Ministry of Fisheries, 2020

## Domestic market

A market study was carried out every week in 2019/2020 in a local fish market with the goal to collect data based on marine resource market prices and projected volume sold in local marketplaces. **The study revealed that 94 metric tonnes of marine resources were recorded, valued at approx. USD 0.84 million. Typical market prices for fish ranged from USD 8 to USD 9 per kilogram, while bags were sold for prices ranging from USD 20 to USD 70** (Ministry of Fisheries, 2020). Figure 6 shows the results for the study.

**Figure 6: Total volume and value by fish market (2019-2020 financial year)**




Source: Ministry of Fisheries Annual Report FY2019/20, pp. 46

**Table 15: Fisheries landings (in Mt) (2016–2021)**

| Species | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|---|
| Horse Mackerel | 315,972 | 318,200 | 304,533 | 311,892 | 295,976 | 182,186 | 174,951 |
| Hake | 137,488 | 150,219 | 159,600 | 152,038 | 143,574 | 122,429 | 139,984 |
| Pilchards | 20,379 | 3,427 | 3,974 | 0 | 0 | 0 | 0 |
| Monk | 10,105 | 8,412 | 8,001 | 7,702 | 8,054 | 6,767 | 9,119 |
| Crab | 2,968 | 3,078 | 2,964 | 3,136 | 4,099 | 2,772 | 1,103 |
| Rock Lobster | 87 | 126 | 164 | 134 | 282 | 80 | 106 |
| **Total** | **486,999** | **483,462** | **479,236** | **474,902** | **451,985** | **314,235** | **325,263** |

Source: ILO, 2022

**Table 16: List of exporting markets for Namibian fish and crustaceans, molluscs and other aquatic invertebrates (USD thousands)**

| | Exported value in 2016 | Exported value in 2017 | Exported value in 2018 | Exported value in 2019 | Exported value in 2020 |
|---|---|---|---|---|---|
| World | 603,381 | 674,305 | 731,086 | 695,215 | 596,806 |
| Spain | 204,541 | 223,207 | 269,503 | 272,144 | 255,433 |
| Zambia | 69,702 | 68,072 | 80,117 | 77,517 | 71,600 |
| South Africa | 69,180 | 105,640 | 113,403 | 107,951 | 59,206 |
| Congo, Democratic Republic of the | 51,777 | 64,145 | 69,890 | 80,447 | 53,297 |
| Italy | 33,851 | 43,703 | 37,997 | 37,323 | 36,806 |
| Mozambique | 38,881 | 19,521 | 23,820 | 22,014 | 29,948 |
| France | 24,688 | 29,338 | 26,481 | 21,866 | 18,723 |
| Portugal | 41,744 | 33,166 | 25,271 | 15,741 | 14,447 |
| Netherlands | 10,084 | 16,128 | 12,068 | 15,892 | 12,552 |
| Germany | 12,716 | 14,176 | 26,145 | 14,226 | 8,439 |
| United Arab Emirates | 142 | 169 | 153 | 179 | 4,966 |
| United Kingdom | 5,552 | 3,985 | 444 | 266 | 4,210 |
| Japan | 4,065 | 4,236 | 3,812 | 4,158 | 4,067 |
| Zimbabwe | 12,767 | 1,308 | 7,403 | 1,677 | 3,953 |

Source: ILO, 2022

## Fisheries landings

**Marine fisheries dominate Namibia's fisheries sector, accounting for 99.8% of total landings**, averaging approx. 550,000 metric tonnes annually from 2010 to 2015 (Haimbala, 2021). **The value of these landings is approx. NAD 10 billion (approx. USD 800 million)** (Ibid.). Namibia's annual marine landings were also estimated at approx. 500,000 metric tonnes by the African Development Bank (AFDB, 2020). The COVID-19 pandemic caused a contraction of 9.4% in the industry, resulting in lower fish volumes in 2020 (ILO, 2022). The fisheries sector has been declining since at least 2015 in terms of landed metric tonnes. However, in the 2021/22 fishing season, total marine capture landings for various fisheries reached 421,471metric tonnes, representing a 19% increase compared to the previous season (MFMR, 2022). Table 15 shows the fishery landings trend from 2016-2021.

The fisheries sector is seen as a significant source of sustainable employment at a national level. **In 2022, employment figures showed 18,105 people working in fishing and land-based factories, with women comprising the majority at 8,478 or 64% in land-based factories** (MFMR, 2022; MFMR, 2023). However, **due to the high level of informality, employment estimates in the fisheries sector vary widely, ranging from 6,800 direct jobs and 250,000 indirect jobs (AFDB, 2020) to 14,000 direct jobs, with 5,575 on-board vessels and 7,925 in onshore processing (ILO, 2022).** Hake fishing alone is estimated to provide employment for over 10,000 people, with a majority being women working onshore (Ibid.). According to the Labour Force Survey (2018), workers in the agriculture, forestry, and fishing sector had a relatively low average wage of NAD 3,393 (approx. USD 228), which is among the lowest income levels in the country due to low skill levels. Factory workers generally receive lower pay compared to fishers and vessel crew, reflecting the demanding conditions at sea, such as long working hours and overtime (ILO, 2022).

**The fishing industry also generates government revenue through quota fees, corporate taxes, license fees, and other levies** (see Text box 12) (Chiripanhura & Teweldemedhin, 2016). Fishermen pay quota fees to obtain fishing rights, regardless of their catch. The fee structure favours Namibian-owned vessels over foreign-owned ones, with over 90% Namibian crew pay lower fees (MFMR, 2001). Lower quota fees apply to fish landed onshore (MFMR, 2001). Fishing companies are also required to contribute to the Marine Resources Fund levy, which supports research and development in the sector.

**The future of the ocean, fish and coastal communities that rely on ocean resources are threatened by overutilisation of stocks** (Haimbala, 2019). **In fact, over 75% of the fish stocks are overutilised** (Gustavsson, 2018). MFMR (2022) noticed a worrying trend of over-catching observed within the fishing industry (see Text box 13 for the stock assessment). The report by FAO's monitoring of assessed stocks states that fish stocks that are within biologically sustainable levels decreased from 90% in 1974 to 66.9% in 2015 (FAO, 2018).

**Illegal, unreported and unregulated (IUU) fishing by foreign fleets has contributed to the overexploitation and decline of Namibian commercial stocks** (Akawa & Nashima, 2013). Achieving sustainability is crucial in addressing global challenges and improving human well-being (Haimbala, 2019). The allocation of quotas to right holders was adjusted to match species biomass, leading to the recovery of fish stocks and maintaining their economic value (Mundjego, 2022). This has positive impacts on employment, income generation, and food security at local and national levels (Ibid.).

Text box 12

### Marine resource utilisation and management

The MFMR and fishing companies collaborate to ensure optimal and sustainable use of marine resources. The fishing licenses are categorised based on sea depth and target different fish stocks.

- **Level 1 harvesting:** Small and pelagic fish, such as tuna, pilchard, and anchovy, are harvested by companies with the right licenses. Pelagic fish stocks declined in the late 1990s, leading to a ban on trawling in shallow waters and job losses.
- **Level 2 harvesting:** Mid-water fish stocks, including horse mackerel and hake, are targeted using trawling methods. Mid-level fishing is vital for the industry and has contributed to onshore jobs since independence.
- **Level 3 harvesting:** Demersal fishing focuses on bottom-dwelling species such as hake, sole, and monk. Fish are processed on-board or transported for onshore processing.
- **Level 4 harvesting:** Deep-water fishing targets orange rough and alfonsino, with declining catch sizes over time.

Other sea products in Namibia include crabs, rock lobster, oysters, seals, guano, and seaweed. Foreign-owned companies still play a significant role, but smaller indigenous companies also participate, often selling their fishing rights to boat owners, (Sherbourne, 2014).

Source: Chiripanhura & Teweldemedhin, 2016

Text box 13

## Stock assessment of the marine resources

**Research conducted in 2022 indicated that the monk and crab stocks are at biologically sustainable levels, and the monk stock has shown a 2% growth in total biomass to approx. 70 000 metric tonnes.** The seal population is also in a healthy state but continues to grow as the pup Total Allowable Catch (TAC) was not landed over the year. As the country subscribes to international best practices, Namibia is guided by international instruments that call for sustainable utilisation of fisheries resources based on the best scientific evidence.

Furthermore, **the stock assessment results for hake showed that the overall stock biomass has grown by 22% to approx. 2.3 million metric tonnes**. However, the overall spawning biomass is still below the biomass that can produce a Maximum Sustainable Yield (MSY). Namibia, therefore, needs to continue with efforts to rebuild this stock so that catches are brought closer to the MSY level.

Stock assessment results have also shown that **the current spawning stock biomass of horse mackerel is at a sustainable level**. The scientific survey conducted in March 2022 indicated that the stock has declined drastically. Furthermore, the size of the fish has been decreasing over the past five decades, and catches of the midwater fishery are now continuously made up of relatively smaller fish in size. The pilchard stock remains in a precarious state.

**Of concern was the fact that the Rock Lobster stock is also in a poor state, with signs that the fishing pressure exerted on the resource has been too high**. The survey found that up to 80% of undersized lobsters are still being caught and remedial actions are therefore required in order to avoid this stock from collapsing.

Source: MFMR, 2022

## Recreational fisheries

**The Namibian coast is excellent for recreational fishing,** especially during December, and according to the Ministry of Fisheries and Marine Resources, half of the anglers are Namibians, with the remainder coming from the SADC (Southern African Development Community) region. The majority of anglers (84%) are men and the remaining 16% are women (Fishing Industry Resurgence, 2022). There are no restrictions to the number of anglers who can participate in recreational fishing; each angler must, however, obtain an angling permit from the Ministry of Fisheries and Marine Resources. Anglers primarily pursue silver kob (*Argyrosomus inodorus)*, also known as *kabeljou* in the region, west coast steenbras (*Lithogn athus au reti)*, and Galjeon (*Coracinus Capensis*) (Nghipunya, 2017).

Recreational angling is part of the Line fish sector, one of Namibia's 10 commercial fisheries. It has a daily bag limit on fish caught per angler (Nghipunya, 2012) (see Table 17). **Recreational angling is a popular activity in Namibia, attracting both local and international anglers targeting various line fish species** (Nghipunya 2017, Haimbala, 2021). It contributes to resource use and tourism development. Namibia's shore angling is limited to approx. 260 km of the coast, with 90% of recreational fishing taking place between Sandwich Harbour and the Ugab River (Barnes & Alberts 2008).

**Table 17: Anglers daily bag limit**

| Scientific name | Common name | Bag limit |
|---|---|---|
| *Argyrosomus inodorus* | Silver Kob | 10 |
| *Lithogn athus au reti* | West Coast Steenbras | 10 |
| *Coracinus Capensis* | Galjeon | 10 |
| *Lutjanus fulvus* | Blacktail | 10 |
| *Barbus barbus* | Barbel | 30 |
| *Thysites atun* | Snoek | 20 |
| *Chondrichthyes* | Sharks | 1 |

Source: Nghipunya, 2012

In 2011, the **total number of anglers registered was 60,498** (Nghipunya, 2012) and, **through the sale of permits the Ministry generated approx. USD 300,000** (FAO, 2015). The total expenditure on accommodation, fishing materials and equipment and fuel in 2011 was over USD 53 million recorded in this subsector (see Table 18).

**Table 18: Total expenditure on angling (2011)**

| Item | Amount (NAD) | USD equivalent |
|---|---|---|
| Travel cost | 159.4 million | 19.9 million |
| Accommodation | 145 million | 18.1 million |
| Entertainment | 46.4 million | 5.8 million |
| Tackle | 20 million | 2.5 million |
| Reels | 18.7 million | 2.3 million |
| Rods | 17.9 million | 2.2 million |
| Bait | 11.2 million | 1.4 million |
| Others | 990 million | 1,2 million |
| **Total** | **428,3 million** | **53.5 million** |

Sources: MFMR, 2011; Nghipunya 2012

## Inland fisheries

The Ministry of Fisheries & Marine Resources (MFMR) spearheads several regulatory interventions based on research of the inland fish resources. These interventions are derived from the mandate of the MFMR towards the sustainable management of aquatic resources as regulated under the Inland Fisheries Resources Act (No 1 of 2003). To promote responsible governance of inland fisheries, MFMR in partnership with local authorities, regional councils, and stakeholders, and with support from the Namibia Nature Foundation, assisted riparian communities in the Zambezi and Kavango Regions to establish community fisheries reserves (pers. comm., S.G. Sitengu, 2024). This collaboration led to the official designation of 10 small-scale fisheries management areas, covering over approx. 2,500 hectares of natural inland water bodies, along with 20 fishing areas placed under direct community management (Ibid.). The Ministry is in the process of declaring, by Government Gazette, Maurice Nekaro in Kavango West Region and Nsundwa and Kabulabula in Zambezi Region as community fishery reserves (pers. comm., S.G. Sitengu, 2024).

In June 2022, the Ministry of Fisheries and Marine Resources launched a National Plan of Action for Small Scale Fisheries (NPOA-SFF) for Namibia that aims to enhance the contribution of small-scale fisheries to food security and sustainable livelihoods (pers. comm., S.G. Sitengu, 2024). This is under the FAO Umbrella Programme for Promotion and Application of the Voluntary Guidelines for Securing Small Scale Fisheries (SSF Guidelines) (Ibid.). This plan of action joins other Acts and Policies that regulate the Inland Fisheries, including the White Paper on the responsible Management of the Inland Fisheries of Namibia 1995, and the Inland Fisheries Resources Act, 2003.

**Inland fisheries are primarily located in the northern regions in the floodplain systems of the Zambezi River, Kwando-Chobe-Linyanti River system, Kavango River and Iishana systems;** however, they are limited by scarce freshwater resources (Negroni & Mwanja, 2016 and pers. comm., S.G. Sitengu, 2024). In the Zambezi region, which includes the Zambezi River, the 200 km² Lake Liambezi, and the Kwando system, yield range is approx. 1,500 to 5,000 metric tonnes per year and the Kavango River yield is approx. 840 to 3,000 metric tonnes annually (pers. comm., S.G. Sitengu, 2024). The **total amount of fish caught in perennial rivers and artificial water reservoirs varies seasonally, producing an estimated 6,000–8,000 metric tonnes annually**, mainly consisting of tiger fish (*Hydrocynus vittatus)* (MFMR, 2015; ILO, 2022).

**Inland fisheries are crucial for food security in densely populated rural areas such as the Zambezi and Kavango regions (ILO, 2022).** Rural communities in these northern regions rely on inland wild fish resources for food, income, and informal employment. Currently, approx. **6,125 metric tonnes of freshwater fish are produced annually through inland fisheries, with an estimated value of NAD 230 million (approx. USD 13.2 million)** (pers. comm., S.G. Sitengu, 2024). This sector significantly **supports the livelihoods of approx. 250,000 people who rely on fishing for daily protein in the Kavango and Zambezi regions and provides employment for 45,000 people** (Ibid.). The Namibian government also promotes community-based fish farming to enhance food security, employment, and income (MFMR, 2015) (see Text box 14).

