

**REPUBLIC OF NAMIBIA**  
Ministry of Environment and Tourism

**Namibia's Second National  
Biodiversity  
STRATEGY AND ACTION PLAN**  
**2013 - 2022**



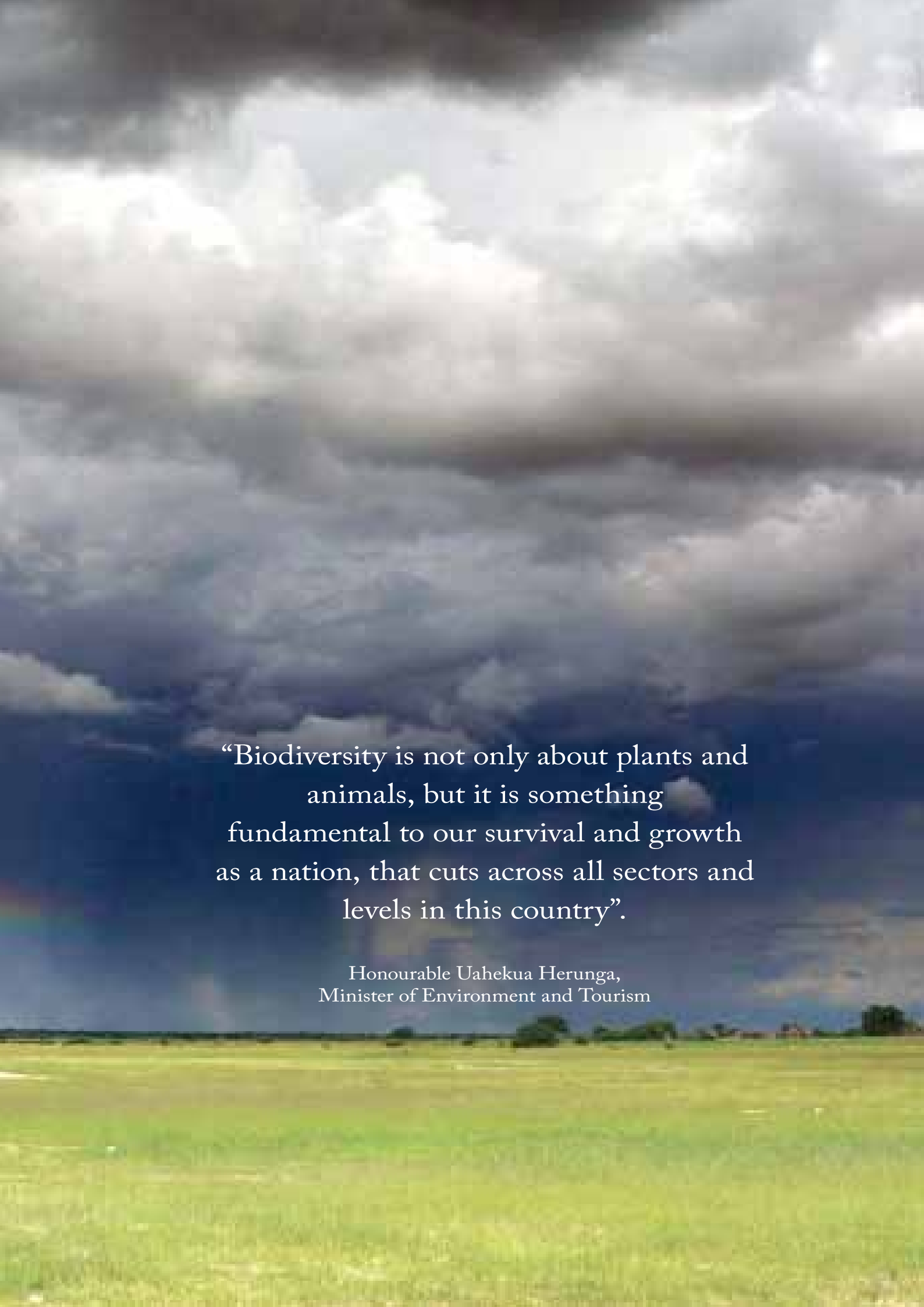
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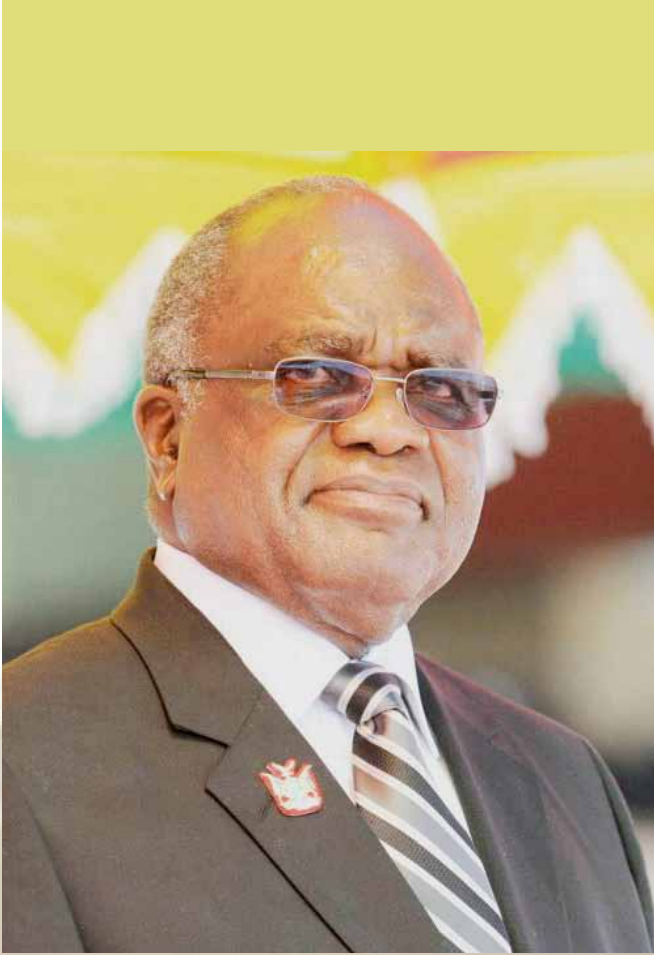




“Biodiversity is not only about plants and animals, but it is something fundamental to our survival and growth as a nation, that cuts across all sectors and levels in this country”.

Honourable Uahekua Herunga,  
Minister of Environment and Tourism





# Foreword

**By His Excellency Dr Hifikepunye Pohamba  
President of the Republic of Namibia**

For Namibia, the conservation of the natural environment and our ecosystems is a constitutional imperative. In terms of Article 95(l) our national constitution implores the state to ensure sustainable management of biodiversity by taking measures to promote and maintain the welfare of the people including “the maintenance of ecosystems, essential ecological processes and biological diversity of Namibia and utilization of living natural resources on a sustainable basis for the benefit of all Namibians, both present and future...”

Since Independence in 1990, Namibia has ratified several International Conventions, including the three United Nations Conventions, which emerged from the 1992 Rio Earth Summit on Biological Di-

versity; Combating Desertification; and Climate Change. These instruments have been instrumental in Namibia’s efforts to realign our policies and laws, incorporating international best practices in order to effectively deal with the challenges and constraints related to the proper management of the environment in our country.

The succesful compilation and launch of this National Biodiversity Strategy and Action Plan (2013-2022) is further demonstration of our Government’s commitment to the sustainable management of unique biodiversity and ecosystems. It is a continuation of the good work done as part of the first National Biodiversity Strategy and Action Plan, which was implemented from 2001 to 2010.


The healthy state of our biodiversity is a valuable comparative advantage for Namibia, with the potential to provide immeasurable economic benefits for our people and our country. At present, Namibia’s entire Atlantic coastline of 1500 kilometers is protected under our framework of proclaimed National Parks. Moreover, Namibia is home to other environmental conservation initiatives, including four Ramsar Wetland Sites of international importance, a 12,000 square kilometer Marine Protected Area, and part of the world’s largest Trans-frontier Conservation Area (TFCA) – the Kavango Zambezi TFCA, which was proclaimed in 2012. Namibia also possesses the largest free-roaming population of black rhino as well as the largest population of cheetahs in the world.

We are pleased that environmental conservation is now an established form of land use in Namibia. In addition to our National Parks, 79 communal conservancies covering almost 19 per cent of the country’s total land surface area, have been registered. Furthermore, approximately 15 percent of freehold land is dedicated to wildlife management. Ongoing research indicates that the populations of different wildlife species in Namibia will continue to increase in the coming years.

Conscious of the critical importance of biodiversity to the socio-economic development of our country, the focus of this Strategy goes beyond the conservation of protected areas and wildlife. Biodiversity and the benefits that can be derived from intact and healthy ecosystems such as clean air and water and productive soils, are the basis of all life. For this reason alone, the importance of biodiversity cannot be over-emphasised.

In Namibia, we have always considered the three objectives of the Convention on Biological Diversity (CBD) as being mutually reinforcing. We recognize sustainable use of natural resources as the key factor linking conservation to fair and equitable benefit-sharing. We will, therefore, continue to advance this approach through the implementation period of this Strategy so that biodiversity is placed at the centre of our development efforts to achieve sustainable economic growth and poverty alleviation in our country, especially in rural areas. Namibia's recent ratification of the Nagoya Protocol on Access and Benefit-Sharing signifies our desire to accelerate the fair and equitable distribution of benefits that can be derived from biodiversity, especially by our local communities.

This approach is in line with our drive to achieve our long-term national development strategy, Vision 2030. We are confident that the effective implementation of this National Biodiversity Strategy and Action Plan (2013-2022) will contribute greatly towards the revitalisation of our biodiversity and the realisation of our Vision 2030.



Hifikepunye Pohamba  
PRESIDENT OF THE REPUBLIC OF NAMIBIA



# Preface

**By Honourable Uahekua Herunga  
Minister of Environment and Tourism .**

Our rangelands, marine and freshwater fisheries, forests, and protected areas are the basis of livelihood for most of the Namibian population. Maintaining and enhancing the health and viability of these assets is crucial for us to achieve our national development objectives of high and sustained economic growth, employment creation and increased income equality.

Our first National Biodiversity Strategy and Action Plan has given considerable impetus to sustainable development in this country. Its implementation has led to the proclamation of four new state protected areas, a first Marine Protected Area and the world's largest Trans-frontier Conservation Area; an

increase in the number of conservancies from 15 to 79 and the proclamation of 32 community forests; and the continued recovery of wildlife and fishing stocks based on an innovative policy framework and system of quotas and permits. The beneficiation of our communities has been at the heart of this process.

It is the task of NBSAP2 to build on these achievements and tackle the threats and challenges we are facing. These have been well documented in the thorough review process undertaken on NBSAP1, and I am confident that NBSAP2 will lead to the continued and enhanced health of our ecosystems as well as improved living conditions among our rural populations. This is encapsulated in our vision for NBSAP2 for "Namibia's biodiversity to be healthy and resilient to threats, with its conservation and sustainable use as key drivers of poverty alleviation and equitable economic growth, particularly in rural areas".

The consultative process to develop NBSAP2 has been comprehensive and has guided the need to align NBSAP2 closely with the CBD Strategic Plan and the associated Aichi Targets. Each of the five Strategic Goals of the CBD is of very high relevance to Namibia and we have refined the Aichi Targets based on our national priorities and threats into 17 targets which we consider to be specific, measurable and attainable. This approach will also streamline our reporting the Convention and provide clear evidence of our national contribution towards the achievement of the Aichi Targets.

NBSAP2 is thus our main vehicle to spearhead action on all matters of biodiversity from the management of all ecosystems and species, to biosystematics and biosafety, to access and benefit-sharing. With this in mind, implementation will be closely coordinated between all stakeholders and I look forward to us partnering together to achieve the important goal of NBSAP2.

**Uahekua Herunga,  
Minister of Environment and Tourism, MP**







## ACKNOWLEDGEMENTS

The Second National Biodiversity Strategy and Action Plan is an outcome of a cooperative effort. Many individuals and organisations participated in various capacities. The 2nd NBSAP would not have been possible without numerous contributions from authors, reviewers, MET staff members, funding agencies and many who at one point or another contributed to the document. The compilation of this document brought together a wide range of stakeholders. The Ministry of Environment, as focal point to the Convention on Biological Diversity and coordinator of the document, is extremely grateful to all of them and would like to thank and acknowledge them here for their dedication and long hours.

## NBSAP STEERING COMMITTEE

Special thanks are given to the members of the NBSAP2 Steering Committee for coordinating the review of NBSAP1, providing guidance and technical input into the development of the NBSAP2.

## AUTHORS

We would like to thank all authors who contributed to this strategy: Samson Mulonga, John Mfunu, Nico Willemse, Michale Humavindu, Bryn Canniffe, and Jonas Nghishidi.

## REVIEWERS

The Strategy and Action Plan benefited greatly from all of the feedback and comments provided by our reviewers including NBSAP Steering Committee, Louisa Mupetami, Teofilus Nghitila, Petrus Muteyauli, Kauna Schroder, Nick de Voss, Eric Belvaux, Aina Kambala, Nadine Faschina, Konrad Uebelhoer, Emily Mutota, UNEP World Conservation Monitoring Centre NBSAP 2.0 Project

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## EXECUTIVE SUMMARY

Biodiversity and the natural environment are of critical importance to Namibia. Natural resource-based sectors including mining, fisheries, agriculture and tourism are the basis of the Namibian economy, and around 70 per cent of Namibia's population is directly dependent on the natural resource base for income; food; medicinal and health needs; fuel and shelter. This situation demands that biodiversity, and the ecosystem services it provides, are maintained and enhanced as far as possible for sustainable development. Namibia recognizes the essential role of National Biodiversity Strategies and Action Plans (NBSAPs) in this regard.

Namibia implemented its first NBSAP during the period 2001-2010. This was internationally recognised as being one of the best first generation NBSAPs, and it provided a strong foundation for the sustainable management and use of biodiversity in the country. In 2012, Namibia set about the process to develop NBSAP2 to build upon this foundation and to directly tackle the threats and challenges it is facing in this area.

Namibia's NBSAP2 will cover the period 2013-2022, and its vision is for "Namibia's biodiversity to be healthy and resilient to threats, and for the conservation and sustainable use of biodiversity to be key drivers of poverty alleviation and equitable economic growth, particularly in rural areas."

The Paper was developed in a highly participatory manner involving over 400 stakeholders from international experts to on-the-ground managers of natural resources. The consultative process included a detailed review of Namibia's first NBSAP (2001-2010) which provided valuable lessons and guidance for the formulation of NBSAP2.

One of the key lessons learned was the need for NBSAP2 to be more focused, and this is reflected in a more concise structure. Based on national and regional prioritization exercises, the five strategic goals of the CBD Strategic Plan were considered highly relevant to Namibia, and these provide the overarching framework for NBSAP2. The 20 Aichi Targets were reduced to 17 national targets which are considered to be specific, measurable, attainable, relevant and are time-bound to Namibia. In this way, NBSAP2 is both closely aligned to the CBD Strategic Plan and Aichi Targets (2011-2020), and targeting Namibia's unique priorities and circumstances. The Strategic Goals and Targets of NBSAP2 are presented in the table below:

NBSAP2 Goals and Targets	Lead GRN Agencies
<b>Strategic Goal A: Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society</b>	
1. By 2020, at least 75% of surveyed key target groups know the meaning of biodiversity and can identify important reasons for biodiversity conservation	MET
2. By 2018, biodiversity values and prioritized ecosystem services are quantified, monitored and mainstreamed to support national and sectoral policy-making, planning, budgeting and decision-making frameworks	MET
3. By 2018, selected incentives for biodiversity conservation and sustainable use are in place and applied, and the most harmful subsidies are identified and their phase out is initiated	MET and MoF
<b>Strategic Goal B: Reduce direct pressures on biodiversity and promote the sustainable use of biological resources</b>	
4. By 2022, the rate of loss and degradation of natural habitats outside protected areas serving as ecological corridors or containing key biodiversity areas or providing important ecosystem services is minimized through integrated land use planning	MLR / MET



NBSAP2 Goals and Targets	Lead GRN Agencies
5. By 2022, all living marine and aquatic resources are managed sustainably and guided by the ecosystem approach	MFMR
6. By 2022, principles of sound rangeland and sustainable forest management, and good environmental practices in agriculture are applied on at least 50 per cent of all relevant areas	MAWF
7. By 2022, pollution, including from excess nutrients, has been brought to levels that are not detrimental to biodiversity and ecosystem health and functioning	MET/MAWF
8. By 2015, national review of invasive alien species in Namibia from 2004 is updated (including identification of pathways), and by 2018, priority measures are in place to control and manage their impact	MET
9. By 2016, ecosystems most vulnerable to climate change and their anthropogenic pressures are identified, and by 2018, appropriate adaptation measures are developed and implemented in priority areas	MET/MAWF
<b>Strategic Goal C: Improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity</b>	
10. By 2018, existing terrestrial protected areas (national parks) are conserved, effectively and equitably managed, within an ecologically representative and well-connected system, and by 2020, coastal and marine areas, of particular importance to biodiversity and ecosystem services, are identified and measures for their protection initiated	MET / MFMR
11. By 2016, threatened and vulnerable species lists are updated and measures implemented by 2019 to improve their conservation status	MET
12. By 2020, genetic diversity of cultivated plants and farmed animals is maintained and enhanced	MAWF
<b>Strategic Goal D: Enhance the benefits to all from biodiversity and ecosystem services</b>	
13. By 2022, ecosystems that provide essential services and contribute to health, livelihoods and well-being are safeguarded, and restoration programmes have been initiated for degraded ecosystems covering at least 15 per cent of the priority areas	MAWF / MME / MET
14. By 2015, national legislation giving effect to the Nagoya Protocol is in force and by 2018 fully operational to ensure that benefits are fair and equitably shared from the conservation and sustainable use of biodiversity	MET
<b>Strategic Goal E: Enhance implementation of NBSAP2 through participatory planning, knowledge management and capacity building</b>	
15. By 2020, traditional knowledge and the innovations and practices of indigenous and local communities relevant to the conservation and sustainable use of biodiversity are recognised, respected and promoted	MRLGHRD
16. By 2022, knowledge, science base and technologies relating to biodiversity and ecosystem management are improved and made relevant to political decision-makers	MET / MYNSSC / MoE

NBSAP2 Goals and Targets	Lead GRN Agencies
17. By 2022, mobilization of financial resources from all sources has been increased compared to the period 2008-2012 to allow for the effective implementation of this strategy and action plan	MET / NPC/ MoF

Strategic initiatives were also formulated to guide actions that will ultimately lead Namibia on a path towards the achievement of its 17 targets. There are 38 such strategic initiatives, each with associated activities identified during the NBSAP2 consultative process. The activities also have designated lead agencies and indicators to allow for improved monitoring.

The implementation of NBSAP2 will be coordinated by the Multi-Lateral Environmental Agreements Division within the Ministry of Environment and Tourism (MET) with the full participation and guidance of the cross-sectoral NBSAP2 steering committee. Independent mid-term and final evaluations of NBSAP2 will be undertaken to ensure that the status of biodiversity in Namibia is effectively tracked and so that Namibia's contribution towards the achievement of the CBD Strategic Plan (2011-2020) and the Aichi Targets can be effectively measured.



## Acronyms and Abbreviations

ABS: Access and Benefit- Sharing	ICZM: Integrated Coastal Zone Management
BCC: Benguela Current Commission	IPA: Important Plant Area
BCLME: Benguela Current Large Marine Ecosystem	IPTT: Indigenous Plant Task Team
BMCC: Biodiversity Management and Climate Change Project	IRDNC: Integrated Rural Development and Nature Conservation
BMU: German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety	IRLUP: Integrated Regional Land-Use Plan
BMZ: German Federal Ministry for Economic Cooperation and Development	ISOER: Integrated State of the Environment Report
CBD: Convention on Biological Diversity	IUCN: International Union for the Conservation of Nature
CBNRM: Community-Based Natural Resource Management	IWRM: Integrated Water Resources Management
CBO: Community-Based Organisation	KAZA: Kavango Zambezi (TFCA)
CEPA: Communication, Education and Public Awareness	KBA: Key Biodiversity Area
CI: Conservation International	KfW: German Development Bank
CITES: Convention on Trade in Endangered Species	KRA: Key Result Area
CoM: Chamber of Mines	LAs: Local Authorities
CPP: Namibia's Country Pilot Partnership Programme for Integrated Sustainable Land Management	MAWF: Ministry of Agriculture, Water and Forestry
CRIAA: Centre for Research, Information, Action Africa	MCA: Millennium Challenge Account
DART: Directorate of Agricultural Research and Training	MDGs: Millennium Development Goals
DEA: Department of Environmental Affairs	MET: Ministry of Environment and Tourism
DGIS: Dutch Ministry of Foreign Affairs	MFMR: Ministry of Fisheries and Marine Resources
DRFN: Desert Research Foundation of Namibia	MHAI: Ministry of Home Affairs and Immigration
DWA: Department of Water Affairs	MLR: Ministry of Lands and Resettlement
EAF: Ecosystem Approach to Fisheries	MME: Ministry of Mines and Energy
EAPAN: Environmental Assessment Professionals of Namibia	MoE: Ministry of Education
EBSA: Ecologically or Biologically Significant Area	MoF: Ministry of Finance
EIA: Environmental Impact Assessment	MOLSW: Ministry of Labour and Social Welfare
EIF: Environmental Investment Fund of Namibia	MPA: Marine Protected Area
EMP: Environmental Management Plan	MRLGHRD: Ministry of Regional and Local Government, Housing and Rural Development
GCNN: Global Compact Network Namibia	MTI: Ministry of Trade and Industry
GDP: Gross Domestic Product	MWT: Ministry of Works and Transport
GEF: Global Environment Facility	MYNSSC: Ministry of Youth, National Service, Sport and Culture
GIS: Geographic Information Systems	NACOMA: Namibian Coast Management and Conservation Project
GIZ: Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH	NACSO: Namibian Association of CBNRM-Support Organisations
GMOs: Genetically Modified Organisms	NAFOLA: Sustainable Management of Namibia's Forested Lands
GTRC: Gobabeb Training and Research Centre	NAMETT: Namibia's Management Effectiveness Tracking Tool
IBA: Important Bird Area	
IBPC: Interim Bioprospecting Committee	



NAMPLACE: Namibia Protected Areas Landscape Initiative  
NAU: Namibia Agricultural Union  
NBAC: National Biosafety Advisory Council  
NBC: Namibian Broadcasting Corporation  
NBRI: National Botanical Research Institute  
NBSAP: National Biodiversity Strategy and Action Plan  
NCCI: Namibian Chamber of Commerce and Industry  
NCC-SAP: National Climate Change Strategy and Action Plan  
NCEI: National Core Environmental Indicators  
NCRST: National Commission on Research, Science and  
Technology  
NDF: Namibia Defence Force  
NDP: National Development Plan  
NEEN: Namibian Environmental Education Network  
NERMU: Namib Ecological and Restoration Monitoring Unit  
NGO: Non-Governmental Organisation  
NIED: Namibia Institute for Education Development  
NNF: Namibia Nature Foundation  
NPC: National Planning Commission  
NPGRC: National Plants Genetic Resources Centre  
NSA: Namibia Statistics Agency  
NSI: Namibia Standards Institution  
OPM: Office of the Prime Minister  
PASS: Strengthening the Capacity of the Protected Area  
System to Address new Management Challenges (Project)

PLCAs: Protected Landscape Conservation Areas  
PoN: Polytechnic of Namibia  
PPF: Peace Parks Foundation  
RC: Regional Council  
REEEI: Renewable Energy and Energy Efficiency Institute  
SADC: Southern African Development Community  
SDAC: Sustainable Development Advisory Council  
SDC: Swiss Agency for Development and Cooperation  
SEA: Strategic Environmental Assessment  
SEMP: Strategic Environmental Management Plan  
SGP: Small Grants Programme  
SPAN: Strengthening the Protected Area Network Project  
TAs: Traditional Authorities  
TFCA: Trans-frontier Conservation Area  
UNAM: University of Namibia  
UNCCD: United Nations Convention to Combat Desertification  
UNESCO: United Nations Educational, Scientific and Cultural  
Organisation  
UNFCCC: United Nations Framework Convention on Climate  
Change  
WHC: World Heritage Convention  
WWF: World Wide Fund for Nature





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# 1. INTRODUCTION

## 1.1 Background Information

Namibia is one of the few countries in the world that includes a clause in its constitution targeting the sustainable management of biodiversity. Article 95(L) of the 1990 Constitution requires the State to 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 utilization of living natural resources on a sustainable basis for the benefit of all Namibians, both present and future...”

The three objectives of the CBD, for which this document is the key national level implementing instrument, correspond closely with Article 95 (L), as they seek to promote:

1. The conservation of biological diversity;
2. The sustainable use of its components; and
3. The equitable sharing of benefits arising out of the utilization of genetic resources.

Recognizing the importance of these objectives to its national circumstances, Namibia signed the CBD in 1992 and ratified it in 1997. Namibia developed a first NBSAP in 2001, which covered the period 2001-2010. This sought to implement the three objectives of the CBD in an integrated manner and was internationally recognized as one of the best first-generation NBSAPs.

In 2012, Namibia embarked on a process to review implementation of NBSAP1 and to develop a second generation NBSAP that is aligned with the latest national and global trends (in particular, the Strategic Plan for Biodiversity 2011-2020 including the Aichi Targets; decision x/2) and good practices, and that can address critical challenges and capitalize on existing areas of comparative advantage in the areas of natural resource management and environmental protection.

## 1.2 Namibia's Biological Diversity

Namibia's biodiversity is shaped by a diverse range of factors including climate, topography, geology and human influences. As the most arid country south of the Sahara, lack of rainfall and the high variability of rainfall are perhaps the leading influences on biodiversity. Namibia is characterized by a steep south-west to north-east rainfall gradient. Annual rainfall can be as low as 10mm in the south-west and west, while it averages around 600mm in the north-eastern areas (Mendelsohn et al 2003). A reverse gradient exists in terms of seasonal and daily temperature variations, which are low in the north and north-east and high in the west and south-west.



As a result, the greatest overall terrestrial species diversity is found in the more tropical areas of north-eastern Namibia, while areas of high endemism are mainly concentrated in the arid and semi-arid west, central and southern parts of the country.

### 1.2.1 Diversity of Ecosystems

Namibia is classified into four terrestrial biomes (Desert; Nama and Succulent Karoo; Acacia Savanna; and Broad-leaved Savanna), and two aquatic biomes (Coastal Marine; and Wetlands). Each biome is affected to different extents by land uses such as rangeland farming, agriculture, wildlife production, tourism and recreation, mining and urban development. Namibia's variable environmental conditions have also shaped a large diversity of vegetation zones, which have been divided into 29 units. In general, palaeotropical floral elements are found in the north, cold-temperate elements in the south, and transitional elements between the two. The vegetation zones and biomes are shown in detail in Figure 1 below.

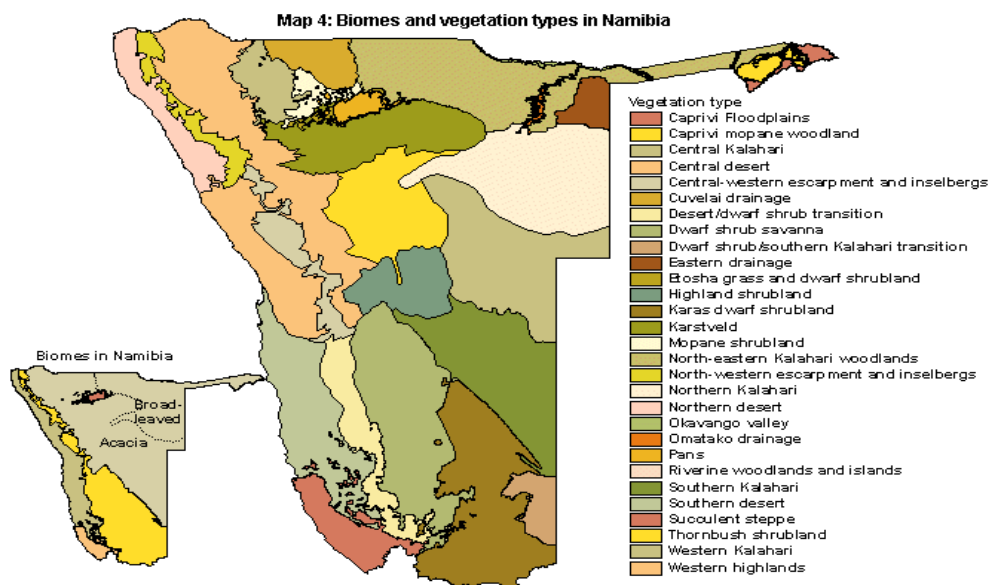


Figure 1: The division of Namibia into vegetation zones (l) and biomes (r) (Source: Mendelsohn et al 2003).

## Terrestrial Biomes in Namibia

### (i) Desert Biome

- Low rainfall (less than 100mm annually), and lack of surface water
- Sparse vegetation dominated by annual grasses and dwarf shrubs
- Large habitat diversity including mountains, gravel plains, sandy seas and succulent steppe winter rainfall regions
- Coastal fog plays a vital role in supporting many plants and animals
- Ephemeral rivers cut across the biome providing linear oases where large trees and water sources support many of the larger mammals and animals
- Systems within this biome are extremely sensitive and fragile and prone to long-term degradation with long recovery periods

### (ii) Karoo Biome

- Annual rainfall is 100-200mm
- Vegetation dominated by dwarf shrubs or “Karoo bushes” and annual grass species
- Harsh climate with large seasonal and daily temperature variations
- The fauna in this biome is species poor but supported vast herds of springbok in the past, which were subsequently reduced by hunting and fencing
- Sensitive to over-grazing and degradation which can lead to desertification

### (iii) Acacia Savanna

- Annual rainfall of 250-400mm
- Dominated and characterized by a wide variety of grass species and acacia species such as camelthorn and blackthorn
- Supports a high concentration of various species which are endemic to the region, and supports large plains game including herd animals and predators
- Contains the headwaters and catchments of most ephemeral rivers in Namibia
- Vulnerable to inappropriate management and over-use resulting in desertification and bush encroachment

### (iv) Broad-leafed Savanna

- Annual rainfall of 450-700mm
- High species diversity, especially at the interface with the wetland biome
- Deciduous tree species are characteristic including Zambezi teak, mopane and wild seringa
- High numbers of large mammals are present including 70% of Namibia's elephant population and the majority of the buffalo and hippopotamus populations
- Important to transboundary cooperation as ecosystems are shared and species move across national boundaries
- Forest fires are a common occurrence in this biome

## Aquatic Biomes in Namibia

### (v) Wetlands

- Multiple habitats including perennial rivers, ephemeral rivers, floodplains, pans, sinkholes, estuaries, swamps, marshes, springs and dams
- Typically highly productive systems which provide important sources of freshwater and vegetation
- Interact with all other biomes
- Important to the hydrology of areas through services such as the recharging of aquifers
- Provide important sites for breeding and refuge
- Vulnerable to over-abstraction of water, alien species and pollution

### (vi) Coastal/Marine

- Characterized by the cold Benguela current which produces a nutrient-rich upwelling system
- Highly productive system which supports some of the highest concentrations of marine life in the world
- Multiple habitats including the littoral, shelf and abyssal zones, islands, lagoons and estuaries

Table 1: Brief description of Namibia's biomes.

### 1.2.2 Species Diversity

As an arid country, Namibia has a relatively low number of species compared to countries with wetter climates. However, it possesses a high level of endemism, with approximately 20% of described species classified as endemic. Endemism is particularly high in plants, invertebrates, reptiles and frogs in Namibia while it is relatively low for mammals, birds and fish (see Table 2 below).

Taxonomic Group	Number of described species in Namibia	% of species endemic to Namibia
Reptiles	254	28%
Insects	6,421	24%
Plants	4,334	17%
Amphibians	50	12%
Arachnids	618	11%
Fish	114	8%
Mammals	229	7%
Birds	676	2%

Table 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](http://www.biodiversity.org.na)).



### 1.3 National and Global Biodiversity Perspective

Namibia is one of the few dryland countries in the world with internationally recognized biodiversity hotspots. The most significant of these is the Tsau //Khaeb (Sperrgebiet) National Park, situated in the Succulent Karoo floral kingdom in Southern Namibia. The second hotspot is the rugged Namib Escarpment, which is part of Africa's great western escarpment, and an area of particularly high endemism.

Vegetation types	56 different vegetation types
Plants	About 1,050 species representing 25% of the entire flora of Namibia on just 3% of the country's land surface
Frogs	16 species
Reptiles	100 species
Birds	35 coastal and marine species, 60 wetland species 120 terrestrial species
Mammals	80 terrestrial species 38 marine species including an estimated 600,000 cape fur seals or 50% of the world's population
Insects and other invertebrates	Great number of insects and other invertebrates, of which probably 90% are not described by science
	A Marine Protected Area covering 13 offshore islands and islets

**Table 3: Biodiversity of selected taxonomic groups found in the Tsau //Khaeb National Park (MET 2010).**

Some sites of national and global significance in Namibia include its:

- Twenty Protected Areas, which cover hugely varied ecosystems and some 17% of the country's land mass including the entire 1500km coastline
- Two Transfrontier Conservation Areas (TFCAs) – Ai-/Ais / Richtersveld TFCA, and the Kavango Zambezi TFCA (the world's largest TFCA)
- Four Ramsar Wetland Sites of International Importance – Etosha Pan, Walvis Bay Lagoon, Sandwich Harbour and the Orange River Mouth. All of these sites are located within protected areas.
- Nineteen Important Bird Areas (IBAs), 12 of which are located in the coastal zone or on off-shore islands
- Forty Important Plant Areas (IPAs), spread across the country.

### 1.4 Biodiversity Conservation and Sustainable Use for Poverty Alleviation in Namibia

Biodiversity and the natural environment are of critical importance to Namibia. Natural resource-based sectors including mining, fisheries, agriculture and tourism are the basis of the Namibian economy, and around 70% of Namibia's population is directly dependent on the natural resource base for income; food; medicinal and health needs; fuel and shelter. This situation demands that biodiversity, and the ecosystem services it provides, are maintained and enhanced as far as possible for sustainable development.

The tourism industry, of which National Parks are considered the bedrock, is recognized as the fastest growing sector of the Namibian economy. Travel and tourism was estimated to have accounted for 20.5% of GDP in 2011 (directly and indirectly) (WTTC 2012), and it is a key industry in Namibia linking economic development with poverty alleviation and biodiversity conservation with national parks promoted as engines of growth in the rural areas. This is facilitated by engaging local communities in the management of parks and the sustainable use of natural resources through the granting of tourism and hunting concessions to local communities, usually in partnership with private sector investors.

Conservation has emerged as an increasingly viable land use in Namibia, particularly since rights to the conditional use of wildlife were devolved to local communities through conservancies in 1996. It was estimated in

2012 that conservancies employed around 900 people permanently and 3,500 on a temporary basis, with over N\$50 million being generated by conservancies in 2011 (MET 2012b), mainly through trophy hunting, accommodation establishments, and the harvesting and sale of natural resource products and crafts.

The CBNRM Programme is the only example in Namibia in which the linkages between biodiversity and poverty alleviation are systematically measured by collecting periodic data on returns and employment through tourism establishments and activities, trophy hunting, wildlife meat harvesting, medicinal plant collection, and non-timber forest products (NTFPs) amongst others. Although CBNRM covers only some 18 per cent of Namibia's landmass, it gives a clear indication of the role biodiversity can play in poverty alleviation in the rural areas.

The CBNRM Programme has also highlighted the linkages between biodiversity management and gender. Women have been included in biodiversity governance structures and as the main day-to-day managers of biodiversity, women are most affected by biodiversity loss and degradation. For this reason they are a key target group of NBSAP2.

Overall, 42% of Namibia's landmass was under some form of conservation management in 2012 including through private game parks and nature reserves, tourism concessions, conservancies and community forests. One of the main objectives for NBSAP2 is to ensure that the different conservation land uses are drivers of poverty alleviation and contribute to ecosystem resilience in rural areas.