**To enhance the management and accuracy of data on Namibia's inland fisheries, a national fish monitoring programme was established to track fish stocks in perennial rivers and create an up-to-date time series database incorporating both biological and socio-economic data** (pers. comm., S.G. Sitengu, 2024). The Ministry of Fisheries and Marine Resources initiated annual surveys in the Kavango River in 1984 and expanded to include the Zambezi River and Kwando-Linyanti-Chobe system in 1993 (Ibid.). Since the launch of these monitoring efforts, socio-economic surveys have shown that **inland fisheries play a crucial role in employment and subsistence for riparian communities**. However, the full value chain of the fish commodity remains largely unknown and undervalued (pers. comm., S.G. Sitengu, 2024).

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Text box 14

## Namibia's pioneering approach to inland fisheries: A model for community-driven conservation

Namibia stands out as a leader in community-based conservation, particularly through its innovative approach to managing inland fisheries. These fisheries play a critical role in ensuring household food security and nutrition, providing a vital source of affordable protein and essential micronutrients that help combat malnutrition in local communities. Beyond food security, these fisheries are also a cornerstone for small-scale income generation, supporting the livelihoods of many. However, the diverse ecological landscapes of Namibia and the transboundary nature of its river systems present unique conservation challenges. Over the past two decades, declining fish stocks have underscored the urgent need for sustainable management solutions. In response, Namibia implemented a collaborative learning process, enabling communities to establish fish reserves that are both socially acceptable and ecologically significant. The pilot phase, tested over five years in 20 locations, refined the understanding of stakeholder roles and preconditions for success. These reserves not only demonstrated higher catch rates and larger fish sizes but also highlighted the ecological benefits of protected areas in rehabilitating inland water systems.

**A key to the success of these community-driven reserves was high compliance with conservation rules, reinforced by continuous education and the visible benefits of fish reserves.** The involvement of local communities ensured stronger enforcement against illegal fishing, particularly from outsiders. However, **Namibia's inland fisheries require an adaptive management approach that acknowledges the complex interplay of social, geographic, and ecological factors.** Conservation strategies tailored to local contexts, leveraging traditional knowledge while maintaining flexible yet straightforward guidelines, proved essential. Policy and governance insights from the study emphasise the importance of ongoing multi-stakeholder engagement rather than one-time consultations. Challenges such as limited capacity, under-resourced inspectors, and the need for a stronger focus on inland fisheries policies were identified. Innovations such as decentralised permit systems and community fish guards show potential but must balance local empowerment with centralised oversight.

Namibia's inland fisheries face additional pressures from illegal fishing, climate change, and invasive species, necessitating adaptive conservation measures. Expanding fish reserves to include migratory corridors could further protect both resident and migratory species, building resilience within inland fisheries. By integrating fish reserves within existing conservancy structures, Namibia adopts a landscape approach to managing its natural resources. This holistic model not only conserves fish populations but also supports sustainable livelihoods, offering valuable lessons for community-based conservation efforts across southern Africa.

Source: Hackenberg et al., 2022

## Challenges in the inland fisheries sector

Population growth in Namibia's northern regions has led to conflicts among communities, commercial, and recreational water users, all reliant on increasingly stressed water resources (pers. comm., S.G. Sitengu, 2024). Similar conflicts have already emerged in other densely populated areas where communities depend on fish for their livelihoods. Alongside population pressures, Namibia's river systems have also faced encroachment from migrant fishers due to high fish demand in Zambian urban areas and the Democratic Republic of the Congo (Ibid.). The impact of commercialised fishing has driven some communities to adopt environmentally harmful and unsustainable fishing practices such as dragnetting, bashing, drifting gillnets, and beach seine netting with gauze wire so as to cope with declining catches and meet nutritional needs (pers. comm., S.G. Sitengu, 2024). This intensified fishing pressure has led to a depletion of larger-bodied fish species, including tigerfish (*Hydrocynus vittatus*) and cichlids (*Cogochromis dimidiatus*), which are crucial for both subsistence and recreational purposes (Ibid.). The loss of these key species may have disrupted the river's food web structures, potentially affecting its long-term productivity. Beyond the immediate implications for local communities who depend on fish as a food source, these changes also negatively affect tourism, with broader economic repercussions for Namibia (pers. comm., S.G. Sitengu, 2024).

## Aquaculture

**Namibia's aquaculture sector operates within a strong legal and policy framework, supported by key policy instruments, programmes, and plans.** These include the Aquaculture Policy (2001), Aquaculture Act (2003), Aquaculture Licensing Regulations (2003), Aquaculture Strategic Plan (2004–2009), Aquaculture Import and Export Regulations (2010), the National (Freshwater) Aquaculture Master Plan (2012–2022), the Master Plan for Marine Aquaculture (2012–2022), and the recent Blue Economy Policy (2019), a sectoral blueprint that promotes sustainable ocean and inland water activities to foster blue economic growth for all Namibians (pers. comm., S.G. Sitengu, 2024).

**Regionally, Namibia's aquaculture aligns with various regional aquaculture frameworks and instruments,** providing a strategic foundation for growth. The sector

presents numerous emerging opportunities, with Namibia uniquely positioned to capitalise on both inland aquaculture and mariculture. **Inland aquaculture in Namibia primarily focuses on catfish (*Clarias gariepinus*), while mariculture centres on oysters (*Crassostrea gigas*), abalone (*Haliotis midae*), and seaweed** (Chiripanhura & Teweldemedhin, 2016). **The fresh water sub-sector products are geared for the local market, for food security reasons**, but they also find their way into neighbouring countries (specifically Angola, Botswana and Zambia) (Ibid.). Within inland aquaculture, particularly in the KAZA Landscape, Namibia focuses on local species such as the Three-spot tilapia (*Oreochromis andersonii*), Redbreast tilapia (*Coptodon rendalli*), and African catfish (*Clarias gariepinus*) (pers. comm., S.G. Sitengu, 2024). Current production levels remain low, with annual yields below 100 metric tonnes, highlighting significant potential for future growth in this sector (Ibid.).

According to the ILO (2022), **the aquaculture sub-sector is gaining importance with production estimated at 472.48 metric tonnes in 2018, which is equivalent to approx. EUR 1.26 million (approx. USD 1.34 million).** However, Aquaculture in Namibia has not expanded significantly and faces constraints, despite its importance (Haimbala, 2019). **Inadequate water supplies, especially in desert areas, pose a challenge to aquaculture development** (Chiripanhura & Teweldemedhin, 2016). There is potential for aquaculture in the north-eastern and southern parts of the country: **emphasis should be placed on marine biotechnology, sustainable coastal aquaculture, value chain development, fish processing, food safety standards, and reducing food waste** (Haimbala, 2019).

## Challenges faced by the fisheries sector:

Sources: Amaechi, 2022; Chiripanhura & Teweldemedhin, 2016; FAO, 2015; ILO, 2022

- Lack of skilled labour and access to finance
- Unharmonised fishing legislation
- Lack of financing and expertise for aquaculture development
- Lack of an accredited national shellfish sanitation programme
- High overhead and operating costs, low value-added production, and high port charges
- Possible depletion of stocks due to overfishing, difficulty in securing access to external markets, and environmental conditions

## Wildlife trade

**Namibia regulates its wildlife trade through a coordinated system led by the Ministry of Environment, Forestry and Tourism (MEFT),** which sets policy, issues permits, and oversees law enforcement (MEFT, 2025). Community participation is central to governance. **Through the CBNRM programme, rural communities manage wildlife on communal lands and retain direct benefits from legal use.** This model is supported by the Namibian Association of CBNRM Support Organisations (NACSO), a consortium of NGOs and the University of Namibia that provides technical assistance on governance, natural resource management, and financial planning (NACSO, 2025).

MEFT administers wildlife utilisation under national legislation, including the Nature Conservation Ordinance (Ordinance 4 of 1975), the Environmental Management Act (Act 7 of 2007), and related regulations. All wildlife use and trade require permits based on two principles (MEFT, 2025):

1. Wildlife in Namibia is legally protected and cannot be taken or possessed without authorisation.
2. Utilisation and trade can negatively affect wild populations unless monitored through a regulated, accountable permitting system.

The Ministry of Fisheries and Marine Resources (MFMR) is mandated to manage Namibia's marine and freshwater fisheries under the Marine Resources Act (Act 27 of 2000) and its regulations (Iitembu et al., 2023; MFMR, 2025). Additional governmental bodies, including the Fisheries Observer Agency (FOA), fulfil complementary functions in monitoring and supporting compliance within the sector (Iitembu et al., 2023). Scientific assessments underpinning these decisions are generated by the National Marine Information and Research Centre (NatMIRC) (Ibid.). MEFT works alongside MFMR on matters involving the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)-listed marine species, particularly as an enforcement focal point (CITES, 2025c).

CITES regulates the international trade in endangered species to ensure their survival and safeguard biodiversity. **Namibia, which joined CITES in December 1990 and entered into force in January 1991,** is an active participant in CITES (CITES, 2025a). It employs its regulations to manage and monitor the trade in endangered species. This section examines Namibia's CITES exports and imports over 10 years (2014-2023). The data was sourced from the CITES trade database, and all subsequent information on CITES-listed species is derived from this database (CITES, 2025b), unless stated otherwise.

**Between 2014 and 2023, Namibia exported 10,822,946.57 CITES-listed specimens, significantly higher than the 83,091.65 specimens imported.** Accurately determining the exact number of CITES-listed species traded via the CITES database is challenging due to inconsistent recording methods. Quantities often include partial specimens, derivatives, and weight or volume measurements, which can lead to inflated figures. As a result, these quantities require scrutiny, as they may not reflect the actual number of taxa imported. Quantities are reported from both the exporter and the importer. Amounts reported were calculated using the highest reported value, whether from the importer or exporter, depending on which was greater. **Exports from Namibia are predominantly for commercial and uncategorised purposes, accounting for 71.70% and 26.89% of all recorded exports, respectively.** Table 19 indicates the purposes and reported quantities of exports and imports from Namibia, and Table 20 provides a detailed overview of Namibia's top 10 countries with commercial exports of CITES-listed species.

## Shark trade

**Within the commercial category, shortfin mako (*Isurus oxyrinchus)* accounts for 61.47% of all exports, with all specimens sourced from the wild.** The Republic of Korea received the largest share of these commercial exports (47.58%), followed by Italy (17.34%) and Portugal (11.89%). Blue shark (*Prionace glauca*) represents 12.70% of commercial exports; of this trade, 57.31% was wild-sourced, 37.08% originated from areas "*the marine environment not under the jurisdiction of any State*", and 5.61% was classified as pre-Convention. Spain received the largest share of these commercial exports (91.86%), followed by Uruguay (4.44%) and Singapore (3.70%). In a recent report by Vitale et al. (2025), Namibia emerged as the top exporting country of shortfin mako and blue shark within the Southern African Development Community (SADC) region. **Namibia plays a significant role in high-value shark-product flows** into Asian fin markets, European meat markets, and South American processing hubs (see Text box 15).

**Table 19: Purpose of Namibia's exports and imports of CITES-listed species (2014–2023)**

| Purpose | Exports | | Imports | |
|---|---|---|---|---|
| | Quantity | % | Quantity | % |
| Breeding in captivity | 8,289 | 0.08% | 2,004 | 2.41% |
| Circus or travelling exhibition | 112 | 0% | 686 | 0.83% |
| Commercial | 7,759,614.86 | 71.70% | 50,457.02 | 60.72% |
| Educational | 204 | 0% | 2 | 0% |
| Hunting trophy | 33,600.26 | 0.31% | 660.97 | 0.80% |
| Introduction into the wild | 629 | 0% | 1,709 | 2.06% |
| Law enforcement | 756 | 0.01% | 0 | 0% |
| Medical | 18,815 | 0.17% | 22,938 | 27.61% |
| Personal | 4,815.88 | 0.04% | 2,067.23 | 2.49% |
| Scientific | 85,510.80 | 0.79% | 1,861.43 | 2.24% |
| Uncategorised | 2,910,533.77 | 26.89% | 706 | 0.85% |
| Zoo | 66 | 0% | 0 | 0% |
| **Total** | **10,822,946.57** | | **83,091.65** | |

Source: CITES, 2025b

Text box 15

## Namibia's participation in global shark product trade

**The global shark-product trade is valued at almost USD 1 billion annually**, yet a detailed understanding of market dynamics remains limited. Food and Agriculture Organization of the United Nations (FAO) data show shark fins alone averaged USD 377.9 million in annual imports (2000–2011), reflecting their high unit value relative to shark meat. The growing demand for shark meat and stricter regulations on finning have increased incentives to fully utilise shark carcasses, sustaining global pressure on shark populations.

Within this system, Namibia is a notable supplier of both shark fins and meat. **In 2012, Namibia ranked among the top five origin countries supplying shark fins to Singapore, exporting 297 tonnes valued at USD 4.5 million**. **Namibia also supplied substantial volumes of shark meat to Spain, which imported 2,290 tonnes valued at USD 4.1 million,** placing Namibia alongside Japan, the United Kingdom, and Morocco as key exporters. Namibia further contributes to Uruguay's shark-processing supply chain, particularly for blue shark (*Prionace glauca*) destined for Brazil. Uruguay relies heavily on imports from Namibia, South Africa, Peru and Spain, despite having no domestic market for shark meat.

Source: Dent & Clarke, 2015

**While Namibia is a major exporter of shortfin mako and blue shark products, the sustainability of this trade remains insufficiently assessed**. An assessment of Namibia's Ecosystem Approach to Fisheries (EAF) implementation notes strong management measures, such as Total Allowable Catch (TAC) controls, by-catch reduction rules, observer coverage, and stock-rebuilding plans, under which sharks are broadly managed (Iitembu et al., 2021). However, the same assessment highlights gaps relevant to shark conservation, including the lack of ecosystem-level indicators, limited research on non-target species, and continued reliance on single-species management. These shortcomings indicate that, despite robust fisheries governance, **the ecological impacts and sustainability of Namibia's shark-meat trade remain insufficiently assessed.**

## Devil's claw trade

Devil's claw (*Harpagophytum spp.*) is indigenous to southern Africa and is widely used as a medicinal plant, particularly for treating arthritis, reducing pain and fever, and aiding digestion (Blendler, 2021; NACSO, 2021). Over the past two decades, it has become a significant export commodity, with Namibia supplying large volumes to European markets, primarily Germany and France (NACSO, 2021).