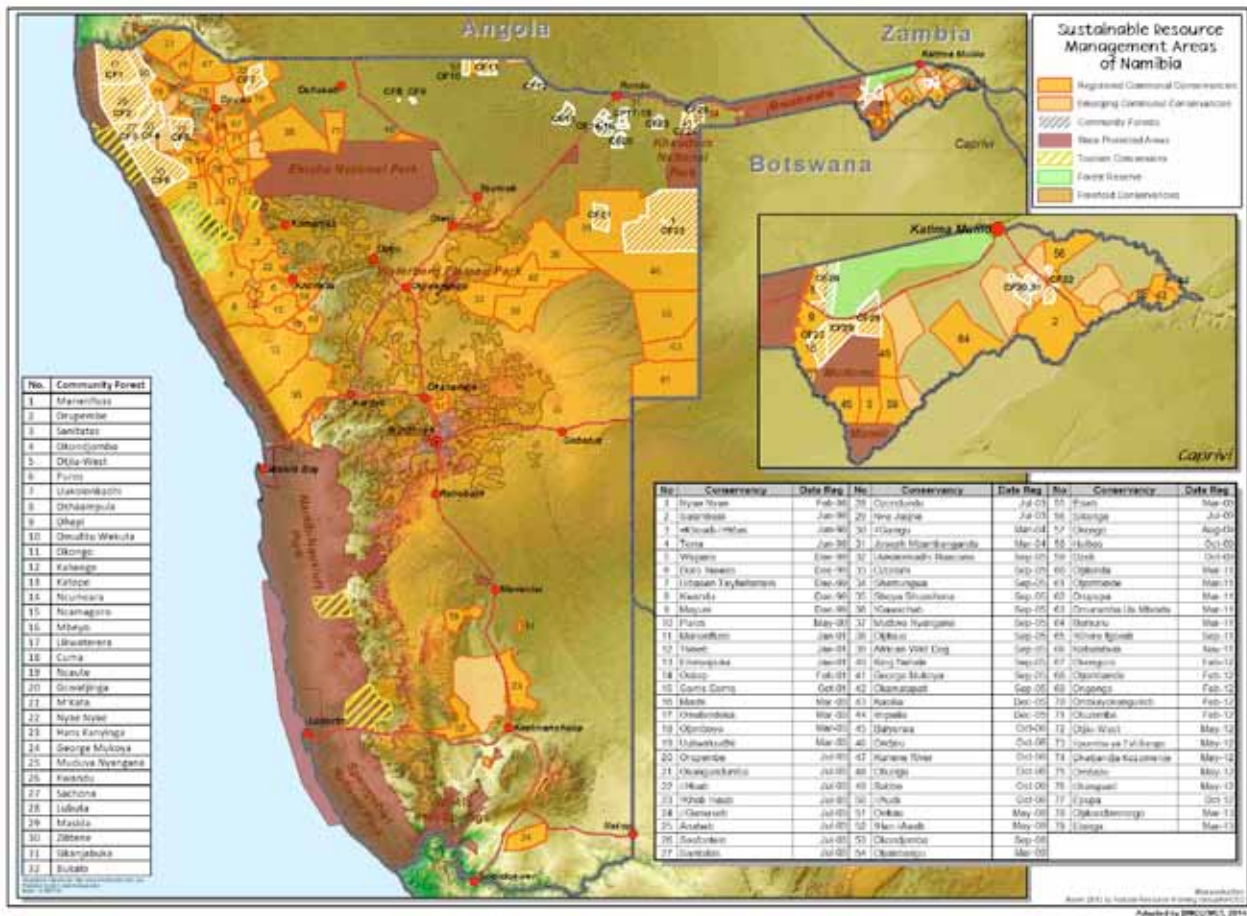


Figure 2: Map showing the 42% of Namibia under conservation management.



## 2. METHODOLOGY TO DEVELOP NBSAP 2

### 2.1 Institutional Framework

As focal point to the CBD, the Ministry of Environment and Tourism (MET), through the Department of Environmental Affairs (DEA), coordinated the elaboration of NBSAP2 during the period March 2012 to December 2013.

A National NBSAP2 Steering Committee was established and convened for the first time in May 2012. The first meeting of the NBSAP2 Steering Committee deliberated on the review process for NBSAP1 and on the best way to elaborate Namibia's 2nd NBSAP. The Committee was originally established to oversee the formulation of NBSAP2 but its mandate has since been extended so that it also coordinates the implementation of NBSAP2, including its monitoring and evaluation.

#### Namibia's NBSAP Steering Committee

##### Terms of Reference

Coordinate the review of NBSAP1, provide guidance and technical input into NBSAP2 and oversee the implementation, and monitoring and evaluation of NBSAP2

##### Membership

###### Government Ministries

Ministry of Environment and Tourism (Chair and Secretariat); Ministry of Agriculture, Water and Forestry; Ministry of Education; Ministry of Finance; Ministry of Fisheries and Marine Resources; Ministry of Foreign Affairs; Ministry of Gender Equality and Child Welfare; Ministry of Mines and Energy; Ministry of Regional and Local Government, Housing and Rural Development; Ministry of Youth, National Service, Sport and Culture; National Planning Commission

###### Academic Community

Polytechnic of Namibia; University of Namibia

###### Indigenous and Local Communities

Chief of the Aodaman Traditional Authority

###### Non-Governmental Organizations

Desert Research Foundation of Namibia

###### Private Sector

Chamber of Mines

###### Implementing Agencies

United Nations Development Programme (UNDP); Gesellschaft für Internationale Zusammenarbeit (GIZ)

Figure 3: Functions and Membership Structure of the NBSAP Steering Committee.

## 2.2 Promoting Participation and Consultation

In line with the guidance of the CBD Conference of Parties decisions IX/8 and X/2, widespread participation has been promoted in the process to develop NBSAP2<sup>1</sup>. Government ministries; local and regional government authorities; the scientific community; non-governmental organisations (NGOs) and community-based organisations (CBOs); indigenous and local communities; donor agencies; and the private sector were all closely involved in the NBSAP2 development process. In total, about 400 stakeholders were engaged in the national and regional level consultative process. Individual interviews were also undertaken with key relevant stakeholders<sup>2</sup>.

The roadmap towards developing NBSAP2, highlighting the major milestone events, is presented in the diagram below:



Figure 4: Roadmap followed to develop Namibia's NBSAP2.

Two national level workshops were held in March and July 2012 to review implementation of NBSAP1 and to provide preliminary inputs to the content and formulation of NBSAP2. The workshops also introduced the Strategic Plan of the CBD (2011-2020) and the Aichi Targets to the participants who were asked to assess and prioritize these targets in terms of their relevance to Namibia's national circumstances and to identify preliminary activities per each target as considered appropriate.

### Some Lessons Learned from NBSAP1

Namibia's first NBSAP1 was internationally recognised as being one of the best first generation NBSAPs. It covered 10 Strategic Themes which in turn encompassed 55 strategic aims and 242 activity-based targets. The review of NBSAP1 indicated that some 80 per cent of these targets were at least partially achieved. NBSAP2 sets about building on areas that were under-achieved but still considered priorities as well as identifying new priority areas for action. Some further key lessons to guide the formulation of NBSAP2 are highlighted below:

<sup>1</sup>CoP Decision IX/8 calls on Parties to "engage indigenous and local communities and all relevant sectors and stakeholders" in biodiversity planning and implementation. CoP Decision X/2 calls on Parties to "Enable participation at all levels to foster the full and effective contributions of women, indigenous and local communities, civic-society organizations, the private sector and stakeholders from all other sectors in the full implementation of the objectives of the Convention and the Strategic Plan".

<sup>2</sup>See list of interviewees in Annex 1.



- **Mobilisation of Resources:** The NBSAP was an important instrument for channelling resources into priority biodiversity areas with a number of donor-funded projects particularly targeting specific priority NBSAP areas such as coastal conservation, the CBNRM Programme and the management of protected areas.
- **Coordinating framework for NBSAP1:** The coordination framework for the implementation and monitoring and evaluation of NBSAP1, while initially strong and effective, fell away after the end of the donor-funded National Biodiversity Programme in 2005.
- **Scope of NBSAP1:** NBSAP1 was well-designed and very ambitious in scope, with equal consideration given to each of the 3 objectives of the Convention. However, it was arguably over-ambitious and NBSAP2 needs to be more focused and outcome-oriented.
- **Capacity for effective implementation of NBSAP1:** This was insufficient and is yet to be adequately addressed in a number of areas including biosystematics, biotechnology and environmental monitoring.
- **Low awareness levels of NBSAP1:** Awareness of NBSAP1 was low, including among key implementing partners; regional and local stakeholders; and the general public. NBSAP1 was not accompanied by a Communication, Education and Public Awareness (CEPA) Strategy, which was an impediment to effective implementation.
- **Working Groups:** The voluntary working groups tasked to formulate and implement specific aspects of NBSAP1 had mixed success. Some such as the Namibia Biotechnology Alliance, the Wetlands Working Group and the Alien Invasive Species Working Group delivered substantive outputs, however almost all failed to last for the duration of NBSAP1. The strong focus on individuals, high rates of staff turnover and their voluntary nature tended to reduce their long term effectiveness.
- **Coordination and management of cross-cutting issues:** The coordination of areas such as wetlands, mountain ecosystems and biosystematics was a key challenge in NBSAP1 and needs to be targeted and improved through NBSAP2

Figure 5: Summary of key lessons from the review of NBSAP1.

A regional consultation process was undertaken to raise awareness of NBSAPs in general at local level, to establish the status quo of existing biodiversity initiatives in the regions and to determine regional priorities and possible interventions in the development and implementation of the NBSAP2. The relevance of the Aichi targets to local circumstances was also assessed in each region. The regional consultative process, which comprised of 5 two-day workshops held to cover regional clusters, was undertaken during October and November 2012.

Some Specific Priorities Identified from the Regions	
Zambezi	• Rigorous enforcement of inland fisheries legislation
Erongo	• Limit the impact of mining and development on biodiversity-sensitive areas
Hardap	• Preservation of biodiversity sensitive areas
!Karas	• Creation of livestock breeders associations to prevent genetic erosion
Kavango East and West	• Strengthen the support of extension services to farmers
Khomas	• Strengthen capacity to control and handle genetically modified organisms • Establishment of green economy enterprises • Encourage harvesting of invasive species by exploring potential economic use • Ensure adherence to Environmental Impact Assessments and Management Plans
Kunene	• Document local indigenous knowledge on conservation and sustainable use of natural resources • Strengthening of wildlife law enforcement capacity • Introduce rangeland management practices in conservancies

Ohangwena	<ul style="list-style-type: none"> <li>• Expansion of conservation agriculture</li> <li>• Integration of biodiversity issues into school curriculum</li> </ul>
Omaheke	<ul style="list-style-type: none"> <li>• Introduction of fire breaks and afforestation programme</li> <li>• Conduct research into the traditional uses of biodiversity for medicines</li> <li>• Expansion of nurseries and wildlife sanctuaries</li> <li>• Extend the use of organic fertilisers and pesticides</li> </ul>
Omusati	<ul style="list-style-type: none"> <li>• Gazette more areas as conservancies and community forests</li> </ul>
Oshana	<ul style="list-style-type: none"> <li>• Promote renewable energy technologies</li> <li>• Implementation of the climate change adaptation toolkits</li> </ul>
Oshikoto	<ul style="list-style-type: none"> <li>• Monitor and assess carbon emissions</li> <li>• Reintroduction of species to their historical habitats</li> <li>• Identification of threatened species</li> </ul>
Otjzondjupa	<ul style="list-style-type: none"> <li>• Identify suitable areas for proclamation as conservancies, community forests and national parks</li> <li>• Promote use of environmentally friendly herbicides and pesticides</li> </ul>

**Table 4: Some identified NBSAP2 priority activities per region.**

A final National Consultative Workshop was held from the 26-27th February 2013 to present the findings from the regional consultative process, and to secure final inputs from the participants into the content of NBSAP2. High level technical stakeholders, parliamentarians and traditional authorities were among the key groups targeted by this workshop. The workshop was quickly followed by a high level segment in which the draft NBSAP2 was presented to the Permanent Secretaries of relevant ministries and the Chief Executive Officers of relevant parastatals and private sector institutions for their awareness and preliminary approval.

Lastly, a comprehensive internal and external peer review was undertaken on the document. The external peer review was conducted during a regional workshop organized by the NBSAP 2.0 Mainstreaming Biodiversity and Development Project from 8-12 July in Uganda.

### 2.3 Aligning NBSAP2 with the CBD Strategic Plan and Aichi Targets

Based on the results of the outcomes of the national and regional prioritization exercises, it was decided to closely align NBSAP2 with the CBD Strategic Plan and Aichi Targets (2011-2020). The national and regional workshops each revealed that the five strategic goals are of high importance to Namibia, while the twenty Aichi Targets were also considered relevant for Namibia, though some were refined to better suit Namibia's circumstances. These alterations are presented in Annex 2.





Figure 6: Outcome of prioritization exercises undertaken on the 20 Aichi Targets in each of Namibia's 13 regions

From the figure 6 it is clear that Strategic Goals A on mainstreaming (targets 1-4); D on benefits (targets 14-16); and E on participatory planning, knowledge management and capacity building were considered most important. Over 50 per cent of Namibia's 13 regions prior to new demarcations considered all of the 20 Aichi Targets as being highly relevant to their region, with the exception of targets 5, 6 and 10<sup>3</sup>. This is explained by the fact that these targets make specific reference to forests, fisheries and marine ecosystems, which do not feature in most of Namibia's regions.



<sup>3</sup>This issue of coral reefs was considered of relatively low importance to Namibia, however climate change is recognized as a key threat to biodiversity needing to be addressed.

## 3. OVERVIEW OF NBSAP2

### 3.1 Structure

The vision of NBSAP2 is for **“Namibia’s biodiversity to be healthy and resilient to threats, and the conservation and sustainable use are key drivers of poverty alleviation and equitable economic growth, particularly in rural areas”**.

NBSAP2 has five key strategic objectives, each of which has a number of targets to be achieved by the end of the timeframe of the NBSAP2. There are a total of 17 targets, closely aligned to the Aichi Targets, and each with one or more key performance indicators.

In line with the CBD Strategic Plan (2011-2020), the strategic goals of NBSAP2 are to:

1. Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society
2. Reduce the direct pressures on biodiversity and promote the sustainable use of biological resources
3. Improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity
4. Enhance the benefits to all from biodiversity and ecosystem services
5. Enhance implementation of NBSAP2 through participatory planning, knowledge management and capacity building



Strategic initiatives are intended to guide actions that will ultimately lead Namibia on a path towards the achievement of these targets. There are 38 such strategic initiatives, each with associated activities identified during the NBSAP2 consultative process. These activities are described as indicative to allow for flexibility, and are not intended to be prescriptive. Other sectoral activities and initiatives contributing to the strategic initiatives and targets are also likely to be developed over the course of the lifespan of NBSAP2.

### 3.2 Roles and Responsibilities

As the main custodians of Namibia’s land and marine resources, the four main natural resources management-related ministries – MET; Ministry of Agriculture, Water and Forestry; Ministry of Lands and Resettlement; Ministry of Fisheries and Marine Resources – will be the lead implementers of NBSAP2.



The other main implementing Ministries include:

- Ministry of Youth, National Service, Sport and Culture (MYNSSC) for biosystematics; environmental education functions; for identifying and managing heritage sites; and for mobilising the youth into biodiversity conservation.
- Ministry of Mines and Energy in the areas of mining regulation and sustainable energy.
- Ministry of Regional and Local Government, Housing and Rural Development for coordinating rural development.
- Ministry of Education for integration of biodiversity issues within curricula and for biodiversity-related research and science.

Namibia has been one of the most successful countries in Africa in attracting funding for biodiversity-related projects through the Global Environment Facility (GEF) and also benefits from excellent bilateral cooperation in the area of biodiversity management with a number of countries. These projects typically play an important role in providing catalytic funding for innovative interventions relating to biodiversity and will directly contribute to the implementation of NBSAP2. A list of the most significant projects and their areas of intervention is below:

Project Title	Project Objective	Action Plan Area
<b>BCLME<sup>4</sup> (2008-2015) (GEF)</b>	Strengthen sustainable utilization of marine resources at transboundary level.	2.2; 5.2
<b>KAZA Project (2008<sup>5</sup>)</b>	To sustainably manage the Kavango Zambezi ecosystem, its heritage and cultural resources based on best conservation and tourism models for the socio-economic wellbeing of the communities and other stakeholders	3.1; 3.2; 4.1; 5.2
<b>Agriculture and Tourism Projects of MCA (2009-2014)</b>	Support to Protected Areas, Conservancies and Indigenous Plants Industry	2.3; 3.1; 4.1; 4.2; 5.2
<b>SAREP (2010-2015)</b>	Promote a transboundary approach to resource management and climate resilience to preserve the Okavango basin and provide sustainable and equitable development opportunities for its inhabitants	4.1
<b>TNC (2012-2015) (GEF)</b>	To enhance Namibia's capacity to better deal with climate change risks and create opportunities at individual, institutional and systemic levels.	2.3; 2.4; 2.6; 3.3
<b>NBSAP2 Resource Mobilisation Project (2013-2017) (BMU)</b>	To improve resource mobilisation for biodiversity conservation sustainably on the basis of an economic valuation of ecosystem services and their mainstreaming into national governance processes	1.2; 5.2; 5.3
<b>NACOMA Phase II (2013-2018) (GEF)</b>	Strengthen conservation, sustainable use and mainstreaming of biodiversity in coastal and marine ecosystems in Namibia	2.1; 2.2; 2.3; 2.4; 2.6; 3.1; 5.2
<b>Namibia National Parks Programme Phase III (2013-2016) (KfW)</b>	Enhance park management and infrastructure development in Namibia's North-Eastern Parks in the KAZA TFCA and the Tsau //Khaeb (Sperrgebiet) National Park	3.1
<b>BMCC Project (2013-2020 – MET/GIZ)</b>	<ol style="list-style-type: none"> <li>1. MET increasingly fills new key functions and structures in line with policies and legislation (especially EMA) Capacity development for community-based natural resource management in a changing climate in selected pilot regions</li> <li>2. resource management in a changing climate in selected pilot regions</li> <li>3. Cross-sectoral mainstreaming of biodiversity, adaptation to climate change and a green economy</li> </ol>	1.2; 2.1; 2.6; 4.1; 5.2

<b>PASS Project (2014-2019) (GEF)</b>	Strengthen the Protected Area system of Namibia and ensure sustainable finance through improving current systems for revenue generation, introduction of innovative revenue generation mechanisms; and cost effective enforcement through application of the Enforcement Economics Model	3.1; 3.2; 5.2
<b>NAFOLA (2014-2019) (GEF)</b>	To maintain current dry forests and the ecosystem goods and services they provide, in over 500,000 ha of forest lands, through wide-scale adoption of SLM, SFM and other improved technologies	2.3; 5.2
<b>Conservation and Sustainable Use of the BCLME (2014-2019) (BMU)</b>	To increase the capacities of the Benguela Current Commission and its member states for enhanced sustainable management of the BCLME's marine biodiversity and natural resources, making use of EBSAs and Marine Spatial Planning tools	2.2; 5.2
<b>Integrated National Park Management Programme (2014-) (KfW)</b>	Support MET in the planning, development and management of an integrated coastal park from the Orange River to the Kunene River	3.1

*Table 5: The crucial role of Namibia's supporting projects.*

Other important supporting agencies for mainstreaming and implementation of biodiversity-related initiatives include the tertiary institutions as the generators and purveyors of scientific knowledge; CSOs and donor agencies as on-the-ground implementers and often pilot practitioners of good practices; the Ministry of Information, Communication and Technology and the media for dissemination of information; and cross-sectoral bodies such as the NBSAP2 steering committee, the Indigenous Plants Taskforce Team, the Namibia Environmental Education Network (NEEN) and the Sustainable Development Advisory Council which can convey the importance of biodiversity to different sectors and facilitate improved coordination of activities.

#### **The Role of CSOs**

A number of CSOs are highly active on-the-ground in Namibia, working closely with communities on a wide variety of environmental issues. CSOs thus have a very important role to play in the implementation of NBSAP2 in areas such as awareness raising; capacity building for good practices; support to participatory governance and decision-making; research and development; and value addition to natural resources. Among the most prominent CSOs for biodiversity management are the World Wide Fund for Nature (WWF), Desert Research Foundation of Namibia (DRFN), Namibia Nature Foundation (NNF), Integrated Rural Development and Nature Conservation (IRDNC), Centre for Research, Information, Action Africa (CRIAA), and the umbrella body - Namibian Association of CBNRM Support Organizations (NACSO).

A key target group of NBSAP2 is those institutions and stakeholders which are not typically directly responsible for biodiversity management but which have important planning functions or undertake activities which impact heavily on the environment. In Namibia, of particular importance in this regard, are the:

**Office of the Prime Minister (OPM):** for integrating biodiversity into the strategic plans of all relevant line ministries.

**Ministry of Finance (MoF):** for allocating appropriate funds for biodiversity-related activities and for integrating these activities in longer term financial planning and budgeting frameworks.

<sup>4</sup>All acronyms in this table are described in full on page IV

<sup>5</sup>KAZA is being supported by a range of partners including the BMZ through KfW; SDC; USAID; PPF; CI; WWF; and DGIS

**National Planning Commission (NPC):** for the integration of biodiversity-related activities into national planning frameworks (also Namibia's main instruments for poverty reduction) and donor-funded programmes.

**Parliamentarians:** for mobilizing political will and support towards implementation of NBSAP2. Parliamentarians can play a particularly strong role towards biodiversity management through supportive law-making, budgetary allocations, oversight, promoting international cooperation and awareness raising.

**Traditional Authorities:** for the promotion of biodiversity conservation on communal lands and for regulating access to traditional knowledge.

**Regional Councils and Local Authorities:** Regional councils for planning in Namibia's political regions, and Local Authorities for environmentally-friendly approaches to critical urban functions impacting on biodiversity such as waste management, transport, housing, water and sanitation provision.

**Private Sector:** The private sector has an essential role to play, both in investing in biodiversity-related opportunities and in promoting sustainable consumption and production. The Namibia Chamber of Commerce and Industry, Chamber of Mines and commercial banks are obvious targets as are companies promoting value addition to natural resources and Namibia's various tourism associations. Namibia's large number of private game reserves, as well as the investment by many private companies in low-impact, high quality eco-tourism, also represent key elements of biodiversity conservation and sustainable use in Namibia. It is estimated that almost four per cent of Namibia's landmass is used as private game parks and nature reserves (MET 2013).

### 3.3 Key Priorities of NBSAP2

NBSAP2 has been formulated to capitalize on its comparative advantage in terms of biodiversity status and potential and to channel efforts and resources into tackling the threats to biodiversity it is facing. The following key priorities for NBSAP2 are:

#### 3.3.1 Mainstreaming Biodiversity

The need to mainstream biodiversity at all levels of government and society is recognized as a cornerstone of NBSAP2 (see mainstreaming strategy in section 1 of Action Plan).

#### 3.3.2 Improving Communication of Biodiversity-Related Issues

Low levels of awareness of biodiversity were identified as a critical challenge during the NBSAP2 consultative process. A CEPA Strategy was thus developed to promote behavioural change and for mainstreaming the importance of biodiversity among the Namibian population, (see the summarised CEPA strategy under section 1.1 of Action Plan, full version is available on [www.met.gov.na](http://www.met.gov.na))

#### 3.3.3 Addressing Critical Threats to Biodiversity

NBSAP2 is geared towards tackling the critical threats to biodiversity that Namibia is facing. These threats can undermine the economic and social development of the country. It is a strategic priority of NBSAP2 to address these threats in a holistic manner through a range of measures and mechanisms. The most critical threats to biodiversity in Namibia are highlighted in Table 8 below<sup>6</sup>.

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<sup>6</sup> These threats are not listed in order of severity.

<b>Unsustainable Water Uses</b>	Mainly through large scale irrigation (particularly in North-Eastern Regions), pollution (in and adjacent to urban areas), damming and over-abstraction of groundwater
<b>Expansion of urban areas and increasing industrialization</b>	Leading to increasing demand for resources and services, and increasing types and volumes of waste and pollution
<b>Threats and impacts of Climate Change</b>	Mainly through increased variability drought and flood events; shifts in vegetation types and species distribution; and effects on vulnerable ecosystems such as the Benguela Current Large Marine Ecosystem
<b>Rapid expansion of Mining and Prospecting</b>	Expansion of mining and prospecting especially in ecologically sensitive areas (including off-shore) and through habitat loss and destruction; infrastructural development; increased demand for water and electricity; and the long term impacts of contaminated waste
<b>Unsustainable Land Management Practices</b>	Leading to soil erosion, land degradation, deforestation and bush encroachment
<b>Uncontrolled bush fires</b>	In 2011, uncontrolled fires destroyed and damaged around 370,000 hectares of vegetation. Bush fires are also a major threat to national parks such as Etosha, Namib Naukluft and those in the north-east.
<b>Alien Invasive Species Illegal harvesting and trade of wildlife and forest and plant resources</b>	Lead to species loss and ecosystem simplification and breakdown Leads to loss of biological diversity and loss of income arising from inequitable benefit sharing from wildlife, forest and plant resources
<b>Human Wildlife Conflict</b>	Increases damages to community livelihoods in terms of crop destruction, water point damage and livestock mortalities and even threats to human life

*Table 6: Critical threats to biodiversity in Namibia.*

### 3.3.4 Contributing to National Development Objectives

The conservation of biodiversity is prominently addressed in Namibia's long-term development strategy - Vision 2030 - with a dedicated Chapter on the Sustainable Utilisation of Natural Resources and Environmental Sustainability.

A focused 4th National Development Plan (NDP4) is under implementation from 2012-2017. NDP4 has three main objectives, which include high and sustained economic growth; employment creation; and increased income equality. Biodiversity, through the nature-based tourism sector is already an important provider of employment, while the potential for it to contribute further to employment creation and reduced income inequality through biodiversity-based enterprises is still largely untapped.

NDP4 further focuses on the following sectors for economic growth: agriculture, tourism and manufacturing. Biodiversity management has an important contribution to make towards these objectives and economic priority areas. Strategic initiatives in NDP4 to promote conservation agriculture and implement a debushing programme are good examples of national commitment to sustainable agriculture and the restoration of degraded lands, while the maintenance and development of national parks and increased investment in communal areas are outlined as key strategies under the tourism development sector. Value addition, improved market access, the establishment of testing centres and beneficiation for local people are considered cornerstones to increase the contribution of manufacturing to the economy. Each of these areas is highly relevant also for the development of biotrade in Namibia.

### 3.3.5 Strengthening the Policy-Making Framework for Biodiversity Management

Namibia has an excellent policy and legislative framework for biodiversity conservation and broader environmental management, however implementation and enforcement of this framework is a challenge. NBSAP2



will target the enhanced implementation of this framework, with particular emphasis on the:

- Environmental Management Act of 2007 for the improved regulation of activities having a harmful impact on the environment through EIAs and SEAs.
- Access and Benefit Sharing Bill of 2012 which is expected to be gazetted in 2014.
- Protected Areas and Wildlife Management Bill which will provide a legal framework for the maintenance of ecosystems, essential ecological processes and the biological diversity of Namibia, and the utilization of living natural resources on a sustainable basis for the benefit of Namibians, and to promote the mutually beneficial co-existence of humans with wildlife.
- National Rangeland Policy and Strategy of 2012 which seeks to enable rangeland managers to manage their rangelands in such a way so that productivity and biodiversity are restored and maintained.
- National Climate Change Strategy and Action Plan of 2013 which aims to increase climate change resilience and optimize opportunities towards sustainable development.
- Third National Action Programme to Combat Desertification of 2014 which seeks to reverse and prevent desertification/ land degradation and to mitigate the effects of drought in affected areas to support poverty reduction and environmental sustainability.

### 3.3.6 Generating Reliable Baseline Information

Baseline information is lacking in a number of critical areas including awareness of biodiversity, the value of biodiversity and ecosystem services for the economy and society, as well as the extent of bio-physical factors such as land degradation and biodiversity loss. The establishment of such baseline information is a key NBSAP2 priority, particularly during the first four years, so that the status quo on these issues can be established and subsequent trends can be monitored and positively influenced.

### 3.3.7 Capitalizing on Synergies with the Rio and other Biodiversity-Related Conventions

Namibia is a Party to the Ramsar Convention on Wetlands of International Importance, the Convention on Trade in Endangered Species (CITES), the International Treaty on Plant and Genetic Resources (ITPGR), the World Heritage Convention (WHC) as well as the two other Rio Conventions on Climate Change and Desertification. These Conventions are clearly closely linked and NBSAP2 seeks to integrate the objectives and actions of these Conventions under its umbrella.

The different national focal points to each Convention were closely engaged in the consultative process to formulate NBSAP2, which in turn has contributed towards the integration of Convention-specific targets, objectives and commitments into NBSAP2. This will further create synergies in the monitoring process and national reporting requirements to each Convention. Examples of thematic areas in which Convention-specific targets, objectives and commitments have been integrated into NBSAP2 are presented in the diagram below:

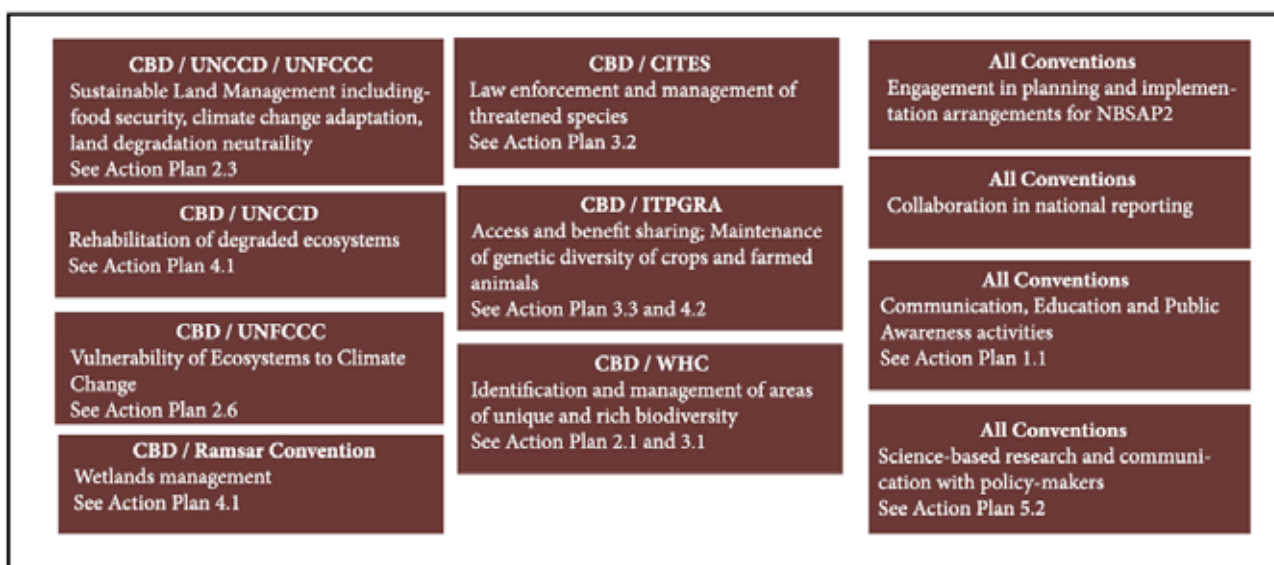


Figure 7: Thematic areas for synergies through NBSAP2.

### 3.3.8 Enhancing Regional Cooperation

Namibia recognizes the critical importance of the transboundary management of natural resources, which is guided by SADC protocols on energy, tourism, fisheries, watercourses, wildlife and law enforcement, and forestry. This is further promoted in NBSAP2, particularly with regard to the improved management of Namibia's two TFCAs (KAZA and the /Ai-/Ais Richtersveld TFCA); the Benguela Current Large Marine Ecosystem; and the transboundary river commissions such as OKACOM and the Orange-Senqhu Basin Commission. The NBSAP2 also seeks to identify new areas of cooperation at the regional level. Although the SADC Regional Biodiversity Strategy and Action Plan is structured differently to the CBD Strategic Plan and Aichi Targets, Namibia has sought to align its NBSAP2 with this document and this alignment is represented in Annex 3<sup>7</sup>.

### 3.3.9 Mainstreaming Gender Considerations

Women are sometimes known as the “invisible” managers and users of natural resources in Namibia. Despite the fact that they are the main managers of these resources on a daily basis, they often play a limited role in decision-making processes and in the sharing of benefits from their efforts. Empowerment of women is however occurring in the natural resources management sector and is being actively promoted through the CBNRM Programme, and targeted support through funding mechanisms such as the Environmental Investment Fund and the Small Grants Programme of UNDP.

NBSAP2 promotes the full participation of women in the planning and implementation of biodiversity-related initiatives as well as in the areas of capacity building; value addition and enterprise development; and benefit-sharing.



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<sup>7</sup> The alignment of Namibia's NBSAP2 with the SADC Regional Biodiversity Strategy and Action Plan is presented in Annex 3.



## 4. THE NATIONAL BIODIVERSITY STRATEGY

### 4.1 STRATEGIC GOAL 1: Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society

The need to integrate the conservation of biodiversity at all levels of government and society is a cornerstone of NBSAP2. After participation in the NBSAP 2.0 Project and consulting with the Good Practice Guides Series of the CBD, Namibia is pursuing a two-phase approach to achieve its mainstreaming vision for a “society in which biodiversity issues and concerns are the responsibility of all citizens and are recognized by all sectors of government, private sector and civil society”.

The mainstreaming approach emphasizes :

- Making and communicating the business case for biodiversity with focus on poverty alleviation, with the aim to improve understanding among decision and policy-makers and the private sector of the linkages between biodiversity, poverty and economic development
- Integrating biodiversity considerations into national, regional, local and sectoral policies, plans, strategies and budgets

In order to effectively mainstream biodiversity across government and society and to address the underlying causes of biodiversity loss, the following elements are considered critical:

- Improved communication, education and public awareness on issues relating to biodiversity
- Valuations of ecosystem services to inform decision-making about the values of nature and the integration of biodiversity into national and sectoral policy-making, planning, budgeting and decision-making frameworks
- Development of a wide range of economic incentives to promote biodiversity conservation and sustainable use of natural resources

#### 4.1.1 Target 1: By 2020, at least 75% of surveyed key target groups know the meaning of biodiversity and can identify important reasons for biodiversity conservation

**Key Performance Indicator: Results of surveys for pre-defined target groups using the Biodiversity Barometer Tool**

**Strategic Initiative:**

**1.1.1 Raise public awareness of the meaning and value of conservation of biodiversity and wise use of biodiversity by target groups**

**1.1.2 Promote understanding and clarify values of biodiversity and development of positive attitude towards conservation and use of biodiversity**

**1.1.3 Raise adequate funding to facilitate communication and dissemination of NBSAP2**

**1.1.4 Foster international cooperation and networking to enhance communication of the values of biodiversity conservation and sustainable use**

With awareness raising being a strong tool for behavioural change and for mainstreaming the importance of biodiversity among the Namibian population, it was considered an important priority to develop a Communication, Education and Public Awareness (CEPA) strategy for NBSAP2<sup>8</sup>.

The ultimate goal of the CEPA Strategy is “**to achieve a positive change in the behaviour of stakeholders towards biodiversity, based on effectively demonstrating its value and importance to Namibian society**”. It is further expected that the CEPA Strategy will offer a more structured and integrated approach to implementation of environment-related awareness raising in Namibia.

Of key importance is that identified priority target groups and sectors are reached by the strategic stakeholders so that they can implement activities towards the conservation and sustainable utilisation of biodiversity. Priority target groups include technical experts and decision-makers in respective line ministries, regional councils, local authorities and traditional authorities; politicians and high level stakeholders; private sector players; resource managers on-the-ground; and the youth and women’s groups. This will require the use of an array of different media and resource material.

The Division of Environmental Information and Natural Resource Economics within the MET will be the lead agency to coordinate implementation of the CEPA Strategy. As Secretariat to the multi-stakeholder Namibia Environmental Education Network (NEEN), it is well positioned to fulfil this function.

The CEPA strategy focuses on five key strategic themes, each with corresponding strategic aims:

- (i) Awareness
- (ii) Education
- (iii) Participation and Implementation
- (iv) Funding
- (v) International Cooperation and Networking

**4.1.2 Target 2: By 2018, biodiversity values and prioritized ecosystem services are quantified, monitored and mainstreamed to support national and sectoral policy-making, planning, budgeting and decision-making frameworks**

**Key Performance Indicators:**

- **SEA regulations gazetted**
- **Integration of biodiversity issues within NDP5**
- **Integration of biodiversity into sectoral, regional and local plans and respective budgetary allocations**

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<sup>8</sup> The CEPA Strategy is summarized in section 1.1 of the action plan and the full CEPA Strategy may be downloaded from [www.met.gov.na](http://www.met.gov.na).



#### **Strategic Initiatives:**

**1.2.1 Contextualize and apply biodiversity and ecosystem services valuation tools to quantify and monitor the environmental, economic and social value of biodiversity**

**1.2.2 Integrate biodiversity and ecosystem services valuations into decision-making and to develop a business case for biodiversity**

Biodiversity is often only associated with conservation through national parks and rare and endangered species. This understanding fails to cover the deeper concept that biodiversity underpins our survival and well-being, especially when around 70% of Namibia's population is dependent on the natural resource base for their livelihood needs in terms of income, food, fuel, medicine and shelter.

The valuation of biodiversity and the critical ecosystem services it provides is thus an important priority for NBSAP2 as a mainstreaming tool to create awareness and to influence policy makers and planners. Natural resource accounts have been completed for wildlife, forestry, tourism and water use, and these have shed light on the economic importance of these assets. These will be built on and absorbed in a new approach dedicated to the valuation of biodiversity as a whole and its variety of ecosystem services, the results of which will be disseminated and integrated into national, sectoral and local planning frameworks and budgets.