**CITES trade data indicate that devil's claw accounts for 15.97% of Namibia's commercial exports.** The main exported taxa are *Harpagophytum procumbens* (11.63%), *Harpagophytum spp*. (2.63%), and *Harpagophytum zeyheri* (1.73%). All are sourced from the wild, except for a small proportion of *H. zeyheri* for which the source is unknown. Germany is the dominant destination market, receiving 98.22% of exports, with the remaining 1.78% destined for Spain.

A 2010 national review published by the then Ministry of Environment, Forestry and Tourism (MEFT) reported that Namibia had supplied over 90% of global demand for devil's claw during the preceding fifteen years (MEFT, 2010). Annual exports ranged from 331 to 851 tonnes, reflecting the plant's longstanding contribution to rural livelihoods and the national economy (Ibid.). **In 2008, Namibia exported 686 tonnes valued at NAD 21.5 million (approx. USD 3.1 million), followed by 378 tonnes valued at NAD 12.2 million (approx. USD 1.44 million) in 2009.** The decline in 2009 resulted from the global recession and an oversupply from the previous year (Ibid.).

Text box 16

## Access to benefit sharing for devil's claw in Namibia

In rural Africa, many households rely on non-timber forest products (NTFPs) such as devil's claw for income and cultural, social, and spiritual value. However, access to and benefits from these resources are shaped by complex social-ecological systems and varied governance structures.

Research in Namibia's Zambezi region used devil's claw as a case study to explore the effects of different governance arrangements. While decentralised co-management between governments and local communities has improved access to support networks and resources, it has also created tensions with traditional systems, overlooked local practices, and sometimes sparked new land-use conflicts. Communities have often used their agency to navigate or resist governance systems that don't align with their needs.

Moreover, even policies aimed at decentralisation often limit true autonomy, reflecting a form of "coercive conservation." NGO efforts, while beneficial in some cases, have not shifted power dynamics; harvesters still lack market control.

The study suggests that **greater decentralisation, combined with economic frameworks that value wellbeing and culture**, could enable communities to reshape access to NTFPs. This could help reframe NTFPs as development assets rather than subsistence safety nets, embedding customary rights and cultural values more deeply into governance and market systems.

Source: Lavelle, 2018

More recent accounts show that devil's claw continues to support rural incomes. In 2021, communities in the Omaheke Region earned approx. NAD 300,000 (approx. USD 20,310) at a local buying event (NACSO, 2021). In 2024, the Muduva Nyangana Community Conservancy and Community Forest reported NAD 40,202 (approx. USD 2,170) in total earnings from devil's claw sales, of which NAD 4,068.50 (approx. USD 220) contributed to conservancy management fees (FAO, 2025). **Harvesters collected an average of 34 kg each, equivalent to about NAD 1,500 (approx. USD 81) per person, an important supplement for household expenses such as food, education, and healthcare** (Ibid). These income figures also align with broader evidence on access, governance, and benefit-sharing outlined in Text box 16, which highlights how institutional arrangements shape who benefits from the devil's claw trade.

## Cape fur seal trade

**Cape fur seal (*Arctocephalus pusillus*) products account for 8.95% of Namibia's CITES commercial exports, all sourced from the wild.** Key importers include China (50%), South Africa (17.87%), Turkey (10.01%), Hong Kong (9.97%), and Thailand (9.18%). Seal management is regulated under the Marine Resources Act (2000) and associated regulations, with the Ministry of Fisheries and Marine Resources (MFMR) setting annual harvest quotas. However, quota utilisation remains low due to limited global demand for seal products (Parliament of Namibia, 2025).

According to the Parliament of Namibia's 2025 report, the country hosts 26 Cape fur seal colonies from Lüderitz to Cape Cross. **Population assessments indicate steady growth since the early 1990s, reaching an estimated 1.6 million seals in 2022** (Ibid.). The Parliament of Namibia's (2025) report assesses how rising seal numbers affect fish stocks and reviews the management of the commercial sealing industry, including regulatory frameworks, population trends, and annual quotas. Stakeholders highlighted concerns such as under-utilised quotas, economic losses to fisheries, and limited markets for seal products. While recognising the ecological importance of seals, the report concludes that improved data, revised quotas, and stronger coordination between MFMR, industry and conservation groups are needed to address pressures on marine resources.

There are no recent peer-reviewed studies that provide a dedicated analysis of Namibia's seal-product trade or the economics of the commercial harvest. Existing scientific literature focuses primarily on Cape fur seal population ecology, diet, distributional shifts and anthropogenic threats (e.g., entanglement), while trade and harvest dynamics are documented mainly in grey literature, policy reports and parliamentary reviews.

The Namibian seal harvest remains widely criticised by animal rights organisations, scientists and environmental groups, who argue that it is inhumane, ecologically unsustainable and socially harmful (Kirkman & Lavigne, 2010; Ocean Conservation Namibia, undated). Despite ongoing controversy, the harvest continues annually. The Government of Namibia maintains that it is a sustainable management tool that supports local livelihoods. **However, the collapse of markets for seal pups has resulted in very low utilisation of the authorised quota** (de Klerk, 2025; Ocean Conservation Namibia, undated). As mentioned above, seals are often blamed for declining fish stocks, raising concerns that management may shift from a commercial harvest to a state-funded cull (Ibid.).

## Exotic bird trade

Namibia commercially exported 1,240 bird (*Aves*) specimens, all of which were sourced from captive-bred populations. All species were exported live, with the exception of Indian Peafowl (*Pavo cristatus)*, which was traded exclusively as feathers. Among live exports, South Africa was the largest destination, receiving 56.76% of specimens, followed by Belgium (21.67%), Angola (21.47%), and the United States of America (0.01%). Although these birds are captive-bred, escapes from aviaries or transport facilities can establish invasive alien populations, which may compete with native species for food, nest sites, and habitat. Parrot species such as Ring-necked parakeet (*Psittacula krameri*) have already become invasive in multiple African countries, including South Africa, where they threaten indigenous cavity-nesting birds (Zengeya & Wilson, 2022). Monitoring exotic bird movements can help prevent similar risks in Namibia.

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**Table 20: Namibia's top 10 countries with commercial exports of CITES-listed species (2014-2023)**

| Importer country | Species | Common name | Trade terms | Reported quantity |
|---|---|---|---|---|
| **Republic of Korea** | | | | **2,275,640** |
| 29.33% of commercial exports | *Arctocephalus pusillus* | Cape fur seal | Leather products (large) | 3 |
| | *Crocodylus niloticus* | Nile crocodile | Leather products (large), leather products (small), skin pieces, skins | 6,400 |
| | *Equus zebra hartmannae* | Hartmann's mountain zebra | Skins | 21 |
| | *Isurus oxyrinchus* | Shortfin mako | Bodies, meat | 2,269,216 |
| **Spain** | | | | **1,319,472** |
| 17% of commercial exports | *Crocodylus niloticus* | Nile crocodile | Bodies, skin pieces, skins, trophies | 205 |
| | *Equus zebra hartmannae* | Hartmann's mountain zebra | Fur product (small), leather products (small), skin pieces, skins, trophies | 127 |
| | *Harpagophytum spp.* | Devils claw | Dried plants | 11,000 |
| | *Harpagophytum zeyheri* | Devils claw | Roots | 11,000 |
| | *Isurus oxyrinchus* | Shortfin mako | Bodies | 391,857 |
| | *Prionace glauca* | Blue shark | Bodies, meat | 905,283 |
| **Germany** | | | | **1,219,336.22** |
| 15.71% of commercial exports | *Arctocephalus pusillus* | Cape fur seal | Skins | 3 |
| | *Caracal caracal* | Caracal | Skull | 1 |
| | *Crocodylus niloticus* | Nile crocodile | Leather products (small), skin pieces, skins, skulls | 7 |
| | *Equus zebra hartmannae* | Hartmann's mountain zebra | Fur product (small), leather products (large), leather products (small), skin pieces, skins, trophies | 1,639 |
| | *Giraffa camelopardalis* | Giraffe | Bones, skulls, trophies | 65 |
| | *Harpagophytum procumbens* | Devils claw | Dried plants, roots | 902,429.66 |
| | *Harpagophytum spp.* | Devils claw | Dried plants, powder, roots | 192,836.50 |
| | *Harpagophytum zeyheri* | Devils claw | Dried plants, roots | 121,850 |
| | *Hoodia gordonii* | Bitter ghaap | Derivatives, extract, leaves, powder | 401.06 |
| | *Loxodonta africana* | African elephant | Skin pieces | 1 |
| | *Mellivora capensis* | Honey badger | Bones, skull | 2 |
| | *Panthera leo* | Lion | Skin, skulls, trophies | 4 |
| | *Papio ursinus* | Chacma baboon | Bones, skins, skulls, trophies | 97 |

**Table 20: Namibia's top 10 countries with commercial exports of CITES-listed species (2014-2023) (continued)**

| Importer country | Species | Common name | Trade terms | Reported quantity |
|---|---|---|---|---|
| **Italy** | | | | **835,718** |
| 10.77% of commercial exports | *Crocodylus niloticus* | Nile crocodile | Skin pieces, skins | 8,570 |
| | *Equus zebra hartmannae* | Hartmann's mountain zebra | Leather products (large), skins, trophies | 28 |
| | *Isurus oxyrinchus* | Shortfin mako | Bodies, fins, meat | 827,120 |
| **Portugal** | | | | **566,940** |
| 7.31% of commercial exports | *Equus zebra hartmannae* | Hartmann's mountain zebra | Leather products (small) | 1 |
| | *Isurus oxyrinchus* | Shortfin mako | Bodies | 566,939 |
| **China** | | | | **367,000.46** |
| 4.73% of commercial exports | *Arctocephalus pusillus* | Cape fur seal | Extract, fur products, genetalia, hair, leather products (large), leather products (small), skin pieces, skins | 347,250.50 |
| | *Crocodylus niloticus* | Nile crocodile | Skins | 3 |
| | *Dalbergia melanoxylon* | African blackwood | Logs | 72.30 |
| | *Equus zebra hartmannae* | Hartmann's mountain zebra | Feet, rug, skins, trophies | 414 |
| | *Isurus oxyrinchus* | Shortfin mako | Bodies | 17,961 |
| | *Panthera leo* | Lion | Specimens, trophies | 2 |
| | *Papio ursinus* | Chacma baboon | Trophy | 1 |
| | *Pterocarpus angolensis* | African bloodwood | Logs, sawn wood | 952.50 |
| | *Pterocarpus tinctorius* | African padauk | Logs | 344.16 |
| **South Africa** | | | | **281,899.63** |
| 3..63% of commercial exports | *Amazona aestiva* | Turquoise-fronted parrot | Live | 7 |
| | *Amazona amazonica* | Orange-winged parrot | Live | 2 |
| | *Amazona autumnalis* | Red-lored parrot | Live | 2 |
| | *Amazona dufresniana* | Blue-cheeked parrot | Live | 2 |
| | *Amazona oratrix* | Yellow-headed parrot | Live | 8 |
| | *Aprosmictus erythropterus* | Red-winged parrot | Live | 4 |
| | *Ara chloropterus* | Red-and-green macaw | Live | 2 |
| | *Ara macao* | Scarlet macaw | Live | 4 |
| | *Arctocephalus pusillus* | Cape fur seal | Fur products (small), fur products (large), leather products (large), meat, oil, skin pieces, skins, specimens | 124,127 |

**Table 20: Namibia's top 10 countries with commercial exports of CITES-listed species (2014-2023) (continued)**

| Importer country | Species | Common name | Trade terms | Reported quantity |
|---|---|---|---|---|
| **South Africa (continued)** | | | | **281,899.63** |
| 3..63% of commercial exports | *Barnardius zonarius* | Twenty-eight parakeet | Live | 10 |
| | *Cacatua alba* | White cockatoo | Live | 2 |
| | *Chalcopsitta atra* | Black lory | Live | 38 |
| | *Chalcopsitta duivenbodei* | Brown lory | Live | 37 |
| | *Chalcopsitta sintillata* | Yellow-streaked lory | Live | 12 |
| | *Crocodylus niloticus* | Nile crocodile | Leather products (small), skins pieces, skins | 2,091 |
| | *Eclectus roratus* | Eclectus parrot | Live | 4 |
| | *Eos reticulata* | Blue-streaked lory | Live | 8 |
| | *Equus zebra hartmannae* | Hartmann's mountain zebra | Leather products (small), skins pieces, skins, trophies | 785 |
| | *Hoodia gordonii* | Bitter ghaap | Derivatives, extract, powder | 660 |
| | *Isurus oxyrinchus* | Shortfin mako | Bodies | 149,788 |
| | *Lathamus discolor* | Swift parrot | Live | 8 |
| | *Lorius chlorocercus* | Yellow-bibbed lory | Live | 4 |
| | *Lorius garrulus* | Yellow-backed lory | Live | 38 |
| | *Lorius lory* | Black-capped lory | Live | 2 |
| | *Loxodonta africana* | African elephant | Skin pieces | 51 |
| | *Malayopython reticulatus* | Reticulated python | Leather products (small), skins | 7 |
| | *Neophema chrysostoma* | Blue-winged parrot | Live | 30 |
| | *Neophema elegans* | Elegant parrot | Live | 26 |
| | *Neophema pulchella* | Turquoise parrot | Live | 25 |
| | *Neophema splendida* | Scarlet-chested parrot | Live | 30 |
| | *Neopsephotus bourkii* | Bourke's parrot | Live | 9 |
| | *Northiella haematogaster* | Bluebonnet | Live | 5 |
| | *Platycercus adscitus* | Mealy rosella | Live | 9 |
| | *Platycercus caledonicus* | Green rosella | Live | 4 |
| | *Platycercus elegans* | Crimson rosella | Live | 12 |

**Table 20: Namibia's top 10 countries with commercial exports of CITES-listed species (2014-2023) (continued)**

| Importer country | Species | Common name | Trade terms | Reported quantity |
|---|---|---|---|---|
| **South Africa (continued)** | | | | **281,899.63** |
| 3..63% of commercial exports | *Platycercus eximius* | Eastern rosella | Live | 4 |
| | *Poicephalus gulielmi* | Red-fronted parrot | Live | 2 |
| | *Polytelis alexandrae* | Princess parrot | Live | 24 |
| | *Polytelis anthopeplus* | Regent parrot | Live | 4 |
| | *Psephotellus varius* | Mulga parrot | Live | 20 |
| | *Pseudeos fuscata* | Dusky lory | Live | 6 |
| | *Psittacus erithacus* | African grey parrot | Live | 50 |
| | *Pterocarpus angolensis* | African bloodwood | Logs, sawn wood, timber | 3,840.63 |
| | *Purpureicephalus spurius* | Red-capped parrot | Live | 12 |
| | *Trichoglossus chlorolepidotus* | Scaly-breasted lorikeet | Live | 10 |
| | *Trichoglossus euteles* | Olive-headed lorikeet | Live | 36 |
| | *Trichoglossus haematodus* | Rainbow lory | Live | 30 |
| | *Trichoglossus ornatus* | Ornate lory | Live | 8 |
| **Signapore** | | | | **256,186.43** |
| 3.3% of commercial exports | *Arctocephalus pusillus* | Cape fur seal | Leather products (large), skins | 2,060 |
| | *Equus zebra hartmannae* | Hartmann's mountain zebra | Skins | 1 |
| | *Isurus oxyrinchus* | Shortfin mako | Bodies, fins (wet), fins | 217,641.43 |
| | *Prionace glauca* | Blue shark | Fins | 36,484 |
| **Trinidad and Tobago** | | | | **111,639** |
| 1.44% of commercial exports | *Hoodia gordonii* | Bitter ghaap | Chips | 10 |
| | *Isurus oxyrinchus* | Shortfin mako | Bodies | 111,629 |
| **Morocco** | | | | **106,110** |
| 1.37% of commercial exports | *Isurus oxyrinchus* | Shortfin mako | Bodies | 106,110 |

## Illegal wildlife trade

**The Government of Namibia has warned against poaching, as this may jeopardise the Namibian economy and also lead to the extinction of wild animals** (Matthys, 2015). Poaching has negative economic consequences, as it depletes the country's wildlife. Without wildlife, no income would be generated from the wildlife trade (Ibid.). **Poaching levels for rhino in 2019 were approx. 2% of the total population,** with 52 rhino poached out of a population of approx. 2,200 (MEFT, 2021; Briceno & Perche, 2021), see Text box 17. The number of poached elephants was similar, with a five-year average of 67 per year, although in 2019 the number reported was much lower at 12 (MEFT, 2021).