**4.1.3 Target 3: By 2018, selected incentives for biodiversity conservation and sustainable use are in place and applied, and the most harmful subsidies are identified and their phase out is initiated**

#### **Key Performance Indicators:**

- **List of assessed subsidies and measurement of magnitude of negative impact on biodiversity**
- **List of analysed incentives and measurement of their potential positive impact on biodiversity**
- **Environmental fiscal policy framework**

#### **Strategic Initiatives:**

**1.3.1 Analyze existing and identify potential incentives to encourage biodiversity conservation and sustainable use and discourage activities that impact negatively on biodiversity**

**1.3.2 Introduce environmental taxes and levies and market-based instruments as part of an Environmental Fiscal Reform Framework**

A diverse range of subsidies and incentives are in place in Namibia to address sectoral problems and to promote economic growth and self-sufficiency. An assessment of the impacts of these different subsidies on the conservation and sustainable use of biodiversity has not been undertaken, and should be an important step towards removing or reforming harmful subsidies and for the development and application of positive incentives.

The process to develop an Environmental Fiscal Reform Framework is also underway in Namibia, part of which is aiming at the introduction of environmental taxes and levies for environmentally harmful activities and the generation of market-based revenue streams as a source of long-term and sustainable funding for positive environmental investments. This will form a key part of the process to develop positive biodiversity incentives.

**4.2 STRATEGIC GOAL 2: Reduce the direct pressures on biodiversity and promote the sustainable use of biological resources**

Given Namibia's fragile and extremely variable environment, adaptive management of all natural resources based on sound scientific data and integrated decision-making needs to be promoted. This will help to reduce the pressures of development from agriculture and industrialization on biodiversity and guide the sustainable

utilisation of all natural resources. The critical elements considered necessary to achieve this strategic objective are:

- The use of integrated decision-making platforms and science-based decision-support tools to guide all critical aspects of development
- Strengthened application of the ecosystem approach to fisheries management
- Increased adoption of sustainable land and forest management approaches
- Measures and mechanisms to reduce the impact from pollution and waste on biodiversity.

#### **4.2.1 Target 4: By 2022, the rate of loss and degradation of natural habitats outside protected areas serving as ecological corridors or containing key biodiversity areas or providing important ecosystem services is minimized through integrated land use planning**

##### **Key Performance Indicators:**

- **Participatory Integrated Regional Land Use Plans with SEA approved by Cabinet for all Regions**
- **Delineation of ecological corridors**
- **Criteria for key biodiversity areas**

##### **Strategic Initiatives:**

**2.1.1: Strengthen the application of decision-support tools for environmental management and protection through improved land and resource use decisions and land use planning**

**2.1.2: Strengthen institutional capacity at all levels to promote informed and integrated decision-making, harmonised policy frameworks and coordinated action on issues relating to land use planning**

Namibia is home to a relatively large number of pristine natural habitats, many of which are home to high levels of species endemism and species richness, as well as being providers of essential ecosystem services. These areas are threatened to differing extents by various economic, demographic and social pressures. For example, land and sea-based mining activities threaten habitats (often in protected areas) in the Namib escarpment and marine ecosystems; forests in the north and north-eastern areas are vulnerable to illegal logging, population pressure and land-use change; and wetlands, including perennial and ephemeral rivers, are vulnerable to the over-abstraction of water from farming as well as pollution.

Preventing the loss of these sensitive habitats requires that the underlying causes are addressed through an integrated approach to development. Emphasis needs to be based on the following tools to prevent the loss of high biodiversity value habitats:

- Integrated Land Use Planning
- Mapping and protection of key biodiversity areas (KBAs)
- The use of EIAs and SEAs to guide development decision-making, as well as the wider enforcement of the Environmental Management Act of 2007
- Integrated mechanisms for natural resource governance at different levels including Integrated Coastal Zone Management (ICZM) as well as Communal Land Boards and expert working groups on biodiversity sensitive areas

#### **4.2.2 Target 5: By 2022, all living marine and aquatic resources are managed sustainably and guided by the ecosystem approach**

##### **Key Performance Indicators:**

- **Stocks of commercial fisheries resources at sustainable levels as proven by scientific data**

- **Marine Spatial Planning for the greater Benguela Current Large Marine Ecosystem**
- **Ecologically and Biodiversity Significant Areas identified as well as protection measures**
- **Effective Monitoring, Control and Surveillance System in place for inland aquatic resources**
- **Income generated from aquaculture and mariculture industries**

**Strategic Initiatives:**

**2.2.1: Ensure that all living marine resources are conserved and utilized sustainably based on ecosystem approach to fisheries (EAF) principles**

**2.2.2: Ensure optimal utilization and conservation of inland aquatic resources**

**2.2.3: Promote the sustainable management of the aquaculture and mariculture industries as vehicles for socio-economic development**

The fishing sector has accounted for just over six per cent of GDP since 1994 and employs approximately 13,000 people directly (MET 2012a). Namibia's 1500km coastline falls within the nutrient rich Benguela Current System, in which nutrient upwelling allows for huge shoals of pelagic and demersal fish, the bulk of which are exported. Overfishing was rampant in Namibia in the colonial era, particularly in the 1960s and 1970s. This led to the collapse of populations of several economically important fish species. The post-independent Namibian government has put in place a number of measures to reverse this trend and to ensure the long-term conservation, management and sustainable use of marine resources and coastal habitats. Nevertheless, fish and aquatic invertebrate stocks as well as aquatic plants are threatened by habitat loss and alteration due to off-shore mining and exploration; land-based pollution; invasive species; and climate change impacts.

An important part of NBSAP2 will be to build on the positive measures that have been undertaken by the Ministry of Fisheries and Marine Resources since Independence. Of particular relevance are the increased use of the ecosystem approach; the elimination of destructive fishing practices; the establishment of representative networks of marine protected areas; the transboundary management of marine resources through the Benguela Current Commission; the use of closed seasons and minimum mesh sizes; strict by-catch regulations; and improved capacity to monitor, control and survey these measures. While many of these approaches are well-established in marine ecosystems, the need for them to be extended to inland fisheries was recommended during the national NBSAP1 review workshop in July 2012.

The sustainable development of the aquaculture industry, guided by the Aquaculture Act of 2002, was identified in Vision 2030 as a priority area to enhance food security, generate employment and improve livelihoods in rural areas. The Aquaculture Act contains strong measures to ensure that this industry grows in a responsible manner, which will also be promoted through NBSAP2.

#### **4.2.3 Target 6: By 2022, Principles of sound rangeland and sustainable forest management, and good environmental practices in agriculture are applied on at least 50 per cent of all relevant areas**

**Key Performance Indicators:**

- **Status of agriculture and rangeland report**
- **Implemented Management Plans for Community Forests**
- **Environmental Impact Assessments and Environmental Management Plans for large scale agricultural developments**
- **Changes in vegetative / land use cover**

**Strategic Initiatives:**

**2.3.1: Strengthen sound agricultural and rangeland management practices which minimize the**

## **negative impacts of agricultural / livestock production on biodiversity and ecosystem functioning**

**2.3.2: Implement sustainable forest management practices in existing and new community forests to enhance conservation and sustainable use of biodiversity**

**2.3.3: Increase community support to enhance livelihood options through biodiversity-based enterprises**

Agriculture and forestry are critical sectors for sustainable resource use and poverty reduction in the rural areas. An estimated 71 per cent of Namibia's land area is used as rangeland for cattle ranching and small-stock farming (Mendelsohn 2006), much of which is recognized as heavily degraded (MAWF 2012). Crop cultivation is vital to subsistence farmers in the northern regions and is being promoted on a commercial scale through the Green Scheme Programme. Forest resources are an asset for communities, mainly in the north and north-eastern regions, and forests are the source of many of Namibia's increasingly important indigenous plant products.

Desertification and drought are key drivers of biodiversity loss in Namibia and with climate change set to lead to increased rainfall variability and instances of extreme events, the threat to ecosystems and species diversity is increasing and requires coordinated action. Unsustainable land management practices compound this threat leading to problems such as bush encroachment by invader species; the disappearance of perennial grasses; and the prevalence of bare soils which inhibit nutrient cycling, water infiltration, seedling development and other essential ecological processes.

These practices need to be changed so that land and ecosystems maintain their productivity and integrity and species loss is avoided over the long-term. Identified good management practices compatible with the ecosystem approach such as rotational grazing, conservation agriculture, and community forestry will be promoted, strengthened and expanded under this target. This is also an area of synergy with Namibia's National Climate Change Strategy and Action Plan (NCC-SAP) and the Third National Action Programme (NAP3) to the UNCCD.

### **4.2.4 Target 7: By 2022, pollution, including from excess nutrients, has been brought to levels that are not detrimental to biodiversity and ecosystem health and functioning**

#### **Key Performance Indicators:**

- **Compliance with Environmental Management Plans (mining companies)**
- **Trends in water quality in aquatic ecosystems (dams, rivers and Ramsar Sites)**
- **Presence / absence of key indicator species**
- **Pollution standards in place, respected and enforced**

#### **Strategic Initiatives:**

**2.4.1: Monitor and manage levels of pollution through a range of effective measures**

**2.4.2: Manage all forms of waste in an effective and efficient manner to reduce its negative impact on the environment**

Although Namibia is not heavily industrialised, pollution was considered extremely relevant to Namibia during the NBSAP1 review workshop in July 2012. Pollution of water, the expanding number of intensive irrigation schemes, and the use and disposal of chemicals were considered as major concerns as well as the rapid and uncontrolled urbanization that is taking place.



The legislative framework and development of standards for the management of waste and for the control of pollution is inadequate in Namibia, and this needs to be the starting point for tackling this issue. Institutional capacity and cooperation to address this issue is another critical constraint that needs to be addressed, as is the upgrading of infrastructure to store, handle and dispose of waste satisfactorily.

#### **4.2.5 Target 8: By 2015, National review of invasive alien species in Namibia from 2004 is updated (including identification of pathways), and by 2018, priority measures are in place to control and manage their impact**

**Key Performance Indicators:**

- Updated National Review
- Management Plans implemented to control most threatening alien invasive species

**Strategic Initiative:**

**2.5.1: Develop mechanisms and measures to prevent the establishment and introduction of alien invasive species and to control or eradicate existing alien invasive species**

A variety of sectors deals with alien invasive species in Namibia, and these different sectors need to be coordinated to tackle this problem, which has been identified as a significant threat to biodiversity. A 2004 report identified and described Namibia's 15 most important invasive alien plant species as well as 11 alien animal species, which have the potential to become extremely invasive in Namibia. This report will be updated through NBSAP2.

There is also a lack of experts in this area and inadequate research and understanding of the issue among the general public. Under NBSAP2, a working group of existing experts and key stakeholders will be established to coordinate action on this issue.

#### **4.2.6 Target 9: By 2016, ecosystems most vulnerable to climate change and their anthropogenic pressures are identified, and by 2018 appropriate adaptation measures are developed and implemented in priority areas**

**Key Performance Indicators:**

- Report on the vulnerability of Namibian ecosystems to climate change and associated anthropogenic pressures
- Evaluation of implementation of appropriate measures

**Strategic Initiative:**

**2.6.1: Undertake vulnerability assessment and develop relevant adaptation measures to enhance climate change resilience of priority ecosystems**

Namibia's ecosystems and biodiversity are particularly vulnerable to the impacts of climate change. Climate change has the potential to reverse the country's development goals and is likely to have severe effects on agricultural production, food security, fisheries and tourism (MET 2013). The effects of increased rainfall variability and an increase in the number of extreme events will place further stress on ecosystems, and these effects will also impact on species distribution, composition and migration. Human population pressure will further exacerbate this stress, particularly in peri-urban areas and in northern Namibia.

In line with Namibia's NCC-SAP, the main thrust of this target is to identify the ecosystems most vulnerable to climate change and to identify and implement appropriate measures to make these ecosystems less vulnerable to the impacts of climate change over the short to medium-term. These assessments will also serve to pinpoint adaptation measures based on nature itself, i.e. ecosystem-based adaptation.

### 4.3 STRATEGIC GOAL 3: Improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity

This Strategic Goal deals with the conservation of the three main elements of biodiversity – ecosystems, species diversity and genetic diversity. Namibia's protected area network and well-conserved species form the backbone of the fast-growing tourism industry, while genetic diversity, particularly in terms of crops and livestock, offers opportunities for more climate resilient agriculture and improved food security. Thus each element of biodiversity will be promoted to improve the socio-economic situation of Namibian society.

#### 4.3.1 Target 10: By 2018, existing terrestrial protected areas (national parks) are conserved, effectively and equitably managed, within an ecologically representative and well-connected system, and by 2020 coastal and marine areas<sup>9</sup>, of particular importance to biodiversity and ecosystem services, are identified and measures for their protection initiated

##### Key Performance Indicators:

- Approved management plans for all national parks
- Management Effectiveness of Namibia's terrestrial protected areas (national parks)
- Sustainable Financing Plans for Protected Area System
- Number of protected areas with connectivity corridors and managed buffer zones
- Trends in revenue and employment generated through the protected area network

##### Strategic Initiatives:

**3.1.1: Ensure that all protected areas are managed using participatory and science-based site planning processes that incorporate clear biodiversity objectives, targets, management strategies and monitoring programmes**

**3.1.2: Enhance the infrastructure and natural resource base of all protected areas to make them attractive destinations for tourists and tourism investors and to improve the working environment for staff**

**3.1.3: Consolidate integrated park management to enable it to generate economic benefits, tackle human wildlife conflicts and contribute to biodiversity protection integrated into the wider landscape**

Protected areas are a proven method for safeguarding habitats and species and important ecosystem services. Namibia is home to a diverse range of protected areas including national parks; transfrontier conservation areas; conservancies; freehold management units; private game reserves; tourism concessions; and marine protected areas<sup>10</sup>. Many of these land uses also border each other, which offers good opportunities for improved connectivity and integrated park management approaches.

National Parks cover approximately 18 per cent of the country's landmass, while other forms of protected areas together bring some 43 per cent of Namibia under some form of conservation. Thus, the main focus for Namibia under NBSAP2 is to strengthen and consolidate the management of existing protected areas. Specific

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<sup>9</sup>The coastal and marine element of the target is dealt with in section 2.2 of the Action Plan

<sup>10</sup>This section focuses mainly on national parks and TFCAs.

emphasis will be placed on improving ecological connectivity; engaging and benefiting local communities; upgrading infrastructure; monitoring and evaluation of management effectiveness; eco-tourism approaches; and building the capacity of protected area staff.

#### **4.3.2 Target 11: By 2016, threatened and vulnerable species lists are updated and measures implemented by 2019 to improve their conservation status**

**Key Performance Indicators:**

- **Number of Species Management Plans under implementation**
- **Conservation status of threatened and vulnerable species**

**Strategic Initiatives:**

**3.2.1 Enhance the management of threatened and vulnerable species, and improve their conservation status**

**3.2.2: Strengthen the framework for law enforcement and implementation with regard to the illegal trade in fauna and flora and derived products**

Threatened and vulnerable plant and animal species are the main focus of this target. Namibia has performed quite well in terms of the in-situ and ex-situ conservation of wildlife and plants. Management and recovery plans have been initiated for a number of species and taxa. Research programmes of the MET's Directorate of Natural Resources Management have driven the in-situ conservation of wildlife while ex-situ conservation of plants has been greatly improved with targeted programmes through the National Plant Genetic Resources Centre (NPGRC).

However, there is a critical need to strengthen human and infrastructural capacity of institutions such as the NPGRC and the National Museum so that the ecological and management needs and conservation status of threatened and endemic species are better known. Research and knowledge of micro-organisms, many marine organisms and endophytes and extremophytes is also lacking.

The illegal trade of wildlife products and unregulated harvesting of plant and plant products are further major concerns for which improved law enforcement is necessary. The MET-PASS project is promoting a more holistic approach to law enforcement of wildlife crime, looking specifically at improving aspects of intelligence, interception and prosecution. There may be useful lessons from this project for similar approaches to reduce illegal trade in plant and animal resources.

#### **4.3.3 Target 12: By 2020, Genetic diversity of cultivated plants and farmed animals is maintained and enhanced**

**Key Performance Indicators:**

- **Strategy to develop and promote indigenous livestock breeds and crop varieties for adoption by local farmers**
- **Operational institutional framework in place to implement and enforce Biosafety Act of 2006**

**Strategic Initiatives:**

**3.3.1: Maintain and enhance the genetic diversity of livestock and crop species through effective in-situ and ex-situ conservation measures and the safe use of biotechnology to improve food security and climate resilience of agriculture**

**3.3.2: Strengthen capacity and institutional frameworks so that they are equipped to implement and enforce the provisions of the Biosafety Act of 2006**

Namibia's plant and animal genetic resources are particularly important for the sustainable development of Namibia's agriculture industry and to improve food security, especially given the predicted impacts of climate change on the agriculture sector. Indigenous breeds of livestock and crops have been replaced to a large extent by exotic breeds and crops which are often poorly adapted to Namibia's harsh farming environment. The MAWF has sought to address this situation, however this process is at a relatively early stage, especially in terms of livestock breeds. Particular emphasis needs to be placed on characterizing and conserving livestock and crop breeds; breeds inventories and monitoring; and developing and promoting indigenous breeds for adoption by local farmers.

Namibia has developed a legislative framework to promote the safe use of biotechnology and the management of living modified organisms through the Biosafety Act in 2006. The legal and administrative basis to implement this Act has been identified as a challenge as well as human resources and infrastructural capacity, and insufficient awareness of the issue among the wider population. These challenges will be targeted directly through NBSAP2.

#### **4.4 STRATEGIC GOAL 4: Enhance the benefits to all from biodiversity and ecosystem services**

Namibia has consistently linked the need for conservation with the generation of benefits for its people through the sustainable use of biodiversity. The devolution of rights and management over resources such as water, wildlife and forests to the community level has been an important step in this process. Conservancies are proving that wildlife will be well conserved once benefits from this conservation reach the local community. This section focuses on increased beneficiation to local communities from biodiversity and ecosystem services with particular focus on the CBNRM Programme, the management of wetlands, restoration of degraded ecosystems, and capitalising on the opportunities from biotrade and bioprospecting.

##### **4.4.1 Target 13: By 2022, ecosystems that provide essential services and contribute to health, livelihoods and well-being are safeguarded, and restoration programmes have been initiated for degraded ecosystems covering at least 15 per cent of the priority areas**

###### **Key Performance Indicators:**

- **Area under sustainable CBNRM and benefits to involved communities**
- **Enforcement of agreements reached under the different transboundary water commissions**
- **Implementation of Integrated Water Resources Management Plan**
- **Area of degraded ecosystems and identified priority areas for action**
- **Number of rehabilitation and restoration programmes and area covered**

###### **Strategic Initiatives:**

**4.1.1: Consolidate and further strengthen the implementation of the CBNRM Policy and Programmes**

**4.1.2: Foster the implementation of integrated water management plans, including restoration and protection of critical wetlands systems, and taking into account transboundary issues**

**4.1.3: Undertake the rehabilitation and restoration of land degraded through unsustainable land management practices and establish biodiversity offsets**

Namibia's CBNRM Programme has led to the establishment of 79 conservancies on 18 per cent of the country's landmass. Conservancies are delivering substantial benefits to communities in the form of income generation from tourism and biotrade as well as employment, while also improving wildlife populations across the



country. An estimated 23 of these conservancies were financially self-sufficient in 2011 and the Programme will be further strengthened during the lifespan of NBSAP2 to ensure its viability over the long term.