Martin and Stiles (2017), in their assessment of Illicit Financial Flows (IFFs) related to wildlife trade in southern Africa, estimated that the illegal trade in rhino horn generated approx. USD 43 million per year, and the illegal ivory trade was approx. USD 38 million per year regionally. **A report compiling prosecution cases in Namibia mentions prices of USD 650-1,200 per rhino horn at the poacher level and USD 5,100-7,000 per horn for intermediaries** (Financial Intelligence Centre, 2017). Lindsey et al. (2015) reported that the price of raw ivory in 2015 was at USD 150 - USD 200/kg while foot soldiers may only get USD 100 per hunt. The Financial Intelligence Centre estimates first-level poachers only get approx. USD 33/kg of ivory and has records of illegal sales of rhino horn at less than USD 150 (Financial Intelligence Centre, 2017). **These translate into losses in tax revenue, revenue to legal actors, wildlife populations and the benefits they generate, and an increase in the problems posed by an underground economy, including corruption and crime** (Briceno & Perche, 2021). The illegal wildlife trade impacts the wildlife asset base of the wildlife economy and threatens long-term sustainability.

Text box 17

### The economic impacts of Illegal Wildlife Trade

Since 2014, Namibia has seen a surge in wildlife poaching as a result of increasing international demand and depleting wildlife populations in other parts of the world. This has led to the loss of high-value species (such as elephant, rhino, and pangolin) and concern about ecosystem impacts and associated economic losses. For instance, Namibia has become a key source of illegally sourced rhino horn, with a total of 416 rhino poached between 2013 and 2019, compared to only 13 between 2005 and 2013 (MEFT, 2020b). The biggest costs from these activities, however, are the losses in tourism revenue, trophy hunting, limited live sales, and many other impacts that translate into further losses in tax revenue, loss of wildlife populations, and an increase in the problems posed by an underground economy, including corruption and crime. These costs are still ill-understood.

In response to this surge in wildlife crime, a diverse range of public and private actors have ramped up efforts to curb illegal wildlife trade (IWT) at the national and international levels. Among other activities, the Namibian government established a multi-agency task force, the Blue Rhino Task Team, to combat illegal wildlife crime, and international aid and local funding have been increasingly funnelled towards these efforts. Private game reserves and community conservancies have also invested considerable resources in this effort. These efforts have been relatively successful, slowing down the rate of poaching of rhino and elephant, and increasing the number of arrests for activities related to these types of crimes. However, these investments are being made with little information on the costs of IWT and the benefits of curbing it.

The benefits of curbing IWT are significant and critical to the Namibian economy. Including all tourism and businesses benefiting from the presence of wildlife species, the current total net benefits amount to approx. NAD 18 billion (approx. USD 1.1 billion) over the ten years. Under the business-as-usual scenario, benefits from the wildlife economy by type of actor are as follows;

- The government receives the highest benefits at approx. NAD 260 million (approx. USD 14.6 million) annually- NAD 2.6 billion (approx. USD 146.6 million) over ten years.
- Private landholders also receive significant benefits at approx. NAD 2.5 billion (approx. USD 145 million) over ten years, or approx. NAD 250 million (approx. USD 14.6 million) annually.
- Communities obtain approx. NAD 933 million (approx. USD 52.6 million) of benefits over ten years, or approx. NAD 92 million (approx. USD 5.2 million) annually.

These benefits will be lost if IWT is not curbed.

Source: Briceno & Perche, 2021

**In response to this surge in wildlife crime, a diverse range of public and private actors have ramped up efforts to curb illegal wildlife trade**

## Wildlife ranching

*The following section is taken directly from a GIZ report (2020) and provides an overview of the wildlife ranching industry in Namibia (as of 2020). No newer information was found.*

The dry climate in Namibia results in little of the land being converted to arable agriculture and natural vegetation is rather used for extensive grazing by livestock and wildlife. The Directorate of Veterinary Services (DVS) of the Ministry of Agriculture, Water and Land Reform (MAWLR) develops guidelines, laws, and regulations related to the safety and suitability of game meat. **The Ministry for Environment, Forestry and Tourism (MEFT) issues permits for quotas of game to be harvested, and no game may be harvested in national parks or game reserves without written permission from the MEFT**. Namibia has more than three million head of game and almost the same number as cattle, sheep, and goats. The Ministry for Environment, Forestry and Tourism (MEFT) confirmed that game populations are generally increasing per year, depending on the species.

**The main game species in Namibia that are suitable for commercial game meat production for export are:**

- Springbok (*Antidorcas marsupialis*)
- Gemsbok (*Oryx gazella*)
- Eland (*Taurotragus oryx*)
- Blue wildebeest (*Connochaetes taurinus*)
- Black wildebeest (*Connochaetes gnou*)

The Namibian industry uses the term game meat and not venison, as the meat is derived from wild game and not farmed game (MITSMED, 2019). Some interesting facts from the GIZ, 2020 report on game meat in Namibia:

- Approximately 80% of all commercial farms trade within the game industry.
- Approximately 50% of the main income of these farms come from the wildlife industry.
- There is an increasing focus on wildlife.
- Between 2003 and 2008, the value of game meat exports tripled from NAD 11 million to NAD 31 million (approx. USD 578,947 to USD 1.6 million).
- A further increase in exports was recorded in 2013 with exports worth NAD 50 million (approx. USD 2.8 million).

**Namibia is promoting game meat as a diversification strategy and to improve food security**. The Government is formalising game harvesting and processing into a value chain by developing guidelines for harvesting and processing, information manuals for farmers, veterinary supervision training, game meat festivals, and proper labelling. With the opening of the European Union export market for game meat, new opportunities are being created in primary and secondary production. **The successful commercialisation of game meat products supports local value creation and addition, economic diversification, and food security.** Consultations with industry experts have concluded that, due to the successive droughts of the last decade in Namibia, wildlife populations are limited. Table 21 shows the estimated numbers of commercially harvestable game species on freehold land for 2020.

**Table 21: Estimated numbers of commercially harvestable game species**

| Game species | Estimated harvestable game |
|---|---|
| Springbok | 380,000 |
| Gemsbok | 250,000 |
| Kudu | 200,000 |
| Eland | 40,000 |
| Blue wildebeest | 35,000 |
| Black wildebeest | 20,000 |

Source: GIZ, 2020

The supply chain analysis shows that there is enough commercially harvestable game meat available, as well as demand. However, **the availability and capacity of game meat handling facilities are limiting factors**.

According to MITSMED (2019), **there are no official figures available on the specific contribution of the game meat industry and its value chain to the Namibian economy**. It is estimated, however, **that approx. 50,000 game units are slaughtered in Namibia annually for meat production** (compared to approx. 140,000 head of cattle and 800,000 sheep). **The value of game meat product sales is estimated at approx. NAD 200 million annually, (approx. USD 10.5 million) that is 10% of total revenue earned from local and export meat production and processing, valued at NAD 2 billion (approx. USD 105 million)** (Meat Board, 2015). This would set the industry's **contribution to the GDP at approx. 0.23%**, as meat processing accounts for 2.3% of the GDP (Ibid.).

Furthermore, **game meat is a significant contributor to food security and livelihoods in rural Namibia, as more than 33,000 farm workers and their families benefit either directly or indirectly from game farming**, **harvesting and hunting activities** (MITSMED, 2019). There are strong indications that the underutilised wildlife industry has a huge untapped potential for value addition and diversified income opportunities, especially for communal conservancies in some parts of Namibia as climate change looms (Ibid.). Investments in game production, harvesting and processing can open new opportunities for employment, poverty reduction and wealth creation in Namibia (GIZ, 2020). Own use harvesting of wildlife for meat is vital in reinforcing the importance of wildlife management as a central part of rural life, and is an important in-kind benefit (NASCO, 2023).

**The quantities of game meat produced in Namibia in informal and formal ways are estimated to vary between 3,400 and 18,000 tonnes annually** (Van Schalkwyk et al., 2012). Another opportunity in wildlife ranching in Namibia is crocodile ranching. Crocodile ranching can be a lucrative industry with considerable benefits for rural development and conservation (MEFT, 2014a). Crocodiles are also a valuable species in the sport hunting and ecotourism industries and have considerable tourism value (Ibid.). There are an estimated 1,000 female and 800 male adult wild crocodiles in Namibia and this population has the potential to generate an estimated NAD 1.2 million (approx. USD 110,000) per year with an estimated annual management cost of NAD 500,000 (approx. USD 46,000) (MEFT, 2014a). **Wildlife ranching presents a compelling strategy for economic diversification, food security, and conservation in Namibia.** By capitalising on the economic value of its wildlife, Namibia can foster a thriving and sustainable wildlife economy that benefits both conservation efforts and local communities.

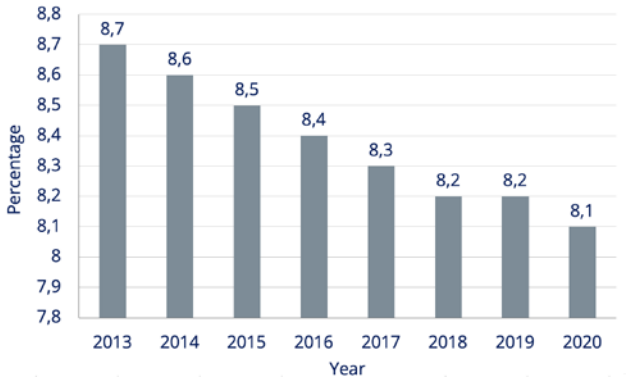
## Forest products

**Forest activities in Namibia are governed by multiple institutions,** including the Ministry of Environment, Forestry and Tourism (MEFT), the Ministry of Agriculture, Water and Land Reform (MAWL), traditional authorities, headmen and other customary leaders, local Non-Governmental Organisations (NGOs), Integrated Rural Development and Nature Conservation (IRDNC) and harvesters (De Cauwer & Beer, 2022) (see Table 22). At the national level the Ministry of Finance plays an important role regarding the import and export of wood (Ibid.).

## Namibia forest trends

**Namibia's forest cover has seen a notable decline over the past ten years.** In 2020, forests accounted for approx. 8.1% of the country's total land area, which is equivalent to 6,638,900 ha. This marked a decrease from the 8.7% reported in 2013, with a 0.6% loss in forest cover (Global Economy, 2023) (see Figure 7). The change in forest cover from 1990 to 2010 reveals an alarming trend, during this two-decade period, Namibia experienced an average annual forest loss of 73,600 hectares, equivalent to a 0.84% decrease each year (Mongabay, 2011). As a result, Namibia's forest cover diminished by a total of 16.8%, (1,472,000 ha) and this was largely due to deforestation for agricultural purposes (Ibid.) (see Text box 18). Table 23 provides data on the extent of forested and other wooded land in Namibia.

**Figure 7: Namibia forest area (% total land area)**




Source: Global Economy, 2023

**Table 22: Authorities involved in regulating and managing forest resources on communal land**

| Resource | Line ministry | Regional government | Traditional authority | Forest Management Committee |
|---|---|---|---|---|
| Land | MLR (control) is responsible for land-use planning; CLBs allocate titling, registration. and leases | Development planning including land-use planning | Allocation of residential and grazing land, endorsement of leases and establishment of community forests | Broad management rights over community forest within gazetted boundaries |
| Grazing | MAWL (advisory) | | Allocates grazing | Authority overgrazing |
| Forest | MEFT (control); DoF manages state forest reserves | Development planning including land-use planning | Management authority | Devolved authority |

*MLR = Ministry of Lands and Resettlement; CLB = Communal Land Board; MAWL = Ministry of Agriculture, Water and Land Reform; MEFT = Ministry of Environment, Forestry and Tourism; DoF = Directorate of Forestry.
Source: De Cauwer & Beer 2022

**Table 23: Estimate of area of forest land by type of land use**

| Forest type | Main use | | |
|---|---|---|---|
| | Total area (ha) | Primary land use (ha) | Secondary land use (ha) |
| Forest | 840,449 | 607,132 | 233,317 |
| Other woodland | 1,152,647 | 779,949 | 372,698 |
| **Total** | **1,993,096** | **1,387,081** | **606,015** |

Source: Namibia Statistics Agency (NSA), 2020

Text box 18

### Causes of deforestation in Namibia

**The reduction in forested areas in Namibia is largely attributed to land clearing for crop cultivation,** as noted by Van Holsbeeck et al. (2016). With the expansion of agriculture, particularly small-scale cereal and pastoral farming, the woodland savannah area in North-Eastern Namibia experienced a decline from 90% in 1975 to 83% in 2004, followed by a slight increase to 86% in 2014. During the same period, agricultural land expanded from 6% to 12% (Wingate et al., 2016). Furthermore, **forest fires pose a significant threat to Namibian forests**, stemming from both human activities and natural causes. These fires occur regularly within Namibia's forested regions, with an annual average of 7% of the land area being affected by fires during the period from 2003 to 2012 (FAO, 2015).

Source: Vrabcová et al., 2019

## Community forests in Namibia

**In an attempt to reduce illegal harvesting of forest resources,** the Namibian Community Forests Policy of 2001, Forest Act of 2001 and 2015 **mandated local community members living in the vicinity of gazetted community forests to manage and utilise forest resources sustainably** (Cauwer & Beer, 2022). Community Forests (CFs) operate on the principles of empowering people living within an area to harvest and manage their forest resources sustainably (MEFT/NACSO, 2022). **This also includes the right to generate income from forest products provided that sustainability is at all costs taken into consideration**. **There are currently 46 registered community forests in Namibia, covering approx. 85,192 km²** within 10 regions in the northern part of the country (Ibid.). Resource monitors and harvesters are often women; **the income generated from forest products is thus critical for gender empowerment and supporting female-headed households** (MEFT/NACSO, 2021). Hence, community forests empower local people to take responsibility and to become actively involved in forest management, thereby increasing the value and benefits of forest resources to local people (NACSO 2023). See Table 24 for details on Ohangwena, Caprivi, Okongo and Kwandu Community Forests.

**In the Kavango Region, for example, the four gazetted community forests generated a total of NAD 98,100 (approx. USD 8,000) in 2009** (*The data is 13 years old and no newer data was found)* (Mogotsi et al., 2016). Income variations between CFs depend on the availability of resources, the efficiency of management procedures and the commitment of stakeholders (Ibid.). Benefits are shared at regular intervals between traditional authorities, management bodies, communities' development funds and investments according to a benefit-sharing plan (Mogotsi et al., 2016). Community Forest management bodies and communities are trained to focus on sustainable forest and habitat management practices to prevent forest degradation and soil erosion, stop depletion of natural resources and protect wildlife habitats (NACSO, 2010).

## Forest products and their economic value

**Namibia's forests provide valuable forest products and ecosystem services**, despite the relatively low tree density (De Cauwer & Beer, 2022). Forest in Namibia serves as a **source of wild fruits, firewood, charcoal, timber, building and construction materials, fencing materials (poles, droppers), windbreaks, and glue to soil erosion** (Kazapua et al., 2021). The products and services not only benefit local communities but the entire Namibian population and economy while ecological services have an impact at a global level (De Cauwer & Beer, 2022). **Hence, the value of Namibia's forests is much more than just the wood; it includes the ecological and socio-economic value, which is much larger and more difficult to quantify** (Ibid.).

**Table 24: Forests of Namibia in Ohangwena, Caprivi, Okongo and Kwandu Community Forests**

| | Namibia | Ohangwena | Caprivi | Okongo | Kwandu |
|---|---|---|---|---|---|
| **Total area** | **82,411,600** | **1,070,300** | **1,452,800** | **76,758** | **19,936** |
| Households | 346,455 | 35,958 | 16,839 | 229 | 210 |
| Population | 1,830,330 | 228,384 | 79,826 | 1,000 | 699 |
| **Total wooded area** | **15,580,000** | **n/a** | **n/a** | **55,918** | **19,888** |
| Production forest area | 8,346,730 | n/a | n/a | 42,357 | 11,575 |
| $m^3$/ha in production forest area | 31.18 | 20.00 | 21.37 | 43.2 | 23.1 |
| **Total volume, $m^3$** | **256,861,237** | **21,388,000** | **30,915,979** | **2,400,000** | **459,604** |
| Community forest area, ha | 394,721 | 56,500 | 65,874 | 55,918 | 19,888 |

Source: Parviainen, 2012

Prior to 2012, forest products **resulted in direct contribution to the GDP of NAD 1 billion (approx. USD 160 million),** which is **approx. 3% of the GDP** (Barnes, et al., 2010; UNEP, 2012). In 2019 the total direct and indirect economic contribution of forest products was approx. **NAD 1.8 billion (approx. USD 288 million)** (Vrabcová et al., 2019). **The main contribution was from Non-Timber Forest Products (NTFPs)**. A study by Vrabcova et al. (2019) on the income generated from Uukolonkadhi community forest from 2009 to 2016, showed that there is potential to generate monetary income from community forests products, however, due to erratic climatic conditions, there are fluctuations in the income generation, most especially from the forest products that are directly dependent on the rainfall. See Text box 19 for more information.

**Forest products,** such as timber and non-timber forest products, **can generate employment opportunities, particularly in rural areas where forests are located. A study** by Mogotsi et al. (2016) **revealed that community members can also generate income from forest resources by trading their labour or selling the harvested forest products.** Jobs may be created through activities such as timber harvesting, processing, value-added production, and collection of non-timber forest products (Mogotsi et al., 2016). Hence, these employment opportunities can provide a source of income for local communities and contribute to rural livelihoods. **Community Forests generated over NAD 58.3 million (approx. USD 3.3 million) for local communities in 2012 and facilitated the creation of 6,477 jobs and 99 enterprises based on natural resources** (NACSO, 2012).

Text box 19

## Utilisation of forest resources and socio-economic development in Uukolonkadhi community forest

Uukolonkadhi Community Forest (100,000 ha) is located in Omusati Region in the North-Central region of Namibia. Harvesting permits for poles is the main source of income. Uukolonkadhi Community Forest (UCF) is dominated by Mopane *Colophospermum mopane* which provides many non-timber forest products such as mopane worms (*Imbrasia belina*), which attract many harvesters from other regions. Apart from mopane worms, silver cluster-leaf (*Terminalia sericea)* is another economically important species from which people produce farming tool handles such as hoes and axes, because of its good quality. Honeybee production has a long tradition in UCF, even though it has not been considerably commercialised owing to the fact that there are few people with keeping and harvesting skills. Income generation has been consistently generated from permits sold to harvest poles, and firewood.

The rest of the resources were not consistent in income generation. For instance, it was observed that there was no income generated from mopane worms between 2009 and 2016 (see Table 25). Similarly, no income was generated from honeybees between 2013 and 2016.

Harvesting permits for firewood is another source of income that yielded approx. NAD 11,982 (approx. USD 659). This was mainly due to the majority of the rural communities that do not have access to formal power supply, particularly electricity. As a result, these local residents depend on firewood for heat and, in some cases, for light energy. However, some of the major observed challenges facing the UCF were the high level of illiteracy among the community management staff. Therefore, it is of vital importance that more qualified foresters and forestry technicians are hired and allocated to all community forests. Furthermore, adequate funds are needed from the government and donors to support incentives and forest activities in community forests. There has been a fluctuation in the income generation over the years. This has mainly been because not all the products could generate income every year owing to the ever-changing climatic conditions in Namibia. For example, poor rainfalls were received in 2009–2010 and 2015–2016, especially in the northern regions of the country. This greatly affected the community forest production and consequently the total income. Moreso, record keeping in community forests needs improvements, the results show that there were no records for production in 2011–2012.

Source: Vrabcová et al., 2019

**Table 25: Income generated from Uukolonkadhi Community Forest (2009 – 2016)**

| Production period | Permits for poles | Permits for firewood | Auctioned poles | Fines | Bees | Mopane worms | Seedlings | Fruits | Wood Transportation permits | Sub-total |
|---|---|---|---|---|---|---|---|---|---|---|
| 2009 – 2010 | 20,015 | 888 | 940 | 200 | 150 | - | - | - | - | 22,193 |
| 2010 – 2011 | 29,475 | 15,46 | 735 | 58 | 661 | 2,106 | 4,096 | – | – | 37,131 |
| 2013 – 2014 | 18,234 | 11,094 | 145 | – | – | – | 416 | 25 | – | 29,914 |
| 2014 – 2015 | 29,475 | 15,46 | 735 | 58 | 661 | 2,185 | 4,096 | – | – | 37,210 |
| 2015 – 2016 | 9,375 | 22,38 | 785 | 930 | – | – | 80 | – | 219 | 11,389 |
| **Total** | **106,574** | **11,982** | **3,340** | **1,246** | **1,472** | **4,291** | **8,688** | **25** | **219** | **137,837** |

Source: Vrabcova et al., 2019

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## Participation of men and women in forest products

**Men and women have unequal access to, and use of, forest resources.** For instance, harvesting permits for *Devil's Claw* species for commercial purposes requires a proof of training attendance, a requirement **which might disadvantage women to an extent** (Mogotsi et al., 2016). Women **mainly participate in less commercial non-timber forest resources,** which include medicinal and edible plants and agro-forestry resources such as marula and palm tree products that contribute to household health and food security (Ibid.). Hence **the unequal access to forest resources and use is accentuated by the fact that men derive their income from higher value and/ or commercial products,** such as charcoal, timber, and honey, while women rely more on wild fruits, tubers, mushrooms, and edible insects (USAID,2017). In terms of construction poles, this resource used to be harvested by men only, but currently women also apply for permits to harvest poles (Mogotsi et al., 2016). Some of these resources have organised markets that provide opportunities to both males and females to sell high valued products such as *Devil's Claw* (Ibid.) (see the non-timber forest product section for more information).

## Timber products

**Approximately 4,000 plant species have been identified in Namibia**, of which 10% are woody trees (Vrabcová et al., 2019). In Namibia, **harvesting timber is regulated under the Forestry Act, of 2001,** which stipulates conditions for permitting activities, and for the use of forests and forest produce. **Timber harvesting is further listed under the Environmental Management Act of 2007** as an activity that requires an Environmental Clearance Certificate from the Directorate of Environmental Affairs.

Approximately **75,000 tonnes of Namibian timber were exported in 2019, mainly to China** (Kabajani et al., 2021). The timber industry is estimated to be worth **over NAD 24 million (approx. USD 1.4 million) a year in revenue for local farmers and landowners** (See Text box 20 on the local and commercial use of timber in Namibia) (Ibid.). A study by Vrabcová et al., (2019) on Uukolonkadhi Community Forest also revealed that, during the production period of 2009 to 2016 the highest income generated **was generated from permits for poles (USD 106,574).** This is because poles are the main forest products in most forests and woodlands of Namibia (Vrabcová et al., 2019): see Text box 19.

### Text box 20

### Local and commercial use of timber in Namibia

**Local users mainly harvest smaller trees for construction purposes, fencing, or for sale**. Communal farmers mostly build houses and fence their homesteads and kraals with poles. For example, people living near M'Kata Community Forest in Otjozondjupa need an average of approx. 54 poles per household to construct or renovate a house and every third year a house is constructed or renovated (Otsub et al., 2003). Other wood uses include woodcraft and domestic tools such as axe handles, pestles and mortars, cooking sticks, and slingshots (Knox et al., 2018).

**The most important commercial timber species are kiaat** *(Pterocarpus angolensis)*, **Zambezi teak** (*Baikiaea plurijuga*), and **false mopane** *(Guibourtia coleosperma),* all indigenous species as there are no timber plantations in Namibia. Only the merchantable or squared logs are traded, with the remaining harvested wood being underutilised. For kiaat, which has a large portion of sapwood, this is approx. 28% of the utilisable timber wood volume (Moses, 2013). Even then, the timber use-value of kiaat, estimated at NAD 485, (approx. USD 26) for a tree of harvest size, surpasses the carbon value. Untreated poles are sometimes sold by private farmers on a commercial scale.

Source: De Cauwer & Beer, 2022

## Firewood

In Namibia, **one of the most crucial timber products is firewood, primarily used for domestic energy needs, particularly cooking** (De Cauwer & Beer 2022). Research revealed that nearly two-thirds of the Community Forest (CF) members surveyed in the Kavango and Zambezi regions rely solely on wood harvesting for fuel (Ibid.). Notable fuelwood species include mopane and purple pod terminalia (*Terminalia prunioides*), with the latter being particularly common in the Kunene region, reaching an average height of five metres.

**Approximately 50,000 tonnes of firewood were sold in Namibia in 2019, potentially creating 380 full-time jobs in harvesting and production** (Schade, 2021). In the Masida Community Forest, approx. 98% of households reported the use of firewood as their primary energy source for cooking (Karupu, 2019). The majority of harvesting permits issued between 2008 and 2016 were for 6.8 tonnes of firewood from *Colophospermum mopane*, while only one tonne of sicklebush (*Dichrostachys cinerea)* was recorded in 2012 (Ibid.). This totals 7.8 tonnes of commercially harvested firewood. The utilisation of firewood as a primary energy source for cooking underscores its crucial role in the Namibian context, highlighting the **need for sustainable harvesting practices to conserve this valuable timber forest product.**

## Charcoal

In terms of charcoal production, according to the Namibia Charcoal Association (NCA), the four species that can be used include black thorn (*Acacia mellifera*), umbrella thorn (*Acacia reficiens*), sickle bush (*Dichrostachys cinerea*) and flood plain acacia (*Acacia kirkii*) (Schlechter, 2019). The use of mopane trees (*Colophospermum mopane*) is also allowed, but only with special permission from the MEFT (Ibid.). However, the use of trumpet thorn bush (*Catophractes alexandri*), African wild sage (*Tachonanthus camphoratus*) and brandy bush (*Grewia flava*) is prohibited, as these species provided valuable grazing to livestock and wildlife (Schlechter, 2019).

**Namibia produces approx. 100,000 – 120,000 tonnes of charcoal per year** (Ministry of Industrialisation, Trade and SME Development, 2017). Almost all charcoal produced in Namibia is exported, making **Namibia one of the largest global exporters of wood charcoal,** consistently ranking among the top ten exporters during the past decade (Beck, 2020). Annual charcoal exports as recorded in official Namibian trade statistics have almost quadrupled over the past 15 years and stood at **185,820 tonnes worth NAD 662.5 million (approx. USD 36.8 million) in 2019** (Ibid.). The Namibia Charcoal Association (NCA) estimates that approx. 55-60% (i.e at least 100,000 tonnes) of **Namibian charcoal was exported directly to Europe in 2019** (Beck, 2020).

Export of wood charcoal has increased substantially since 2011 from NAD 125 million (approx. USD 6.9 million) to NAD 662.5 million (approx. USD 36.8 million) in 2019, contributing 0.7% to total exports (Ibid.). The export value rose by more than 25% in 2020 to NAD 824 million (approx. USD 45.3 million) (Schade, 2021). **The charcoal exports have contributed approx. NAD 4.1 billion (approx. USD 215 million) to Namibia's foreign exchange reserves between 2009 and 2020** (Ibid.).

**The rate of employment in charcoal production and processing has increased substantially over the years amounting to 10,000 workers in 2019 compared to some 6,000 in 2016/17** (Schlechter, 2019; Schade, 2021). This represents 88% of the 11,300 jobs in the biomass industry (Beck 2020, Schade, 2021). There are approx. 26 charcoal processors operating mainly in the area of Outjo, while other companies operate around Grootfontein, Otjiwarongo and elsewhere and **charcoal processors employed approx. 1,350 workers** (Schade, 2021). Due to the harsh conditions in charcoal production only 14% of the workforce were women (Ibid.). **It is important to note that charcoal production is generally not included in the wildlife economy due to the largely unsustainable nature of the industry. It has been included here to illustrate the size of the sector and to highlight the need for sustainable practices.**

## Non-Timber Forest Products

Non-Timber Forest Products (NTFPs) play an important role in the day-to-day lives of many rural households in Namibia. They **contribute to the improvement of rural livelihoods through the provision of food, nutrition and medicine, and create job opportunities** (Kamwi et al., 2020). **NTFPs, such as wild fruits, mopane worms, grass, marula oil, and devil's claw, are traded in both formal and informal markets** (Ibid.).