Due to Namibia's high level of aridity, wetlands are a critical refuge for biodiversity and provider of essential ecosystem services. Wetland systems in Namibia include marine, estuarine, riverine, lacustrine and palustrine systems. Each of these is affected by a range of stakeholders and require an integrated approach to management. This process is underway in Namibia with the establishment of basin management committees and transboundary river commissions. NBSAP2 will seek to strengthen this more holistic approach to tackle threats such as pollution; alien invasive species; over-abstraction of water and groundwater depletion.

This target also covers the restoration of degraded lands, which offers linkages with Namibia's contribution to a land degradation neutral world and its NAP3 to the UNCCD. The most serious type of degradation requiring rehabilitation and restoration in Namibia is bush-encroached land. An estimated 26 million hectares of land is bush-encroached and the rehabilitation of this land has considerable economic, social and ecological potential.

Many areas home to rich biodiversity and rare and endemic species, including the Namib escarpment and Tsau //Khaeb (Sperrgebiet) area, are also characterized by the presence of minerals. The negative impacts from exploration and mining activities can be severe on these areas. Landscape alteration; soil and water contamination; and the loss of critical habitats can compromise ecosystems and reduce tourism potential in these areas. A national policy on mining in protected areas is currently under development to reduce this threat and to promote the restoration of degraded areas. Some good practice examples of restoration have been undertaken in the Tsau //Khaeb (Sperrgebiet) Park through Namdeb. It is suggested that standards and guidelines are put in place to promote a standardised approach to rehabilitation, while instruments such as biodiversity offsets should also be explored during NBSAP2.

#### **4.4.2 Target 14: By 2015, national legislation giving effect to the Nagoya Protocol is in force and by 2018 fully operational to ensure that benefits are fair and equitably shared from the conservation and sustainable use of biodiversity**

##### **Key Performance Indicators:**

- **Accession to the Nagoya Protocol**
- **Gazetting of ABS national legislation and regulation**
- **Institutional arrangements in place including the Competent National Authority and National Focal Point (Genetic Resources and Traditional Knowledge Unit within MET), and national bioprospecting account within EIF**
- **Number of ABS agreements**

##### **Strategic Initiatives:**

##### **4.2.1: Finalize and implement the processes of acceding to the Nagoya Protocol as well as the Access to Genetic Resources and Associated Traditional Knowledge Bill**

Namibia's domestic legislation on ABS has been under development since 1998. The draft ABS bill was put on hold in 2006, until international legislation on ABS was finalized so that the bill could be harmonized with the provisions of this legislation. With the agreement of the Nagoya Protocol in late 2010, work resumed on Namibia's domestic ABS bill in 2011 and the regional and national consultative process was finalized in late 2011. It is expected that the bill will be enacted by 2014. Draft regulations are already formulated.

Thus implementation of the Bill will be a key focus area of NBSAP2, given the potential of ABS to unlock the

opportunities from biotrade and bioprospecting for local communities. The establishment and operationalization of a permanent Competent National Authority on ABS to replace the Interim Bioprospecting Committee will be a key step towards promoting and regulating biotrade linked to traditional knowledge, bioprospecting and the negotiation of ABS agreements.

#### **4.5 STRATEGIC GOAL 5: Enhance implementation of NBSAP2 through participatory planning, knowledge management and capacity building**

NBSAP2 has been developed in a highly participatory manner and requires action from a multitude of stakeholders at all levels. A strong coordination framework through the NBSAP2 Steering Committee is in place to ensure that implementation is carried out in an integrated and harmonized manner, and to mainstream biodiversity and NBSAP2 priorities into other sectors at all levels.

Under this strategic goal, the following stakeholders are targeted:

- Traditional Authorities and local communities involved in the management and use of biodiversity and other natural resources.
- Research institutions to strengthen Namibian capacity in science, research and technology for improved biodiversity and ecosystem management.
- Government (Ministry of Finance and National Planning Commission), international community and the private sector partners to mobilize resources for the effective implementation of NBSAP2.

The issue of capacity building, although prominent under this goal, is considered a cross-cutting element and has also been identified as needed under other thematic areas including environmental economics (section 1.2 in action plan), Institutional capacity for environmental management (section 2.1.2 in action plan), CBNRM (see sections 2.3 and 3.1 in action plan), biosafety, (see section 3.3.2 in action plan), and ABS (see section 4.2 in action plan).

##### **4.5.1 Target 15: By 2020, Traditional knowledge and the innovations and practices of indigenous and local communities relevant to the conservation and sustainable use of biodiversity are recognized, respected and promoted**

###### **Key Performance Indicators:**

- **Biocultural protocols and practices of local communities documented according to mutually agreed terms**
- **System(s) in place to protect and document traditional knowledge as a basis for research and development of commercial biodiversity products**

###### **Strategic Initiative:**

- **5.1.1 Promote the role of traditional knowledge, innovations and practices in the management and use of biodiversity**

Traditional Authorities have a key role to play in the management of natural resources in Namibia with the Traditional Authorities Act of 2000 giving them the mandate to ensure that members of their communities use natural resources in a manner that conserves the environment and maintains ecosystems. Traditional knowledge, referring to the knowledge, innovations and practices of indigenous and local communities relating to biodiversity, has also helped to preserve, maintain and increase biodiversity over centuries in Namibia. Traditional knowledge has also played a key role in facilitating the development of new products from biodiversity and has helped scientists to understand biodiversity.

Thus, traditional knowledge of Namibian communities needs to be carefully harnessed and regulated so that these communities benefit to a greater extent from their biodiversity-related expertise. The development of

bio-cultural protocols; systems to protect and document traditional practices; the incorporation of traditional resource management approaches into school and tertiary curricula; and the further empowerment of Traditional Authorities over issues of biodiversity are among the priority activities identified for implementation of NBSAP2.

#### **4.5.2 Target 16: By 2022, knowledge, science base and technologies relating to biodiversity and ecosystem management are improved and made relevant to political decision- makers**

##### **Key Performance Indicators:**

- Trends in the number of research papers published on biodiversity from PoN, UNAM and other academic research institutions
- Trends in the number of research projects on biodiversity undertaken by state research institutions (Gobabeb TRC, Etosha Ecological Institute, NBRI, NATMIRC, DART, DoF)
- Investment and partnerships in biodiversity-related research, technologies and infrastructure
- Policy briefs from research findings relating to biodiversity

##### **Strategic Initiatives:**

**5.2.1 Promote and encourage research that contributes to the knowledge and understanding of Namibia's biodiversity and ecosystems services and their values**

**5.2.2: Enhance national capacity in biosystematics to provide support to biodiversity conservation management**

**5.2.3: Foster international cooperation and opportunities for information exchange and support in the field of biodiversity at the regional and international level for mutual benefit**

**5.2.4 Develop the modalities of a possible science policy interface on environmental issues**

Namibia's National Commission on Research, Science and Technology (NCRST) was established in 2012 to coordinate, monitor and supervise research, science and technology and to provide policy guidance to the research, science and technology innovation systems in Namibia. It will also facilitate the establishment of the National Research, Science and Technology Fund.

The NCRST is represented on the NBSAP2 Steering Committee and, research, as a critical tool for the management of biodiversity, will be promoted through the NCRST, in the following areas:

- Monitoring of natural resources, including marine, forest and wildlife resources (with the full involvement of communities) to guide sustainable utilisation;
- Taxonomy to improve knowledge of unknown or little known species (including those which may be of commercial use) such as microbial organisms, extremophytes, endophytes and marine organisms;
- Product testing and quality assurance and standards development;
- Innovation and the development of new biodiversity-based products;
- Development of new adaptive approaches to fisheries and land management.

Modalities to communicate relevant research findings to policy-makers, through a science policy interface mechanism, will be explored during NBSAP2.

#### **4.5.3 Target 17: By 2022, mobilization of financial resources from all sources has been increased compared to the period 2008-2012 to allow for the effective implementation of this strategy and action plan**

**Key Performance Indicators:**

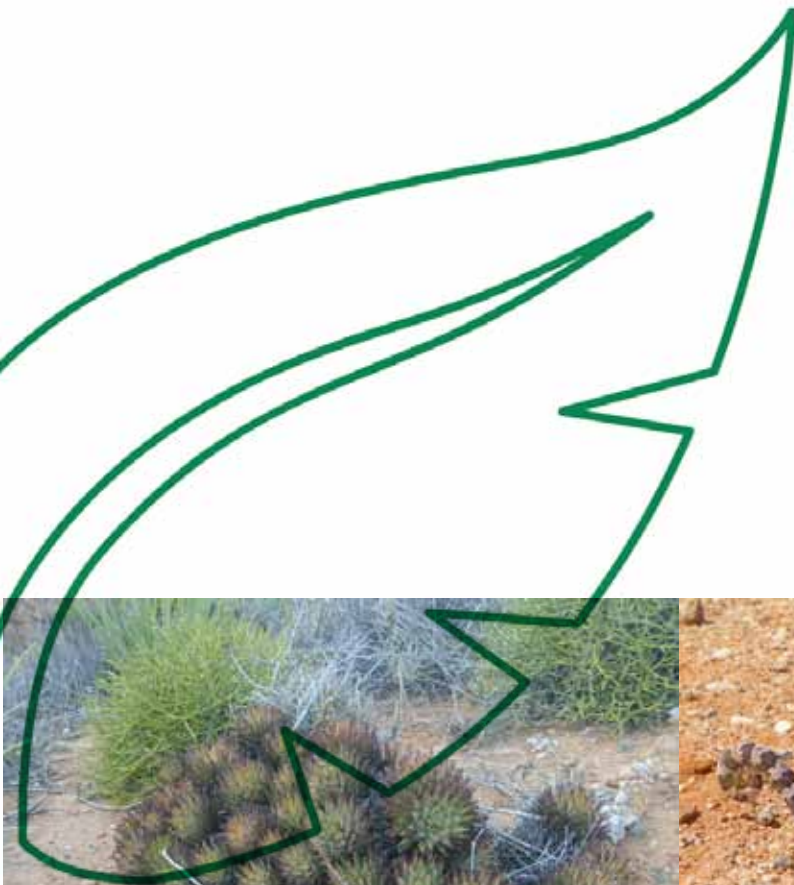
- **Volume of Domestic Funding per annum**
- **Increase in the number of sources (including private sector)**
- **Volume of Official Development Assistance (multi-lateral and bi-lateral)**

**Strategic Initiative:**

**5.3.1 Develop and realise a comprehensive resource mobilization strategy for implementation of NBSAP2**

Namibia is committed through NBSAP2 to implementing decision XI/5 of UNCBD COP11 in Hyderabad, India which called on governments to implement the following measures among others:

- Identify and seek funding support from diverse sources including regional and international donor agencies, foundations and, as appropriate, through private- sector involvement;
- Establish strategic partnerships with other Parties and other Governments and with various organizations, regional bodies or centres of excellence with a view to pooling resources and/or widening opportunities and possibilities for mobilizing resources from various sources;
- Identify and maximize opportunities for technical cooperation with regional and international organizations, institutions and development assistance agencies;
- Ensure efficient use of available resources and adopt cost-effective approaches to capacity-building.





## 5. MONITORING AND EVALUATION FRAMEWORK

A monitoring and evaluation framework was an important missing element in NBSAP1 and the potential modalities of this framework were deliberated on in detail during the consultative process for NBSAP2. An appropriate framework was considered necessary to track ongoing progress as well as the quality and impact of activities being undertaken by the various sectors to achieve the strategic aims and targets included in NBSAP2.

Monitoring and evaluation of NBSAP2 will form part of an ongoing, continuous and cyclical process to align the actions outlined in the NBSAP2 strategy to the long-term development framework of Vision 2030 and medium term NDPs. Monitoring and evaluation will report against the 17 targets included in NBSAP2, each of which is considered specific, measurable, attainable, relevant and time-bound (SMART). The indicators per activity will also be reported on as will the expenditure on the planned activities. This will help to reveal if scarce national resources are being effectively allocated and utilized.

During the NBSAP2 consultative process, it became clear that there is a lack of baseline data in many of the areas critical to biodiversity management. This presents a challenge to monitoring progress towards the achievement of the targets as set out in NBSAP2, and the establishing of reliable baseline data will be a key objective for the early years of NBSAP2.

The monitoring and evaluation of NBSAP2 will be coordinated by the newly established Division of Multi-Lateral Environmental Agreements under the MET, with support from the cross-sectoral NBSAP2 Steering Committee. The Division of Multilateral Environmental Agreements serves as Secretariat to the Committee, and provision has been made in the Terms of Reference of the Committee for it to support the monitoring and evaluation of NBSAP2. All of the activities prioritized in NBSAP2 are to be implemented by institutions represented on the NBSAP2 steering committee, which should facilitate the process of coordination and monitoring and evaluation.

It is envisaged that the different key institutions represented on the NBSAP2 steering committee will report back to the committee and high level stakeholders on an annual basis in terms of their progress and challenges with regard to achieving the targets and strategic goals of NBSAP2. The MET will take responsibility to compile these reports, which will provide a baseline on status of implementation, serve as a guide for future strategic planning, and contribute information towards Namibia's national reporting to the CBD.

An independent mid-term evaluation of NBSAP2 will be undertaken in mid-2017. Progress in implementation will also be reported to the CBD through the 5th National Report in 2014, the 6th National Report in 2018 and the 7th National Report in 2022. A final independent evaluation of NBSAP2, to be undertaken in 2021, will provide information on Namibia's contribution towards the achievement of the Aichi Targets as well as lessons and direction for the development of a third NBSAP.



## 6. THE NATIONAL BIODIVERSITY ACTION PLAN

Strategic Initiative	Indicative Activities	Baseline 02/2013	Indicator(s)	Lead Agency	Partners	Time frame	Cost N\$
<b>Strategic Goal 1: Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society</b>							
<b>By 2020, at least 75% of surveyed key target groups know the meaning of biodiversity and can identify important reasons for biodiversity conservation</b>							
<b>Key Performance Indicator: Results of surveys for pre-defined target groups using the Biodiversity Barometer Tool</b>							
1.1.	<b>Raise public awareness of the meaning and value of conservation of biodiversity and wise use of biodiversity by target groups</b>	No baseline information on biodiversity awareness	Baseline information on biodiversity awareness available and trends monitored;	MET	NEEN institutions	2014 and 2019	450,000
1.1.1	<b>Promote understanding and clarify values of biodiversity and development of positive attitude towards conservation and use of biodiversity</b>	Conduct a survey (such as Biodiversity Barometer) of targeted stakeholders to assess levels of understanding of biodiversity in 2014 and 2019 Develop and implement educational programs on biodiversity issues relevant to Namibia	Biodiversity Clearing House; Mechanism operational Biodiversity issues in curricula; Number of trained environmental educators; Number of environmental education centres and clubs; Celebration of Biodiversity Day	MET and MoE	NEEN institutions	2013 -2022	2,000,000
1.1.4	<b>Raise adequate funding to facilitate communication and dissemination of NBSAP2</b>	Budget for activities of biodiversity and incorporate in annual budget of organization	Trends in funding from all sources towards biodiversity	MET	NEEN institutions	2013 -2022	150,000
1.1.5	<b>Promote international cooperation and networking to enhance communication of the values of biodiversity conservation and sustainable use.</b>	Strengthen and enhance collaboration, linkages and networking among stakeholders involved in biodiversity and environment related issue	Number of new international cooperation agreements on biodiversity awareness issues	MET	NEEN institutions	2013 -2022	1,000,000
1.2	<b>By 2018, biodiversity values and prioritized ecosystem services are quantified, monitored and mainstreamed to support national and sectoral policy-making, planning, budgeting and decision-making frameworks</b>						
<b>Key Performance Indicators:</b> SEA regulations gazetted Integration of biodiversity issues within NDP5 Integration of biodiversity into sectoral, regional and local plans and respective budgetary allocations							

Strategic Initiative	Indicative Activities	Baseline 02/2013	Indicator(s)	Lead Agency	Partners	Time frame	Cost N\$
1.2.1	Contextualize and apply biodiversity and ecosystem services valuation tools to quantify and monitor the environmental, economic and social value of biodiversity	No network in place	Cross-sectoral environmental economics network in place and number of training programmes and people trained	MET	MAWF, MFMR, MoF, UNAM, PoN, NSA	2014 -2022	2,000,000
	Establish and capacitate cross-sectoral environmental economics network on issues relating to ecosystem services and natural resource accounting	Natural Resource Accounts: Water (1997); Minerals (1997); Forestry (2005); Wildlife (2009); Tourism (2011)	Number of ecosystem services evaluations	MET	MAWF, MFMR, MME, UNAM, PoN, NSA	2014 -2022	5,000,000
	Value identified priority biodiversity and ecosystem services	MCA indigenous natural plants information bulletins, and annual state of conservancy and community forests reports	Annual report and its dissemination to key decision-makers and the general public	MET	NACSO, MAWF, MFMR, MTI, PoN, UNAM, CSOs	2014 -2022	1,200,000
1.2.2	Integrate biodiversity and ecosystem services valuations into decision-making and to develop a business case for biodiversity	Package and sell the economic case for the importance of biodiversity to key decision-makers in an easy-to-understand format	Briefings on economic case for biodiversity for key decision-makers	MET	PoN, UNAM	2015 -2022	300,000
	Mainstream biodiversity and ecosystem services valuations into national accounting and regional plans and budgeting processes	None	Budgetary allocations for biodiversity in national and regional plans	MET	NPC, MoF, RCs	2017	1,000,000
	Incorporate biodiversity considerations and opportunities into NDP5 and the sectoral plans of regional councils, local authorities and key ministries	Importance of biodiversity inadequately reflected in NDP4 overall as well as in sectoral plans of other ministries	Biodiversity priorities in national, regional, local and sectoral plans, and trends in financial allocations to biodiversity-friendly initiatives in the respective plans	MET	MAWF, MFMR, MLR, NPC, RCs, LAs	2013 -2022	100,000
1.3	By 2018, selected incentives for biodiversity conservation and sustainable use are in place and applied, and the most harmful subsidies are identified and their phase out is initiated	<ul style="list-style-type: none"> <li>List of assessed subsidies and measurement of magnitude of negative impact on biodiversity</li> <li>List of analysed incentives and measurement of their potential positive impact on biodiversity</li> <li>Environmental fiscal policy framework</li> </ul>					
1.3.1	Analyze existing and identify potential incentives to encourage	No study on incentives	Incentives assessment study report analyzing incentives	MET	MAWF, MFMR, MLR, MME,	2015	400,000
	Undertake assessment study on existing positive, negative						