Data on the contribution of NTFPs to rural household income is important for both rural development and forest management policies because of their potential role in poverty alleviation and the growing demand among both rural and urban households (Mogotsi et al., 2016). **Non-timber forest products contributed 34% to household income in 2008 (Mulenga et al., 2011)**. **However, estimating the value and volume of NTFPs is difficult**, both because most NTFPs are used for subsistence purposes and records are therefore lacking because products that are traded internationally fall under different product categorisation codes (Mogotsi et al., 2016).

**In 2014 it was estimated that the annual contribution of NTFPs to Namibia's GDP was between NAD 30–50 million (approx. USD 1.7 million - USD 2.8 million), with the potential to increase considerably** (Cole, 2014). In 2009, over 401,728 kg of selected indigenous plant products (Devil's claw, Hoodia, Kalahari melon seed oil, Marula oil, Ximenia oil and Commiphora resin) amounting to NAD 22 million (approx. USD 1.3 million) were exported out of Namibia (INP, 2011).

A study conducted by Kamwi et al., (2020), focusing on Mukwe Constituency, revealed that approx. 71% of the survey respondents depend on NTFPs for various aspects of their livelihoods. Moreover, approx. 77.5% of the respondents are engaged in the sale of NTFPs, thereby generating monthly income. The most sold NTFPs in the Mukwe Constituency were thatch grass, accounting for 32% of sales, followed closely by wild fruits at 31%. Ropes constituted 10% of sales, medicinal plants 7%, and there were other items such as devil's claw and mopane worms making up 6% of sales (Kamwi et al., 2020).

The next section includes details on a selection of NTFPs. Socio-economic data for these was often difficult to find, but they are included to highlight the diversity of NTFPs in the country. **The collection of NTFP data in terms of income, subsistence value and employment should be included in national household surveys in order to highlight the enormous value of these and, therefore, the importance of the conservation of the natural resources and the related sustainable use of them.**

## Apiculture

Beekeeping in the Zambezi Region gives communities from CFs the potential of livelihood diversification and economic improvement (Chase, 2022). It is an income supplement for subsistence farmers in rural Africa (Ibid.) and is one of the most promising NTFPs in north-eastern Namibia (Hilfiker, 2011). **Honey collected from wild bees is a major source of cash income in the wetter Miombo woodlands of Namibia** (De Cauwer & Beer 2022)**.** Despite less favourable environmental conditions such as the availability of water and vegetation, **the Department of Forestry (DoF) continues to promote beekeeping as an agent for pollination and an income opportunity for communities** (De Cauwer & Beer 2022; Hilfiker 2011). Honey production has been successful in many central and east African countries, establishing beekeeping enterprises, both for subsistence and commercial farmers (Chase et al., 2022), highlighting that there could be potential in Namibia.

National data was not found but the Sikanjabuka Beekeeping Initiative in Namibia was found to support 21 community members (nine men and 12 women) by providing training and equipment for apiculture (Frans & Himufe, 2025). A 500-gram jar of honey is sold at NAD 100 (approx. USD 5.67) and the initiative earns roughly NAD 10,000 (approx. USD 570) per year (Ibid.).

## Edible insects

**Edible insects play an important role in sustaining rural livelihoods** (Gahukar, 2020). **Harvesting and selling insects improve rural livelihoods by providing an income** that is used for basic needs such as paying for school fees, food, and electricity bills (Ibid.). Trading edible insects also **provides seasonal employment and creates earning opportunities in rural communities** in southern Africa including Namibia (Thomas, 2013). The most popular insects are caterpillars and termites; however, other insect species are also eaten (Kelemu *et al.,* 2015). According to FAO (2013) **the mopane caterpillar is arguably the most popular and economically important caterpillar consumed in Namibia.** The next sections look at two examples:

### Termites

Termites are eaten around the world, including in Africa, Asia, and South America. Usually, these insects are eaten to

Text box 21

## Sustainable harvesting and trading of mopane worms in northern Namibia

**Mopane worm *(Imbrasia belina*) harvesting is one of the ways through which rural communities boost their household economies and nutrition.** Mopane worms are a major rural industry and its trade appears to be a profitable source of income for both formal and informal traders. In Namibia, traditionally the caterpillar is harvested by rural families for their own consumption, but local entrepreneurs have started to harvest mopane caterpillars to sell at urban markets.

In Namibia, all those who are willing to collect caterpillars during the harvesting period are required to **carry a valid written harvesting permit.** This permit is obtained from the village headmen and trusted community members at the Uukwaluudhi Traditional Authority (UTA) office in Tsandi settlement in the Omusati region. Uukwaluudhi inhabitants pay USD 2.86/permit, and non-residents pay USD 5.71/permit. Payment for a harvesting permit is necessary to cover UTA administrative costs.

The permit does not stipulate the valid period for harvesters to stay in the forest. Due to poor monitoring systems and, therefore, the illegal harvesting of mopane worms, it would be better to have only small groups of harvesters which would be easy to monitor and control. In addition, there is no punishment for illegal harvesters when found by law enforcement agents (police officers and directorate of forestry officials). Thus, anyone found in possession of mopane worms without a valid permit is not fined and the products are not confiscated and auctioned by the Forest Management Committee (FMC) of the Ministry of Agriculture, Water and Forestry (MAWF). **This lack of enforcement of regulations threatens the sustainability of the NTFPs.**

**Recommendations for the better management of the Namibian mopane worm industry include:**

- The government should improve the property rights and institutional arrangements that govern the use of common property resources such as mopane worms by introducing specific natural resource management systems.
- UTA should become strict in the issuing of harvesting permits and monitoring of the harvesting of mopane worms by securing the participation of the Namibian police and government, especially MEFT and MAWF in its implementation strategy.
- The harvesting permit should stipulate a quota per harvester and the size of worms to be harvested. In addition, the number of days a harvester is allowed to spend collecting mopane worms in the forest should be limited and specified on the harvesting permit. It is also recommended that UTA should produce a range of permits at different costs depending on the quantity a person is wanting to harvest.
- The MAWF should introduce appropriate technology for the processing and storing of mopane worms which meets acceptable food safety standards.
- To benefit economically, mopane worm harvesters should establish a cooperative based on internationally acceptable principles.

Source: Thomas, 2013

increase protein and fat consumption in rural areas or areas that experience higher rates of malnutrition (Hlongwane, *et al.,* 2020). The most important termite species (*Macrotermes* spp) eaten in Namibia are *M. falciger, M. michaelseni, M. natalensis, M. sybhyalinus, and M. vitrialatus* (Ibid.). For those that emerge during the night, the most common way to collect them is to place a lamp above a bowl of water where they are attracted to the light and fall into the water from which they are scooped. No data was found on the subsistence or economic value of termites.

### Mopane worms

The mopane worm (*Imbrasia belina*) is the caterpillar of a moth of the Saturniidae, which feeds primarily on the leaves of mopane (De Cauwer & Beer, 2022). Mopane worms (*Gonimbrasia belina*) **are an important source of food and income for households in northern Namibia** (Togarepi et al., 2020). The caterpillars are dried before consumption or sale in both rural and urban centres and provide an important source of protein. The supply of mopane worms, however, varies from year to year, depending on rainfall (De Cauwer & Beer 2022).

**The bulk of harvesting and processing of mopane worms in northern Namibia is done by women and children** (Thomas et al., 2013)**.** It was established that approx. 85% of harvesters were women and 15% were men (Ibid.). **These caterpillars play an important role in food security and poverty alleviation for the majority of poor households in Namibia. The trade of mopane worms is an important form of employment, particularly for unemployed rural people in the two constituencies of Tsandi and Okahao constituencies in Namibia** (Togarepi et al., 2020)**.** The communities in Tsandi and Okahao constituencies indicated that unemployed people depend on mopane worms for economic empowerment, as they have the potential to generate higher income levels that can improve their livelihoods (Ibid.). The production of mopane worms is, however, seasonal, thus they cannot be relied on all year or even every year, if not harvested in substantial amounts.

**Mopane worms are sold in rural and urban informal markets such as at open markets, roadside, local *cuca* shops, etc.** (Thomas, 2013) (see Text box 21). In northern Namibia, the harvesters sell caterpillars as raw, cooked or fried. For example, a tin (500 g) full of raw or dried semi-cooked

mopane worms on average is sold at USD 1.43 (Thomas, 2013). In addition, a 50 kg bag of raw mopane worms is said to be relatively profitable with an average gross income of USD 71.43 (Ibid.). **According to Thomas (2013), in rural areas, some harvesters also exchange mopane worms in kind (bartering) for other food.** However, no other economic data was found on the value of mopane worms, though it has been shown to be an important protein source for poorer households and should be researched further.

## Medicinal plants

Traditional medicine has been the trusted, acceptable, affordable and accessible source of health care for African populations for centuries (WHO,2022). Medicinal plants play a vital role in healthcare systems by providing traditional medicine, especially for rural communities who often rely on them as the most accessible primary care option (Cheikhyoussef et al., 2011). **In 2010 Namibia had approx. 2,400 traditional medical practitioners** who were registered with the National Eagle Traditional Healers Association (NETHA), but the actual number practising was higher (Cheikhyoussef et al., 2011).

The traditional medical practitioners reported **that 53 plant species were in demand for medicinal trade in Windhoek** (Cheikhyoussef et al., 2011). In the 1990s a study by Leger, identified more **than 80 medicinal plant species** used to treat approx. **30 medical diseases** in the Tsumkwe District (formerly Bushman land) of Namibia's Otjozondjupa region (Leger et al., 1998). In Oshikoto region, 47 respondents reported **61 medicinal plant species that belonged to 25 families were used to treat 43 types of ailments and diseases in both humans and animals** (Cheikhyoussef et al., 2011). The most cited plants mentioned by the respondents were: African teak (*Pterocarpus angolensis),* Sour plum *(Ximenia americanum, Ximenia caffra)* and Leadwood *(Combretum imberbe)* (Ibid.). Preparation of traditional medicine includes pounding and grating as pre-processing followed either by soaking or boiling to make a concoction or decoction respectively (Hailwa, 1998).

**In the Kavango region of Namibia, 48 different plant species belonging to 22 distinct families were identified for their potential in treating various diseases such as malaria, diarrhoea, sexually transmitted infections, and tuberculosis** (Chinsembu et al., 2011). The study assessed

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Text box 21

### Promoting sustainable harvesting of Devil's Claw in Namibia

The GIZ BioInnovation Africa (BIA) project has fostered an innovative partnership between Givaudan, the Namibian Devil's Claw Exporters Association Trust (NDCEAT), and the Namibian Network of the Cosmetic Industry (NANCi) to promote the sustainable harvesting of Devil's Claw (*Harpagophytum procumbens*) in Namibia. **This collaboration aims to strengthen the value chain by improving traceability, ensuring fair trade, and safeguarding the long-term sustainability of the resource.**

Through the development and implementation of the Namibian Good Agricultural and Collection Practices Plus (GACP+) standards and guidelines, the partnership has introduced responsible harvesting protocols aligned with international standards such as the World Health Organisation and GACP guidelines. These standards guide harvesters on proper collection and primary processing methods, ensuring the protection of the plant's taproot and maintaining product quality. As a result, both ecological and economic benefits are being realised. Harvesters are adopting practices that allow the plant to regenerate, while exporters, such as Procumbens Exporters, report improved product quality and traceability. **This initiative demonstrates how multi-stakeholder partnerships can successfully balance biodiversity conservation with local livelihood enhancement**, securing the future of the Devil's Claw industry in Namibia for generations to come.

Source: GIZ, 2025

the different modes of application of these plants and found that drinking (53%) was the most common mode of application followed by rubbing (22%), steaming (18%) and oral wash (7%) (Ibid.). Drinking was commonly used for diseases caused by internal parasites and steaming was mainly used to treat fever-related symptoms, while rubbing was used for diseases caused by external parasites or diseases which show external physical symptoms such as wounds and sores. **Most medicinal plant species play a direct economic role in local communities, as well as contributing to the overall health of the population.**

## Devil's claw

Devil's Claw (*Harpagophytum genus)* is the collective term for plants belonging to the Harpagophytum genus. Devil's Claw utilises the secondary root tubers in botanical drugs and supplements, which are primarily sourced from Southern Africa, particularly Namibia (Brendler, 2021). It is one amongst many 'natural' products that have experienced a rapid increase in consumer demand over the last two decades (Lavelle, 2019). Devil's Claw harvesting is a crucial livelihood for many people, it serves as their primary source of income, particularly **in Namibia where an estimated 5,000 to 10,000 harvesters are involved** (NRI, 2011a). These harvesters depend on the sale of Devil's Claw to sustain their households' food security. In 2006 the annual earnings per harvester ranged from NAD 100 to NAD 500 (approx. USD 16 to USD 83) depending on the quantity harvested (Wynberg 2006). Over time, the number of Devil's Claw harvesters and their income gradually increased. However, the figures vary significantly from year to year in Namibia's Zambezi Region, ranging **from 34 harvesters earning a total of NAD 98,650 (approx. USD 7,588) in 2015 to 161 harvesters earning a total of NAD 965,994 (approx. USD 74,307) in 2017** (Lavelle, 2019). On average, each harvester's annual income fluctuates between NAD 949 (approx. USD 73) and NAD 6,000 (USD 462) (Tjiteere, 2017).

**In 2002, Namibia was the world's largest supplier of Devil's Claw, estimated at over 1,000 tonnes** (Mwandemele et al., 2006), and **accounting for almost 95% of global trade** (INP, 2011). **Exports from Namibia have varied annually ranging from 300 to 700 tonnes** (MEFT, 2015). The value of Devil's Claw exported was estimated to be NAD 21.5 million (approx. USD 1.3 million) (from the export of 686 tonnes) (MEFT, 2010). The final product on the international market retailed at USD 300 to USD 700 per kilogram with annual global retail sales worth an estimated USD 42 million (NRI, 2011a). **In Namibia, approx. USD 1.5 million (3.6%) is captured in foreign exchange earnings by exporters and middlemen** (Lavelle, 2019). Five or less exporters handle 80-90% of the export volumes (NRI, 2011a). **Therefore, even as the predominant exporter, Namibia earns at most 4% of the USD 100 million in international trade of devil's claw products,** and despite co-management and benefit-sharing interventions, local harvesters earn no more than 0.5% of the trade (NRI, 2014).

In the Omaheke region, communities from the Eiseb and Omuramba ua Mbinda conservancies earned nearly NAD 300,000 (approx. USD 16,461) from Devil's Claw sales in a single event in 2021 (NACSO, 2021). However, **over-harvesting remains a risk for sustainability of the sector.** The growing global demand has increased pressure on resources, one that is already adversely affected by climate change. See Text Box 21 on promoting sustainable harvesting through a multistakeholder partnership. Also, see the wildlife trade section for more information on the trade in Devil's Claw.