Strategic Initiative	Indicative Activities	Baseline 02/2013	Indicator(s)	Lead Agency	Partners	Time frame	Cost N\$
biodiversity conservation and sustainable use and discourage activities that impact negatively on biodiversity	and potential incentives		affecting biodiversity		MoF, MTI, CSOs, PoN, UNAM		
1.3.2 Introduce environmental taxes and levies and market-based instruments as part of an Environmental Fiscal Reform Framework	Environmental taxes and levies introduced and collected as part of wider environmental fiscal reform programme	No environmental taxes and levies in place	Number of environmental taxes and levies; their monetary value and their reinvestment into environmental sustainability initiatives	EIF	MET, MoF	2013 -2022	12,000,000
	Broaden and apply funding sources for the conservation and sustainable use of biodiversity for maximum effectiveness	EIF, SGP, Nedbank Go Green Fund, Game Product Trust Fund	Total spend on biodiversity conservation and sustainable use	EIF	Support projects and private sector	2014 -2022	36,000,000
<b>Strategic Goal 2: Reduce the direct pressures on biodiversity and promote the sustainable use of biological resources</b>							
2.1	By 2022, the rate of loss and degradation of natural habitats outside protected areas serving as ecological corridors or containing key biodiversity areas or providing important ecosystem services is minimized through integrated land use planning						
Key Performance Indicators:							
<ul style="list-style-type: none"> <li>Participatory Integrated Regional Land Use Plans with SEA approved by Cabinet for all Regions</li> <li>Delineation of ecological corridors</li> <li>Criteria for key biodiversity areas</li> </ul>							
2.1.1	Strengthen the application of decision support tools for environmental management and protection through improved land and resource use decisions and land use planning	Develop Integrated Land Use Plans (IRLUPs) for all regions	Number of IRLUPs	MLR	MET	2022	12,000,000
	Develop geo-spatial tool to identify key biodiversity areas throughout Namibia and take measures to enhance their protection	Landscape level assessment completed for Erongo Region Number of Important Bird Areas; Important Plant Areas; World Heritage Sites; and Geoparks	Area and location of key biodiversity areas identified and protected;	MET	MME, LAs, MFMR, MLR, CSOs	2016	36,000,000
	Establish a rigorous and effective EIA process backed up by improved monitoring and enforcement of environmental management plans	Approx. 100 EIAs processed annually but limited capacity to enforce EMPs inspections carried out	Number of EMPs being adhered to; Inspectorate sub-division in place within DEA and number of	MET		2013 -2022	2,500,000



Strategic Initiative	Indicative Activities	Baseline 02/2013	Indicator(s)	Lead Agency	Partners	Time frame	Cost N\$
	Carry out SEAs on priority issues, and implement recommendations through Strategic Environmental Management Plans (SEMPs)	SEA and SEMP on uranium industry, SEAs on biofuels and on IRLUPs for Karas and Hardap	Number of SEAs and uptake of their recommendations through implemented SEMPs	MET		2013 -2022	2,000,000
	Publish national Integrated State of the Environment Reports (ISOERs) on a periodic basis	ISOER from 2004	Number of national ISOERs produced	MET	NACOMA, BCLME, MAWF, MFMR, MLR, MME, CSOS, PoN, UNAM	2014 -2022	1,000,000
2.1.2	Strengthen institutional capacity at all levels to promote informed and integrated decision-making, harmonised policy frameworks and coordinated action on issues relating to land use planning	Operationalize Sustainable Development Advisory Council	Number of meetings of Sustainable Development Advisory Council; and number of biodiversity -related interventions	MET		2013 -2022	1,000,000
	Strengthen the Integrated Coastal Zone Management Committee (ICZMC)	ICZMC established	Number of meetings of ICZMC; ICZM bill enacted	MET	MFMR, RCs, LAs, NACOMA	2013 -2022	500,000
	Establish expert working groups on priority issues identified in the NBSAP2 process including endemic -rich ecosystems, alien invasive species, wetlands, environmental rehabilitation and biosystematics	Wetlands working group and Coastal / marine bird working group	Functional working groups on biodiversity priority issues	MET	Sectoral experts	2013 -2022	250,000
	Strengthen the capacity of regional MET, MAWF, MFMR staff and Communal Land Boards to promote sound environmental management		Training programmes for regional staff	MET	MAWF, MFMR, MLR	2013 -2022	450,000
2.2	<p><b>By 2022, all living marine and aquatic resources are managed sustainably and guided by the ecosystem approach</b></p> <p><b>Key Performance Indicators:</b></p> <ul style="list-style-type: none"> <li>• Stocks of commercial fisheries resources at sustainable levels as proven by scientific data</li> <li>• Marine Spatial Planning for the greater Benguela Current Large Marine Ecosystem</li> <li>• Ecologically and Biodiversity Significant Areas identified as well as protection measures</li> <li>• Effective Monitoring, Control and Surveillance System in place for inland aquatic resources</li> <li>• Income generated from aquaculture and mariculture industries</li> </ul>						

Strategic Initiative	Indicative Activities	Baseline 02/2013	Indicator(s)	Lead Agency	Partners	Time frame	Cost N\$
2.2.1 Ensure that all living marine resources are conserved and utilized sustainably based on ecosystem approach to fisheries (EAF) principles	Develop management plans for vulnerable species based on ecosystem approach to fisheries (EAF) principles	Species management plans exist	Number of management plans for vulnerable marine species	MFMR	BCC, ECOFISH, BCLME-SAP	2013-2022	1,200,000
	Monitor the abundance of commercial fish stocks and crustacean resources	Stocks of all key commercial species known	Trends in state of stocks; trends in total allowable catch	MFMR	BCC, ECOFISH, BCLME-SAP	2013-2022	3,000,000
	Monitor the impact of environmental factors on health of marine ecosystems and fisheries distribution and abundance	Oceanographic surveys	State of the Ecosystem Information System (SEIS); Trends in marine trophic index; sea surface temperature; Southern Oscillation Index; Dissolved oxygen levels	MFMR	BCC, ECOFISH, BCLME-SAP	2013-2022	1,000,000
	Improve monitoring, control and surveillance of illegal fishing practices and activities	Monitoring, control and surveillance system exists within MFMR	Number of fisheries observers trips; sea and air patrols; harbor and factory inspections; violations reported by enforcement officers	MFMR		2013-2022	6,200,000
	Introduce Marine Spatial Planning (MSP) for informed and coordinated decision-making on the sustainable use of marine resources	MSP not practised in Namibia	MSP framework in place and functional	MFMR	BCLME, MET	2014-2022	300,000
	Identify EBSAs and enhance conservation measures in these areas	1 MPA covering 12,000km <sup>2</sup>	Coverage and number of EBSAs	MFMR	MET	2014-2022	400,000
	Strengthen transboundary management of marine resources through improved regional cooperation	Treaty signed for the Benguela Current Large Marine Ecosystem in 2013	Management structures for the Benguela Current Commission in place	MFMR	BCC	2013-2022	150,000
2.2.2 Ensure optimal utilization and conservation of inland aquatic resources	Strengthen permit system, regulations and implementation of Inland Fisheries Act	Permit enforcement system in place	Reduced incidents of illegal fishing	MFMR	NAMPOL, MET, RCs, TAs	2013-2022	300,000
	Strengthen transboundary fresh water fisheries management (Monitoring, control and surveillance)	None in place	Fisheries working group created in TFCA activities	MET	MFMR	2013-2022	200,000
	Review the Inland Fisheries Act to strengthen community-based	Conservancies undertake monitoring activities but	Amendment of the Inland Fisheries Act	MFMR	NACSO, MET	2014-2018	1,000,000

Strategic Initiative	Indicative Activities	Baseline 02/2013	Indicator(s)	Lead Agency	Partners	Time frame	Cost N\$
	management of wetlands and fisheries through conservancies	are not empowered by the Inland Fisheries Act					
2.2.3 Promote the sustainable management of the aquaculture and mariculture industries as vehicles for socio-economic development	Conduct an assessment of viable aquaculture and mariculture farms and use this as a basis to establish and support fish farms to enhance food security and rural development	23 fish farms in place	Aquaculture Master Plan; number of viable fish farms	MFMR		2013 -2022	500,000
	Strengthen control, monitoring and evaluation of aquaculture and mariculture activities to minimize the environmental threats therefrom	Aquaculture Act	Number of aquaculture and mariculture centres operating according to environmental management plans	MFMR		2013 -2022	250,000
	Promote the use of indigenous species for aquaculture and mariculture activities		Number of aquaculture and mariculture centres using indigenous species	MFMR		2013 -2022	150,000
	Improve the surveillance of aquatic diseases	Export and import regulations for aquatic diseases	Aquatic animal disease laboratory	MFMR	NSI	2013 -2022	250,000
<b>2.3 By 2022, Principles of sound rangeland and sustainable forest management, and good environmental practices in agriculture are applied on at least 50 per cent of all relevant areas</b> <b>Key Performance Indicators:</b> <ul style="list-style-type: none"> <li>• Status of agriculture and rangeland report</li> <li>• Implemented Management Plans for Community Forests</li> <li>• Environmental Impact Assessments and Environmental Management Plans for large scale agricultural developments</li> <li>• Changes in vegetative / land use cover</li> </ul>							
2.3.1 Strengthen sound agricultural and rangeland management practices which minimize the negative impacts of agricultural / livestock production on biodiversity and ecosystem functioning	Undertake EIAs for all new irrigation schemes under the Green Scheme Policy		Number of EIAs undertaken on green scheme projects and EMPs under implementation	MET	MAWF	2015	2,000,000
	Promote application of sound rangeland management principles and activities in all regions and on resettlement farms	National Rangeland Strategy and Community-Based Rangeland and Livestock Management Practices underway	Status of agriculture and rangeland report showing good practice coverage	MAWF	NAU, NNFU, MET, MCA, CSOs	2013 -2022	150,000
	Facilitate the increased offtake of	7.5% offtake rate and 1.6	Offtake rate and trends in	MAWF	NNFU, MCA,	2013	

Strategic Initiative	Indicative Activities	Baseline 02/2013	Indicator(s)	Lead Agency	Partners	Time frame	Cost N\$
	cattle in the northern communal areas to reduce pressure on the resource base	million cattle in the northern communal areas	the cattle population in the northern communal areas; auction infrastructure constructed and number of auction events		CSOs	-2022	30,000,000
	Promote the increased adoption of conservation agriculture, organic agriculture and other climate resilient forms of agriculture founded; small scale drip irrigation	100 farmers trained on conservation agriculture through demonstration sites; Namibia Organic Association	Area covered by and number of farmers engaged in conservation agriculture, organic farming and drip irrigation	MAWF	NNFU, NAB, CSOs	2013-2022	2,000,000
<b>2.3.2</b>	<b>Implement sustainable forest management practices in existing and new community forests to enhance conservation and sustainable use of biodiversity</b>	32 community forests	Number of community forests gazetted and covered; number of community forests financially self-sufficient; number of community forests operating according to integrated land use plans	MAWF	CSOs	2013-2022	500,000
	Develop and implement the National Fire management plan	Draft fire management plan	Number of planning and local level fire management implementation committees; number of "planned" fires managed in line with the National Fire Management Plan	MAWF	MET, RCs, LAs, CFs	2014-2022	550,000
	Strengthen the capacity of the MAWF, local communities and relevant institutions to carry out forest law enforcement, including issuing of permits, monitoring, arrests and fines		Number of arrests and prosecutions for illegal logging	MAWF	RCs, LAs, TAs, CFs, NAMPOL	2013-2022	150,000
	Establish an action plan for farm forestry (agro-forestry) and afforestation / reforestation		Approved action plan	MAWF	CSOs	2017	250,000
<b>2.3.3</b>	<b>Increase community support to enhance livelihood options through biodiversity-based enterprises</b>	5 community-based projects supported by EIF in 2012	Number of viable community-based biodiversity value chains (biotrade)	EIF	SGP, BMCC, NACOMA, CSOs	2013-2022	1,000,000



Strategic Initiative	Indicative Activities	Baseline 02/2013	Indicator(s)	Lead Agency	Partners	Time frame	Cost N\$
2.4	<p><b>By 2022, pollution, including from excess nutrients, has been brought to levels that are not detrimental to biodiversity and ecosystem health and functioning</b></p> <p><b>Key Performance Indicators:</b></p> <ul style="list-style-type: none"> <li>• Compliance with <i>Environmental Management Plans (mining companies)</i></li> <li>• Trends in water quality in aquatic ecosystems (<i>dams, rivers and Ramsar Sites</i>)</li> <li>• Presence / absence of key indicator species</li> <li>• Pollution standards in place, respected and enforced</li> </ul>						
2.4.1	<p>Bill on waste management and pollution control enacted and implemented</p> <p>Develop, monitor and enforce minimum national standards on soil, water and air quality as well as occupational health</p> <p>Update Namibia's greenhouse gas inventory and take action to reduce Greenhouse Gas emissions</p> <p>Undertake measures to minimize the impacts from local pollution instances such as oil spills, harmful algal blooms and hydrogen sulphide events at the coast</p>	<p>Draft bill</p> <p>Lessons from Ramatex and Namibia Custom Smelters cases</p> <p>2 Greenhouse gas inventories undertaken</p>	<p>Waste management and pollution control Act</p> <p>Soil, water, air and occupational health standards met by public and private sector</p> <p>3rd and 4th Greenhouse Gas Inventory</p> <p>Emergency committee in place</p>	<p>MET</p> <p>MET</p> <p>MET</p> <p>LAs</p>	<p>LAs</p> <p>NSI, LAs, MoHSS, MoLSW</p> <p>MoHSS, MME, MAWF</p> <p>MET, MFMR, MWT, NAMPORT</p>	<p>2013-2022</p> <p>2013-2022</p> <p>2020</p> <p>2013-2022</p>	<p>200,000</p> <p>350,000</p> <p>430,000</p> <p>100,000</p>
2.4.2	<p>Profile and upgrade waste disposal sites in line with Section 5 of the Environmental Management Act so that they can deal with all waste in an environmentally sound manner</p> <p>Develop and implement National Implementation Plans (NIPs) for the Stockholm and Basel Conventions</p> <p>Develop and implement Environmental Management Plans (EMPs) for all urban areas</p> <p>Promote increased adoption of the "reduce, re-use and recycle" principle by residents and the public and private sector</p>	<p>None</p> <p>No operational NIPs</p> <p>4 draft EMPs for coastal towns</p>	<p>Number of waste disposal sites upgraded</p> <p>2 NIPs in place</p> <p>Number of towns implementing EMPs</p> <p>Volumes of waste recycled annually</p>	<p>LAs</p> <p>MET</p> <p>LAs</p>	<p>MET</p> <p>LAs</p> <p>MET, MOHSS, MAWF, MRLGHRD</p> <p>MET, RNF</p>	<p>2015</p> <p>2013-2022</p> <p>2013-2022</p>	<p>5,000,000</p> <p>500,000</p> <p>3,800,000</p> <p>220,000</p>

Strategic Initiative	Indicative Activities	Baseline 02/2013	Indicator(s)	Lead Agency	Partners	Time frame	Cost N\$
2.5	By 2015, National review of invasive alien species in Namibia from 2004 is updated (including identification of pathways), and by 2018, priority measures are in place to control and manage their impact <b>Key Performance Indicators:</b> <ul style="list-style-type: none"> <li>Updated National Review</li> <li>Management Plans implemented to control most threatening alien invasive species</li> </ul>	Investigate and install alternative systems to make use of solid waste as an economic resource	Number of bio-gas digesters; amount of solid waste utilised	LAs	MET	2013-2022	3,000,000
2.5.1	Develop mechanisms and measures to prevent the establishment and introduction of alien invasive species and to control or eradicate existing alien invasive species	Update the National Report on Alien Invasive Species from 2004  Analyze and implement recommendations from the updated National Report	Updated National Report  Dedicated policy or programme on alien invasive species; management plans for invasive species; establishment of working group on alien invasive species	MET	MAWF, MFMR, PoN, UNAM	2015	180,000
2.6	By 2016, ecosystems most vulnerable to climate change and their anthropogenic pressures are identified, and by 2018, appropriate adaptation measures are developed and implemented in priority areas <b>Key Performance Indicators:</b> <ul style="list-style-type: none"> <li>Report on the vulnerability of Namibian ecosystems to climate change and associated anthropogenic pressures</li> <li>Evaluation of implementation of appropriate measures</li> </ul>						
2.6.1	Undertake vulnerability assessment and develop relevant adaptation measures to enhance climate change resilience of priority ecosystems	Undertake a vulnerability and adaptation assessment on prioritized ecosystems in Namibia	Assessment Study with adaptation recommendations under implementation	MET	MAWF, MFMR, NACOMA, BCLME SAP, BMCC	2018	600,000
<b>Strategic Goal 3: Improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity and enhance the benefits to all Namibians therefrom</b>							
3.1	By 2018, existing terrestrial protected areas (national parks) are conserved, effectively and equitably managed, within an ecologically representative and well-connected system, and by 2020, coastal and marine areas, of particular importance to biodiversity and ecosystem services, are identified and measures for their protection initiated <b>Key Performance Indicators:</b> <ul style="list-style-type: none"> <li>Approved management plans for all national parks</li> <li>Management Effectiveness of Namibia's terrestrial protected areas (national parks)</li> </ul>						