## Edible plants

Plant food products are significant components of many rural communities' diet in southern Africa (Hidalgo et al., 2020). Many of the plant species in Namibia are traditionally used for food, medicine, oils and other products with existing or potential commercial markets (UNEP, 2012). The edible plants found in Namibia include fruits, leaves, seeds and nuts, tubes and roots among others. Fungi also play a major role during the rainy season (Ibid.). According to Elago & Tjaveondja (2015) in Namibia, **plant foods are amongst the most important NTFPs**. Of all the tree species in **Namibia, 157 species (35%) have been recorded as being used for food** in one form or another (Mendelsohn & Obeid, 2005). No socio-economic data was found on the value of edible plants.

## Myrrh

Namibian Myrrh *(Commiphora wildii)* is a species of myrrh occurring mostly in the Kunene Region's hilly terrain; it grows as a shrub with lateral growing branches that can reach heights of 1-2.5m and produces an aromatic resin that is utilised in fragrances as well as in pharmaceuticals (Albertina, 2018). Most *Commiphora wildii* species are conserved within conservancies that were formed primarily for wildlife and tourist purposes; several of the species found in the Kunene region are considered endemic or near-endemic (Nott, 2014). *Commiphora wildii* resin has long been used as a component in body lotion by Himba women in Namibia; however, there are no legal restrictions in place to prevent overharvesting of the species (Ndeinoma & Wiersum, 2016).

The resin of *Commiphora-wildii* is sold for NAD 100/kg, (approx. USD 5.8) and the essential oil is sold for NAD 5,000/kg (approx. USD 289.75/kg) after value addition, and individual harvesters are paid NAD 50 (approx. USD 2.9/kg) of resin or gum delivered to the conservancy purchasing station (Anon, 2022). **Individual harvesters may earn between NAD 1,000 (approx. USD 57.95) and NAD 5,000 (approx. USD 289.75) throughout the three to four-month harvesting season** (Ibid.).

## Wild fruits

Wild fruits form an important source of nutrition and income, especially towards the end of the dry season, or during droughts when crops fail, and the forest resources act as a safety net (De Cauwer & Beer, 2022). In the Zambezian Baikaea woodlands, the fruits of false mopane (*Guibourtia coleosperma*) or *ushivi*, Kalahari podberry (*Dialium englerianum*), marula (*Sclerocarya birrea*), monkey orange (*Strychnos spinosa*) or *maguni*, the dwarf jackal-berry (*Diospyros chamaethamnus*) and raisin bush (*Grewia flava*) are eaten fresh or used to make alcoholic beverages (De Cauwer & Beer, 2022; Knox et al., 2018).

**The primary source of income in the rural West Constituency of Namibia is derived from the sale of indigenous fruits, accounting for 51.6% of the revenue** (Elago, 2015). Approximately 96.8% of households in this constituency have reported that these indigenous fruits significantly contribute to their food security (Ibid.). Furthermore, wild fruits are also crucial in the production of traditional fermented foods and beverages, holding sociocultural and nutritional significance in Namibia while serving as a source of income (Misihairabgwi et al., 2017).

In Namibia, various wild fruits, such as marula (*Sclerocarya birrea*), bird plum (*Berchemia discolor*), jackal berry (*Diospyros mespiliformis*), makalani palm (*Hyphaena petersiana*), manketti (*Schinziophyton rautanenii*), buffalo thorn (*Ziziphus mucronata*),

and large false mopane (*Guibourtia colesperma*), are known for their juices, which can be fermented into alcoholic beverages (Misihairabgwi et al., 2017). Marula, monkey orange (*Strychnos spinosa*), and bird plum are particularly suitable for producing high-quality commercial products (Ibid.). The unique fruit flavours from marula and monkey orange can also be harnessed in the creation of new dairy and soft drink products, including yoghurts and ice creams (Misihairabgwi et al., 2017).

**Wild fruit trees not only provide employment opportunities but also generate income for rural communities as a whole.** However, a comprehensive assessment of the economic contributions of specific types of wild fruits is lacking, even though it is widely acknowledged that these fruits play a vital role in the daily diets of many people (Knox et al., 2018). Limited research has focused on individual tree species to ascertain their nutritional or economic value.

## Edible mushrooms

**Namibia boasts a diverse range of edible fungi (mushrooms),** with their presence predominantly observed during the rainy season. Among the most commonly consumed wild mushrooms in Namibia are Panaeolus papilionaceus (*Kakalahambo*), Kalahari Desert truffles (*Terfezia pfeilii or omatumbula*), Termitomyces sagittiformis (*okahauhwilili or uuhilili*), Termitomyces schimperi (*Owowa or Oova*), and Termitomyces reticulatus (*Oshaamuya or Oshihamuya*) in northern Namibia (Stofberg, 2021).

The most renowned mushrooms in Namibia are the termite hill-mushrooms, belonging to the Termitomyces genus (Fizzin, 2021). These mushrooms are also known as *Omajowa*, a Herero term referring to Namibian termite or ant hill mushrooms (Ibid.). They are notably abundant between Oshivelo and Tsumeb in the Oshikoto region, located east of Etoshapan (Fizzin, 2021). Harvesters gather these mushrooms and sell them along the roadside. Although the price is not fixed, it typically ranges from USD 0.50 to USD 1.20 per kg (Stofberg, 2021). Another mushroom species found in Namibia is the Kalahari truffle, in rural areas, people collect these mushrooms, which often serve as a meat substitute in many meals (Fizzin, 2021). In general, various edible wild mushrooms are well recognised among Namibian farmers and are widely consumed in the northern regions during the rainy season (Kadhila-Muandingi, 2010).

Text box 22

### Marula oil: Eudafano Women's Cooperative

The Eudafano Women's Cooperative serves as a prominent example of successful practices connecting local communities to the global market. This cooperative unites approx. 2,500 Namibian women and their respective communities, all engaged in the harvesting of marula fruits. Marula trees are abundant in northern Namibia, and the fruits are readily gathered.

The Eudafano Women's Cooperative plays a pivotal role by extracting valuable ingredients from the seeds of indigenous plants, such as the marula, which are in demand by the domestic and international cosmetics industry. Marula seed oil is particularly prized for its richness in elements essential for preserving human skin, making it an ideal cosmetic ingredient. The women who are part of this cooperative derive their livelihoods from the harvesting and utilisation of marula fruits. The Cooperative conducts its operations while adhering to a set of guidelines focused on environmental, social, and economic sustainability.

Over the years, its revenues have seen a steady increase. For instance, in 2020, the Cooperative generated approx. USD 158,000 in sales from marula kernels, marking a 14% increase from the previous year. **The Cooperative places a strong emphasis on economic empowerment by ensuring that its members receive fair prices for their contributions.** It's important to note that the income generated by Cooperative members is seasonal, as marula fruits are harvested during specific months, typically between May and November. This Cooperative has established itself as one of the leading producers of marula oil in the southern African region, and its governance structure is exclusively composed of women from the community. The Cooperative is committed to expanding its membership and providing training in organic farming methods to further enhance both its marula oil production and conservation efforts.

Source: UNCTAD, 2021

Wild mushrooms have the potential to enhance food security in Namibia, particularly in addressing the issue of malnutrition, affecting 11% of the country's poorest population (Fernandes et al., 2021). Educating people about which wild fungi are safe to consume, people and families can sustain themselves or generate income by selling these mushrooms at local markets or roadsides (Rothnman et al., 2020).

The global market for fungi and fungal products was valued at USD 24 billion in 2011 and this market is expected to continue growing as more countries recognise the medicinal properties and value of fungi (Zhang et al., 2014). However, **Namibia has seen limited research on its wild mushroom species, and the full extent of their diversity within the country remains largely unknown** (Rothnman et al., 2020). Consequently, these fungal resources could be considered an underutilised asset in addressing persistent challenges in the country, including unemployment, food security, poverty reduction, and the empowerment of disadvantaged populations (Ibid.).

## Oil seeds

**The production of oil seed from indigenous sources holds significant economic importance for Namibia and serves as a valuable asset for enhancing the well-being of local communities** (Cheikhyoussef, 2018). As highlighted by De Cauwer & Beer (2022), the fruits of various tree and shrub species found in Namibia's forests and woodlands, such as marula, blue sourplum (*Ximenia americana*), baobab (*Adansonia digitata*), mangetti (*Schinziophyton rautanenii*), and mopane, yield oils that are commercially utilised in cosmetic industry.

Namibian indigenous oils are commonly marketed internationally as cosmetic ingredients but hold versatile utility beyond this scope (De Cauwer & Beer, 2022). Notably, **marula**

**oil is well-received as a culinary condiment and is available for purchase in both traditional and organised domestic markets throughout Namibia** (Ibid.). See Text box 22 for more information. Additionally, sour plum oil has received significant attention from the global market, primarily due to its recognised anti-ageing properties (Cole, 2014).

White bauhinia (*Bauhinia acuminata*) and mangetti tree (*Schinziophyton rautanenii*) seeds yield oils of notably high nutritional quality (Yeboah et al., 2017). Mangetti, in particular, demonstrates impressive oil yields of approx. 60%, comparable to conventional oils such as sunflower and peanut oils (45–55%) (Ibid.). This suggests the potential for the commercial production of cold-pressed (virgin) oil. While white bauhinia oil yields are lower at approx. 19%, they are comparable to those of soybean oil (17–22%) (Yeboah et al., 2017). Both species contain a substantial proportion of unsaturated fatty acids, ranging from 73% to 80%, which is akin to high-quality oils such as olive oil, typically composed of 72% unsaturated fatty acids (Ibid.). Moreover, mangetti oil has been found to contain α-eleostearic acid (α-ESA), a compound known for its tumour-suppressing properties and its potential in inhibiting breast cancer (Grossmann et al., 2009), suggesting its suitability as a health food supplement (De Cauwer & Beer, 2022; Knox, et al., 2018)

## Ximenia

Ximenia is mainly used in Namibia, and hog plum (*Ximenia americana)* seed oil is a traditional moisturiser and hair-care product produced by heating, crushing, and boiling the seed kernels, which yields traditional Ximenia oil (Indigenous Plant Products in Namibia, 2014). Additionally, the anti-ageing qualities of Ximenia oil have piqued the international market's attention as it is an excellent therapy for dry skin that is prone to ageing (Ibid.). No data was found on its socio-economic value, but the international interest indicates that there is potential to unlock and grow the market for this NTFP.

## Carbon markets

**Namibia has established several key policies and laws that aim to support sustainable forest management and climate action goals.** Article 95 of the Namibian Constitution, the Environmental Management Act, the National Forest Policy (NNFP) of 2001, and the Forest Act of 2015 (Republic of Namibia, 2015) work collectively to recognise the importance of forest protection and enable the country's efforts to develop an enabling framework for managing forests sustainably (De Cauwer & Beer, 2022). These policies are integral to Namibia's commitments outlined in its Nationally Determined Contributions (NDCs). Namibia pledged to reduce its greenhouse gas emissions (GHG) by 14% with limited domestic and international support in its 2015 Nationally Determined Contribution (NDC) to the Paris Agreement (Republic of Namibia, 2017). Additionally, with substantial international assistance, Namibia aims to achieve a remarkable 92% reduction in GHG emissions by 2030 compared to the 2010 business-as-usual scenario (WWF, 2023). This ambitious target equates to a total reduction of 21.9 million metric tonnes of $CO_2$ equivalent ($MtCO_2$ e).

**Namibia is one of the biggest and driest countries in sub-Saharan Africa** with characteristic high climatic variability in the form of persistent droughts, unpredictable and variable rainfall patterns, high temperature variability and scarcity of water (Republic of Namibia, 2015; GFDRR, 2018). On account of this climatic situation, **Namibia stands a high risk of suffering from the impacts of climate change** (Republic of Namibia, 2015)**.** Climate change will increase **the vulnerability of Namibia's already fragile natural resources, which contribute significantly to the country's GDP and people's livelihoods – with 23% of the workforce employed in agriculture, forestry, and fishing industries and another 11% dependent on tourism** (WWF, 2023). The combined effects of the negative impacts can lead to losses of hundreds of Namibian thousands of dollars (Spear et al., 2018). WWF (2023) estimated that the **impact of climate change could result in an annual decrease in GDP by 6.5%**. The resulting decline of the GDP will seriously hinder the country's progress while also preventing the empowerment of the poorest segments of the population that are most vulnerable to climate change (WWF, 2023).

Namibia has little historical or current responsibility for global climate change with the country's GHG emissions representing less than 1% of total global emissions (UNDP, 2022). According to the Fifth National GHG Inventory Report NIR5 1990 – 2016, Namibia remained a net GHG sink over the period 1990 to 2016 as the Land category removals exceeded emissions from the other categories (Republic of Namibia, 2020). The net removal of $CO_2$ increased by 50% over 27 years from 70,329 GT in 1990 to 105,428 Gg in 2016 (Ibid.). During the same period, the country recorded **an increase of 8% in emissions, from 19,692 Gg $CO_2$ to 21,260 Gg $CO_2$** (Republic of Namibia, 2020) and in 2020 Namibia GHG emissions were 13,560.38Gg, a 25.69% increase from 2019 (Macrotrends, 2023). In 2012, the share of GHG emissions from Agriculture, Forestry and Other Land Use (AFOLU) amounted to 88.1% of total national emissions (Republic of Namibia, 2016) (See Table 26) and in 2016, AFOLU contributed 79% of emissions, Energy 18%, and Waste 1% (Republic of Namibia, 2020) (see Text box 22).

Trends of forest cover and carbon stocks in Namibia in 1990–2010 are presented in Table 27. Forest cover declined by 0.92% over the 2005–2010 period, when the mean carbon stock in living forest biomass per hectare was 29 tonnes and the annual change was -2 000t/year for 1990–2010 (Parviainen, 2012). **In 2010 the forests of Namibia contained a total of 210 million tonnes of carbon in living forest biomass** (Mongabay 2010).

**The National Forest Policy (NFP) (2005) recognises that Namibia's woodlands and wooded grasslands provide carbon sinks.** This is executed in accordance with Reduced Emissions from Deforestation and Degradation (**REDD+) by which the avoidance of emissions caused by land conversions that reduce carbon storage is compensated** (Pervianen, 2012). **The REDD+ payments can increase the economic value of forest resources** in developing countries, and could also be an incentive for conserving forests (Ibid.).

Jones & Barnes (2009) examined the potential of making payments for reduced deforestation within the miombo ecoregion of southern Africa through the REDD+ mechanism that exists under the United Nations Framework Convention on Climate Change (UNFCCC). The study focused on the Caprivi Region in Namibia and concluded that:

- REDD+ is not appropriate in Caprivi, primarily because the potential for alternative uses of the woodlands in this region is poor
- The cost of implementation of the REDD+ system in Caprivi was estimated at NAD 33 million (approx. USD 1.8 million) per year (noting that this study was prior to 2009).

**Table 26: National GHG emissions (Gg, CO2) by sector (2000 – 2012)**

| Source Categories | 2000 | 2002 | 2004 | 2006 | 2008 | 2010 | 2011 | 2012 |
|---|---|---|---|---|---|---|---|---|
| Energy | 1,995 | 2,269 | 2,562 | 2,795 | 2,981 | 2,904 | 2,851 | 2,979 |
| Industrial Processes | 25 | 26 | 235 | 255 | 291 | 302 | 421 | 523 |
| AFOLU | 25,274 | 25,378 | 25,427 | 25,359 | 25,992 | 25,062 | 26,779 | 27,028 |
| Waste | 96 | 99 | 113 | 123 | 130 | 145 | 155 | 162 |
| **Total emissions** | **27,389** | **27,772** | **28,336** | **28,532** | **29,394** | **28,414** | **30,206** | **30,692** |

Source: Republic of Namibia, 2016

**Table 27: Changes in total forest net cover and carbon stock in Namibia over the 1990–2010 period**

| Year 1990 | | Year 2000 | | Year 2005 | | Year 2010 | |
|---|---|---|---|---|---|---|---|
| Ha | Million (tonnes) | Ha | Million (tonnes) | Ha | Million (tonnes) | Ha | Million (tonnes) |
| 8,762,000 | 253 | 8,032,000 | 232 | 7,661, 000 | 221 | 7,290 000 | 210 |

Source: Mongabay, 2011

Text box 22

## Agriculture, Forestry, and Other Land Use sector

Emissions come from the use of fuelwood, production of charcoal and wood removals for construction and other purposes, especially in the Namibian rural areas. The livestock industry is also a major contributor through mainly enteric fermentation but offers restricted mitigation avenues on account of the extensive production system. Measures evaluated in the AFOLU sector are:

- Increasing the number of livestock heads in feedlots to reduce enteric fermentation by some 4%;
- Reducing $N_2O$ emissions by approx. 10% through production of biogas from the feedlot manure;
- Reducing chemical fertilisers by 20% through conservation and climate smart agricultural practices, use of organic manure and composts; Reforesting 20,000 ha annually as from 2018;
- Implementing agroforestry systems over 5,000 ha annually during the commitment period as from 2018;
- Converting 5,000 ha of grassland annually as from 2018 to arboriculture up to 2030;
- Reducing wood removal in forests by 50%;
- Combating forest and grassland fires;
- Restoring 15 million ha of grasslands by 2030;
- Conservation agriculture to be practised over approx. 80,000 ha by 2030.

These measures if implemented successfully will result in a combined reduction of emissions and removals of the order of 18,500 Gg $CO_2$-eq in 2030.

Source: Republic of Namibia, 2017


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According to UNDP (2022) carbon market projects are generated beyond mitigation outcomes, including more jobs, healthier air, cleaner water, greener transportation and other co-benefits. In 2022, Namibia unveiled a carbon market project, a trading system in which carbon credits are sold and bought to reduce greenhouse gas emissions and reduce the impact of climate change (Anyango, 2022). The Global Mechanism of the UNCCD 2018 stipulates that, within the various climate change mitigation alternatives, **land-based mitigation options rank among the most cost-effective opportunities to sequester or avoid carbon** in Namibia. The cost of capturing one tonne of carbon (tC) by restoring degraded land is estimated at USD 51 $tCO_2e$; while alternative engineering techniques such as gas plant capture and carbon sequestration have a cost of USD 306 $tCO_2e$.

According to De Cauwer & Beer (2022) it is safe to state that in Namibia most carbon is stored in the tree and shrub savannah of northeastern Namibia and especially in its soils. **The actual amount of carbon in Namibia's forest soils is unknown** (Ibid.). Unfortunately, this carbon pool is decreasing because of climate change, bush encroachment and desertification (Anyango, 2022). See Text box 23 for more on the challenges and barriers to the carbon market in the country.

Text box 23

### Challenges and barriers to the carbon market

**Namibia continues to face several persistent challenges in engaging effectively with the carbon market.** These include inadequate human capacity, the absence of comprehensive vulnerability studies, limited access to up-to-date technologies, insufficient systematic observation coverage across the country, and low public awareness among large segments of the population. Additionally, funding remains insufficient to address these gaps and enable the country to implement adaptation measures in sectors already under pressure from climate change.

**Key barriers identified are:**

- Lack of coordination and conflicting programme implementation
- Viewing climate change primarily as an environmental issue rather than a cross-sectoral challenge
- Limited access to information
- Weak decentralisation and inadequate institutional capacity at the local level
- A reactive approach instead of proactive, long-term planning
- Insufficient evidence demonstrating the benefits of adaptation relative to its costs

Alongside capacity building and technology transfer, Namibia has estimated that approximately USD 22.6 billion (at 2015 prices) will be required to successfully implement the adaptation component of its INDC.

Source: Republic of Namibia, 2015

## Film and photography

Wildlife photography and filming in Namibia offer incredible opportunities to capture the beauty of the country's diverse ecosystems and its rich wildlife and Namibia is a top-rated destination for photographers (Namibia Endless Horizon, 2023).

In Namibia, **permits for wildlife photography and filming are required when conducting commercial activities,** such as selling the images or footage. According to MEFT (2020), the permit conditions do not apply to bona fide tourists, but to any recording with profit, educational, research or informational purposes. MEFT (2020) noted that, **only documentary recordings may be made in game parks**, **non-documentary recordings may be made in tourist recreational areas**, provided the activities of tourists are not disturbed.

Permits are required **to engage in commercial wildlife photography and filming in Namibia** (Namibia Endless Horizon, 2023). **The Namibia Film Commission (NFC) is responsible for overseeing film and photography activities** by providing guidance on permits and regulations (NFC, 2019). Production companies coming to film or photograph are requested to go through an accredited Namibian Film Production Facilitator who will render services, amongst others, **applying for a filming/photography permit as well as a temporary work visa** (NFC, 2020; NFC, 2019). This also includes documentaries and still shoots (NFC, 2019). Foreign companies or people, who are not Namibian citizens, must apply at least one month in advance (MEFT, 2020).

**A filming permit application fee or administration fee is approx. NAD 1,500 (approx. USD 79)** and should be paid to the Namibia Film Commission. Issuing a permit takes up to three working days (NFC, 2020). **All filming and professional photo shoots in national parks and protected areas require permission from the Ministry of Environment, Forest and Tourism** (MEfT) (NFC, 2019). According to MEFT (2020) successful applicants will be liable to pay the following fees:

**Commercial filming (recreational area):**

- Non-Namibian companies: a daily fee of NAD 5,000 (approx. USD 263) as well as official entrance fees
- Namibian-based companies: a daily fee of NAD 2,000 (approx. USD 105) as well as entrance fees.

**Documentary and non-commercial recordings:**

- Non-Namibian companies: a daily fee of NAD 1,000 (approx. USD 53) as well as entrance fees
- Namibian-based companies: a daily fee of NAD 500 (approx. USD 26) as well as entrance fees
- Travel allowance expenses of accompanying official (supervision) at NAD 200 (approx. USD 11) per day.

According to MET (2020), after the Ministry has approved an application, **it will be deemed as a legal contract between the applicant and the Ministry and both parties are bound by the Ordinance on Nature Conservation (No. 4 of 1975 as amended)** and the conditions of this document or any condition

Text box 24

## Namibia film locations

Namibia is known for its spectacular desert locations, rugged coastline, African wildlife, German colonial-era architecture, and an extensive rail network. Namibia has hosted productions such as *The Red Sea Diving Resort (2019), The Mummy (2017), Mad Max: Fury Road (2015), The Amazing Race 26 (2015), The Amazing Race: Season 2 (2002), The Cell (2000)*, and *2001: A Space Odyssey (1968).*

The following regions are conducive for filming:

**Northern area**: This area includes the regions of Kunene, Omusati, Oshana, Ohangwena, Oshikoto, Kavango West & East, Zambezi and Otjozondjupa. The Caprivi panhandle in the north-east of Namibia is one of the country's only areas that has a wet, tropical climate. The Bwabwata National Park is an important migration route for the African elephant. Nkasa Rupara National Park is another wildlife park located in the Caprivi panhandle. Etosha National Park is known for its elephant, rhino, zebra, giraffe, wildebeest, hyena, and lion. The Etosha pan is one of the largest salt flats in the world. Otjiwarongo is home to the Cheetah Conservation Fund, and Crocodile Farm Otjiwarongo. Skeleton Coast National Park, where the Atlantic Ocean meets vast desert sand dunes, is named for the many shipwrecks that dot the coastline. Of note is also the Eduard Bohlen, a shipwreck that looks like it's in the middle of the desert.

**Central area**: This area includes the regions of Erongo, Omaheke, and Khomas. Spitzkoppe is a spectacular granite peak that rises up from the Namib desert. The location was filmed for the "The Dawn of Man" sequence in *2001: A Space Odyssey (1968).* Another impressive location near Spitzkoppe is the giant stone arch.

**Southern area:** Located south of the Tropic of Capricorn, this area includes the regions of Hardap and IKaras; Namib-Naukluft National Park has several interesting film locations. Deadvlei is a white clay pan known for its dead acacia trees and surrounding red sand dunes. Filmmakers have used the iconic location for everything from fashion shoots to advertising skin care products, to portraying an otherworldly dream-like place. Namib-Naukluft National Park is known for fairy circles, which are unique arid grass formations. NamibRand Nature Reserve in the Namib desert is a private nature reserve known for its zebra, giraffe, and springbok. Lüderitz is a coastal town known for its German colonial building and hosted *The Red Sea Diving Resort (2019)*. Kolmanskop is a ghost town in the Namib desert famous with photographers for its desert sand covered houses.

**All these sites offer great potential to grow the film and photography industry in the country.**

Source: Emerge Film Solutions, 2023

which may be applicable to an area under the jurisdiction of the Ministry.

**Cheetah Conservation Fund (2023), prescribes the fees for filming and photography** in their private space as follows:

**Commercial Fees**

- Video/Motion picture/Television film crew fee: USD 1,500 full day (8 hours); USD 750 half day (4 hours)
- Still photography fee: USD 500 full day (8 hours); USD 260 half day (4 hours)

Given the extensive natural beauty in the country, there is an opportunity to grow the film and photography industry, creating local employment and revenues and, through in-country value addition, ensuring that the benefits are locally received.

## Wildlife estates

Wildlife estates (eco-estates or game farms where people build houses and pay rates) and film and photography, can also **contribute significant amounts to local and national economies and create jobs** (Snyman, 2021). The popularity of wildlife estates is growing in Namibia, particularly around Windhoek. No data was however found on the socio-economic value of these or their contribution to conservation.

## Opportunities and challenges in terms of the wildlife economy

### Challenges

- **Data issues**: Across the various sectors, consistent data over time was a challenge to source. A large part of the wildlife economy is informal, which also represents a challenge in terms of data collection and the related monitoring of resource use. Another related issue is the reliance on centralised statistics that often only reflect small parts of the sector.
- **Illegal wildlife trade:** Loss of wildlife as a result of poaching and trafficking of wildlife products pose a serious threat to Namibia's wildlife populations and the sustainability of the wildlife economy. This needs to be addressed to protect the asset base of the wildlife economy.
- **Lack of cross-sectoral collaboration:** The diverse sectors involved in the wildlife economy are dispersed across ministries and departments, necessitating enhanced collaboration. Establishing committees could bring together all stakeholders on a single platform, similar to South Africa's Wildlife Forum.
- **Potential trophy hunting import ban:** Trophy hunting generates significant revenue for Namibia, both directly and indirectly. Any hunting import bans can lead to a loss of this revenue, which would have negative consequences for the country's wildlife assets, conservation efforts and economy.
- **Limited market access**: Some wildlife products, such as Namibian game meat, face market access challenges due to regulatory restrictions and consumer preference. Supportive regulations and promoting game meat at tourism destinations can help market various Namibia's game products.

### Opportunities

- **Collaborations, partnerships and knowledge-sharing:** Knowledge sharing and exchanges with other countries who have established diverse wildlife economies are encouraged to disseminate lessons learned and best practices. The wildlife economy can forge synergies with other sectors in Namibia, such as agriculture, tourism, and fisheries, promoting holistic development.
- **Expand market access for wildlife products and services:** Addressing regulatory barriers, promoting consumer education, and developing innovative value-added products and services can enhance market opportunities for wildlife products and services in Namibia.
- **Invest in infrastructure:** Improving infrastructure, such as roads, communication and accommodation facilities, is essential for enhancing accessibility to wildlife areas and tourist destinations in Namibia. Well-maintained infrastructure ensures smoother travel experiences for tourists and facilitates the transportation of goods, including wildlife products. This investment can significantly boost tourism and wildlife product activities and increase the flow of revenue into local communities.
- **Promote wildlife value chains:** Promoting wildlife value chains is important for Namibia's economic growth and conservation efforts. Currently, some value chains such as game meat, honey, and non-timber forest products are underdeveloped, leading to lost value by exporting raw materials instead of value-added goods. By establishing comprehensive value chains from extraction to sale, Namibia can optimise economic value, create jobs, and support natural resource conservation. This approach ensures sustainable utilisation of wildlife resources while maximising benefits for local communities, government and the environment.
- **Promote wildlife ranching:** Namibia has a huge opportunity to develop its wildlife ranching sector due to its geographic location and climate. The country should adopt a holistic approach to developing its wildlife ranching industry, encompassing legal and regulatory frameworks, infrastructure development, market access and promotion, research and development, and public-private partnerships. This strategy will ensure the long-term sustainability and economic viability of wildlife ranching, contributing to Namibia's economic growth, and conservation efforts.
- **NTFP value addition:** Namibia possesses diverse NTFPs, it should implement a comprehensive strategy to enhance the value addition of these by focusing on product development, processing, marketing, and branding. This strategy should involve collaboration between government agencies, research institutions, private sector entities, NGOs and local communities to ensure the sustainable and equitable utilisation of NTFPs.

## Conclusion

Namibia has a vibrant wildlife economy, including a diversity of activities. In order to ensure long-term sustainability, there is a need to invest back into the wildlife asset, ensure cross-sector collaboration, a broadening and strengthening of value chains and a focus on building the capacity of all stakeholders to engage in, and benefit from, the wildlife economy. The Namibian government has recognised the importance of the wildlife economy and has implemented a number of policies and initiatives to support its growth and development. These include the Community Based Natural Resource Management (CBNRM) programme, which devolves ownership and management of wildlife resources to local communities, and the Wildlife Products Utilisation and Management Policy, which provides a framework for the sustainable use of wildlife products. **The growing demand for wildlife-based products and experiences, coupled with the country's commitment to sustainable development, creates a strong foundation for continued growth in the wildlife economy.**

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