Strategic Initiative	Indicative Activities	Baseline 02/2013	Indicator(s)	Lead Agency	Partners	Time frame	Cost N\$
	<ul style="list-style-type: none"> <li>Trends in investment into the protected area network</li> <li>Sustainable Financing Plans for Protected Area System</li> <li>Number of protected areas with connectivity corridors and managed buffer zones</li> <li>Trends in revenue and employment generated through the protected area network</li> </ul>						
<b>3.1.1</b>	<p>Ensure that all protected areas are managed using participatory and science-based site planning processes that incorporate clear biodiversity objectives, targets, management strategies and monitoring programmes</p> <p>All state protected areas managed according to park management plans (which include biodiversity targets) approved by MET</p> <p>Conduct annual assessments of the management effectiveness of state protected areas using the NAMETT Tool</p> <p>Develop and improve conservation and monitoring systems in state protected areas</p> <p>Finalize and enact the Protected Areas and Wildlife Management (PAWM) Bill</p> <p>Strengthen the management of existing TFCAs and create one additional TFCAs</p>	<p>12 draft management plans</p> <p>NAMETT Reports completed in 2004, 2009 and 2011</p> <p>Incident Book Monitoring System exists</p> <p>PAWM Bill</p> <p>Two TFCAs managed by permanent joint authorities</p> <p>MCA infrastructure funding in Etosha National Park and KfW in north-eastern Parks</p> <p>none</p> <p>Draft Parks and Neighbors policy exists, Concessions are currently awarded</p>	<p>Number of state protected areas being managed according to approved management plans</p> <p>NAMETT scores for each state protected area recorded annually</p> <p>Number of state protected areas using the Incident Book Monitoring System</p> <p>PAWM Act</p> <p>Treaty in place for Iona Skeleton TFCAs; Assessment of management effectiveness of TFCAs; Income generated by TFCAs</p> <p>Annual investment into infrastructure development in parks through MET capital budget and support projects</p> <p>Waste management plans and sustainable use of all resources in the operations of protected areas</p> <p>Number and value of tourism concessions benefiting local communities</p>	MET	KfW, NACOMA	2014	150,000
				MET	NACOMA	2013-2022	800,000
				MET	CSOs	2013-2022	100,000
				MET		2014	500,000
				MET	KAZA Project, KfW, PPF	2013-2022	2,500,000
<b>3.1.2</b>	<p>Enhance the infrastructure and natural resource base of all protected areas to make them attractive destinations for tourists and tourism investors and to improve the working environment for staff</p> <p>Upgrade the infrastructure of all state protected areas</p> <p>Promote protected areas as good practice examples of broader environmental management and eco-tourism destinations</p> <p>Engage local communities in the management of protected areas and income-generating</p>			MET	MCA, KfW, PPF	2013-2022	193,000,000
<b>3.1.3</b>	<p>Consolidate integrated park management to enable it to generate economic benefits,</p>			MET	MCA, KfW, NAM-PLACE, PPF	2013-2020	2,000,000
				MET	NACSO	2013-2022	240,000

Strategic Initiative	Indicative Activities	Baseline 02/2013	Indicator(s)	Lead Agency	Partners	Time frame	Cost N\$
tackle human wildlife conflicts and contribute to biodiversity protection integrated into the wider landscape	opportunities therefrom						
	Sustain 5 protected landscape conservation areas (PLCAs) initiated through the MET NAMPLACE project	Constitutions and collaborative management committees established for the 5 PLCAs	PLCAs viable and functioning after the end of NAMPLACE Project	MET	CSOs, NAM-PLACE	2022	500,000
	Establish mechanisms for ecological connectivity to link together protected areas and to reduce fragmentation	3 corridors identified in V+A study of Namibia's Protected Areas to climate change conservation areas	Number of ecological corridors reducing fragmentation and co-managed	MET	CSOs, MAWF, MLR, TAs	2013 -2022	250,000
<b>3.2</b>	<b>By 2016, threatened and vulnerable species lists are updated and measures implemented by 2019 to improve their conservation status</b>						
	<b>Key Performance Indicators:</b>						
	• Number of Species Management Plans under implementation						
	• Conservation status of threatened and vulnerable species						
<b>3.2.1</b>	<b>Enhance the management of threatened and vulnerable species and improve their conservation status</b>						
	Develop and implement approved management plans / policies for priority species and taxa	Management plans for 2 plant taxa and 2 wildlife species	Number of approved species management plans in place	MET and MAWF	MFMR, MYNSSC, UNAM	2013 -2022	250,000
	Assess and periodically review the status of key species and taxa and where necessary adjust their conservation priority	1400 plant taxa assessed using IUCN criteria	Regularly updated lists and programmes for rare, endangered, endemic and valuable species	MET and MAWF		2013 -2022	150,000
	Conserve and assess the genetic diversity of crops and other major socio-economically valuable plant species ex-situ		National Germplasm collection and % of total plants collected	MAWF		2013 -2022	200,000
	Develop a game translocation strategy, procedures and decision support tools for transporting game into areas of historic range	Around 5 000 head of wildlife translocated to conservancies and into previous ranges	Number of annual game translocated; game introduction technical advisory group set up	MET	KfW, NACSO, MCA, NAMPLACE	2015	42,500 000
<b>3.2.2</b>	<b>Strengthen the framework for law enforcement and implementation with regard to the illegal trade in fauna and flora and derived products</b>	Establish a national database on wildlife crime incidences and offenders	National database accessible to concerned stakeholders	MET-PASS Conservancies, NAMPOL		2014 -2022	500,000
	Promote strong partnership and	No formal partnership	Training programmes on	MET-PASS		2014	760,000



Strategic Initiative	Indicative Activities	Baseline 02/2013	Indicator(s)	Lead Agency	Partners	Time frame	Cost N\$
	cooperation between relevant law enforcement stakeholders (including at regional level) and facilitate training programme for all enforcement departments including local communities	arrangements between stakeholders	priority areas such as "crime-scene" training; joint law enforcement mechanisms and patrols; regional cooperation on wildlife crime in TFCAs	Conservancies, NAMPOL, MHAI, NDF		-2022	
	Develop mechanisms for reporting wildlife crime, rewards for information and review mechanisms for prosecutions and appropriate penalties	No rewards system	New mechanisms for reporting wildlife crime; fine amounts; success rate of prosecutions; time period for prosecution	MET-PASS	NAMPOL	2014 -2022	1,000,000
	Strengthen the capacity of the MAWF, local communities and relevant institutions to carry out forest law enforcement, including issuing of permits, monitoring, arrests and fines	Number of arrests and prosecutions for illegal logging		MAWF	NAMPOL	2013 -2022	1,000,000
<b>3.3</b>	<b>By 2020, Genetic diversity of cultivated plants and farmed animals is maintained and enhanced</b>						
	<b>Key Performance Indicators:</b>						
	<ul style="list-style-type: none"> <li>Strategy to develop and promote indigenous livestock breeds and crop varieties for adoption by local farmers</li> <li>Operational institutional framework in place to implement and enforce Biosafety Act of 2006</li> </ul>						
<b>3.3.1</b>	<b>Maintain and enhance the genetic diversity of livestock and crop species through effective in-situ and ex-situ conservation measures and the safe use of biotechnology to improve food security and climate resilience of agriculture</b>	Develop and strengthen existing legislation to protect cultivated plants and domesticated animals	Legislation in place to protect the genetic diversity of cultivated plants and farmed animals	MAWF	CSOs, NAB, UNAM, PoN,	2013 -2022	250,000
	Improve the long-term conservation of indigenous livestock breeds through characterization and in-situ and ex-situ conservation	Farm Animal Genetic Resources Programme of MAWF and FAO	Characterization of livestock breeds; number of indigenous breed livestock improvement programmes; ex-situ conservation of breeds	MAWF	NAU, NNFU	2013 -2022	2,000,000
	Support the NPGRC with human and financial resources for the conservation of indigenous crop species and other rare, threatened and useful indigenous plant species.		Number of germplasm collected and characterized	MAWF	PoN, UNAM	2013 -2022	1,000,000
	Strengthen programmes for the	Farm Animal Genetic	Number of crop cultivars and	MAWF	CSOs	2013	7,000,000

Strategic Initiative	Indicative Activities	Baseline 02/2013	Indicator(s)	Lead Agency	Partners	Time frame	Cost N\$
	distribution of indigenous livestock breeds and drought-adapted crop cultivars to local communities	Resources Programme of MAWF and FAO	livestock breeds with tolerance to abiotic stresses adopted by farmers			-2022	
	Conduct an awareness campaign on the utility of indigenous livestock breeds and drought-adapted crop cultivars, particularly in light of climate change	No dedicated awareness campaign	Awareness campaign and the number of stakeholders reached	MAWF	MET, NGOs	2015	600,000
<b>3.3.2 Strengthen capacity an institutional frameworks so that they are equipped to implement and enforce the provisions of the Biosafety Act of 2006</b>	Enhance institutional capacity to implement and enforce the national biosafety framework	Biosafety Act of 2006	Regulations of the biosafety act gazetted; National biosafety council operational	NBAC		2013 -2022	300,000
	Strengthen infrastructure and capacity of key stakeholders to monitor and manage the risks associated with the handling, transport, use, transfer and release of living modified organisms		Laboratory facilities in place and number of stakeholders trained	NBAC		2022	5,000,000
	Raise public awareness and regional information sharing on biosafety issues		Awareness programme and stakeholders reached through programme; regional cooperation on biosafety	NBAC		2013 -2022	300,000
<b>Strategic Goal 4: Enhance the benefits to all from biodiversity and ecosystem services</b>							
<b>4.1</b>	<b>By 2022, ecosystems that provide essential services and contribute to health, livelihoods and well-being are safeguarded, and restoration programmes have been initiated for degraded ecosystems covering at least 15 per cent of the priority areas</b>						
	<b>Key Performance Indicator:</b>						
	<ul style="list-style-type: none"> <li>• Area under sustainable CBNRM and benefits to involved communities</li> <li>• Enforcement of agreements reached under the different transboundary water commissions</li> <li>• Implementation of Integrated Water Resources Management Plan</li> <li>• Area of degraded ecosystems and identified priority areas for action</li> <li>• Number of rehabilitation and restoration programmes and area covered</li> </ul>						
<b>4.1.1</b>	<b>Consolidate and further strengthen the implementation of the CBNRM Policy and Programmes</b>	23 financially self-sufficient conservancies; total income of N\$50 million generated by conservancies in 2011	Number of financially self-sufficient conservancies	MET	NACSO	2013 -2022	200,000
	Promote sustainable and integrated	48 conservancies operating	Number of conservancies	MET	MAWF,	2013	1,200,000

Strategic Initiative	Indicative Activities	Baseline 02/2013	Indicator(s)	Lead Agency	Partners	Time frame	Cost N\$
	management by conservancies and community forests in line with CBNRM policy	according to management plans	and community forests with integrated management plans		NACSO	-2022	
	Improve quota setting and management systems across for wildlife resources so utilization is both sustainable and maximises socio-economic returns to conservancies	Quota setting systems in place	Data from annual game counts; number of quotas allocated to conservancies; income and employment through trophy hunting and other wildlife uses	MET	NACSO	2013-2022	100,000
	Support conservancies to implement the National Policy on Human Wildlife Conflict Management loss during 2010-2011 financial year	8 human lives lost; 2 420 instances of crop damage; 301 instances of livestock implementing human wildlife self-reliance scheme	Annual instances of human wildlife conflict; Number of conservancies	MET	NACSO	2013-2022	2,100,000
<b>4.1.2 Foster the implementation of integrated water management plans, including restoration and protection of critical wetlands systems, and taking into account transboundary issues</b>	Finalize the revised Water Resources Management Act and establish the Water and Sanitation Advisory Council	Water Resources Management Act and Water and Sanitation Advisory Council in place		MAWF		2015	200,000
	Establish and strengthen basin management committees for all designated basins and implement basin management plans for each	Four Basin Management Committees	Number of basin management committees and basin management plans operational	MAWF	CSOs	2022	300,000
	Monitor the quantity and quality of water resources comprehensively and regularly	Water quality and quantity records		MAWF		2013-2022	1,000,000
	Participate actively in transboundary river commissions to improve regional cooperation on water resources management	Namibia is signatory to four River Commissions	Examples of regional integration in the transboundary management of river basins	MAWF	MET, CSOs	2014-2022	140,000
	Strengthen the existing wetlands working group to improve the protection of threatened wetland habitats	Wetlands working group	Wetlands group in place and outputs measured	MET	MAWF, MFMR, PoN, UNAM	2014-2022	150,000
	Finalise and implement the Wetlands Policy	Draft wetlands policy	Approved wetlands policy	MET	MAWF, MFMR, PoN, UNAM	2014-2022	250,000
	Develop and implement management plans for improved conservation of Namibia's Ramsar Sites	None	Approved management plans in place for Ramsar Sites; data on water quality; bird	MET	MAWF, MFMR	2020	,200,000

Strategic Initiative	Indicative Activities	Baseline 02/2013	Indicator(s)	Lead Agency	Partners	Time frame	Cost N\$
		courts; restoration programme for Orange River Mouth					
	Create additional Wetland Conservation Areas	Process to proclaim the section of the Okavango at Mahango as a Ramsar Site underway	Number of new Ramsar Sites	MET	MAWF, PoN, UNAM, CSOs	2013 -2022	2,000,000
<b>4.1.3 Undertake the rehabilitation and restoration of land degraded through unsustainable land management practices and establish biodiversity offsets</b>	Carry out a detailed study to assess and document ecosystems that are degraded and prioritize those that need to be rehabilitated and restored through GTRC	Monitoring of degradation due to mining in Namib Desert and research undertaken on restoration of biodiversity after mining	Assessment study on extent of degraded ecosystems	MET	MFMR, MME, MAWF, GTRC	2015	1,000,000
	Develop rehabilitation guidelines and best practice approaches for land degraded by mining	Rehabilitation activities in mining areas in the Sperrgebiet companies	Rehabilitation guidelines; awards scheme for best practices applied by	MME	MET, CoM, GTRC	2015	1,500,000
	Investigate the potential for establishing a biodiversity offsets system in Namibia	None	Number of biodiversity offset cases in Namibia	MET	MME, CoM, CSOs	2014 -2022	1,800,000
	Facilitate the sustainable debushing of undesirable bush species in affected areas	National de-bushing programme	Area of land de-bushed annually; employment and revenue generated through de-bushing; SEA on charcoal industry	MAWF	MET, MME, CSOs	2013 -2022	1,000,000
<b>4.2</b>	By 2015, national legislation giving effect to the Nagoya Protocol is in force and by 2018, fully operational to ensure that benefits are fair and equitably shared from the conservation and sustainable use of biodiversity Key Performance Indicator:						
	<ul style="list-style-type: none"> <li>Accession to the Nagoya Protocol</li> <li>Gazetting of ABS national legislation and regulation</li> <li>Institutional arrangements in place including the Competent National Authority and National Focal Point (Genetic Resources and Traditional Knowledge Unit within MET), and national bioprospecting account within EIF</li> <li>Number of ABS agreements</li> </ul>						
<b>4.2.1 Finalize and implement the processes of acceding to the Nagoya Protocol as well as the Access to Genetic Resources and Associated Traditional Knowledge Bill</b>	Accede to the Nagoya Protocol and enact and implement national ABS legislation	ABS Bill	Nagoya Protocol acceded to and ABS Act in place and under implementation	MET		2013 -2022	200,000
	Establish Genetic Resources	Interim Bioprospecting	Competent National Authority	MET		2014	1,000,000



Strategic Initiative	Indicative Activities	Baseline 02/2013	Indicator(s)	Lead Agency	Partners	Time frame	Cost N\$
	and Traditional Knowledge Unit within MET	Committee in place					
	Establish the National Bioprospecting Account within EIF	No account	National Bioprospecting Account functional within EIF	MET	EIF	2016	50,000
	Promote awareness of the provisions of the ABS Act and of biotrade and bioprospecting potential	Regional consultations and awareness undertaken on ABS bill for parliamentarians and local and regional stakeholders	Number of awareness events and stakeholders reached	MET		2013-2022	500,000
	Support communities to negotiate further ABS agreements and hoodia	Agreements for Commiphora and Marula,	Number of ABS agreements	MET	CSOs	2013-2022	300,000
<b>4.2.2 Facilitate bioprospecting and biotrade activities in accordance with legislation</b>	Support the expansion of the indigenous natural plant products sector to encourage value addition, sustainable enterprises and the upliftment of local communities	IPTT established in 2001; Indigenous Knowledge Systems and Technology Food Programme at UNAM	Development of new products and markets; partnerships with the private sector and ABS agreements	IPTT	MAWF, MET, MTI, MCA, PoN, UNAM, BMCC, NACSO	2013-2022	2,000,000
	Establish appropriate research facilities dedicated to biotrade and bioprospecting	No research facility	Research facility in place; investments, revenue and employment generated through biotrade and bioprospecting	MET	MAWF, NCRST, IPTT, NBRI, PoN, UNAM	2013-2022	100,000
	Strengthen capacity to research and develop commercial products from microbial organisms, extremophytes, endophytes and marine organisms	Limited Namibian knowledge and research capacity	Dedicated research programme in place for these organisms	UNAM	MYNSSC, MAWF, MET, MFMR, PoN	2013-2022	300,000
<b>Strategic Goal 5: Enhance implementation of NBSAP2 through participatory planning, knowledge management and capacity building</b>							
<b>5.1</b>	<b>By 2020, Traditional knowledge and the innovations and practices of indigenous and local communities relevant to the conservation and sustainable use of biodiversity are recognised, respected and promoted</b>						
	<b>Key Performance Indicator:</b> <i>Biocultural protocols and practices of local communities documented according to mutually agreed terms</i> <i>System(s) in place to protect and document traditional knowledge as a basis for research and development of commercial biodiversity products</i>						
<b>5.1.1</b>	<b>Promote the role of traditional knowledge, innovations and practices in the management</b>	No mechanism in place	Mechanism documenting and protecting traditional knowledge	MET	UNAM, PoN, TAS, CSOs	2016	2,000,000

Strategic Initiative	Indicative Activities	Baseline 02/2013	Indicator(s)	Lead Agency	Partners	Time frame	Cost N\$
	and use of biodiversity in different communities						
	Facilitate the development of biocultural protocols with local communities to increase awareness and so that communities can control the terms and conditions under which local resources are accessed	Ondonga and Oukwambi traditional laws documented	Number of bio-cultural protocols	MET	TAs, RCs, UNAM, PoN	2014 -2022	250,000
	Incorporate customs, practices and traditional knowledge in education curricula at primary, secondary school and tertiary levels	None	Issues of traditional knowledge in school and tertiary curricula	MoE	UNAM, PoN,	2015	1,000,000
	Empower traditional authorities in the effective local level governance of biodiversity	Training does not exist	Training reports and number of TAs trained	MET	UNAM, PoN, NGOs	2013 -2022	1,000,000
	Promote mechanisms that facilitate the harmonisation of traditional and scientific knowledge	None	Regular exchange fora between resource managers and scientists	UNAM and PoN	MET, MoE	2018	40,000
<b>5.2</b>	<b>By 2022, knowledge, science base and technologies relating to biodiversity and ecosystem management are improved and made relevant to political decision-makers</b>						
	<b>Key Performance Indicator:</b>						
	<ul style="list-style-type: none"> <li>Trends in the number of research papers published on biodiversity from PoN, UNAM and other academic research institutions</li> <li>Trends in the number of research projects on biodiversity undertaken by state research institutions (Gobabeb TRC, Etosha Ecological Institute, NBRI, NATMIRC, DART, DoF)</li> <li>Investment and partnerships in biodiversity-related research, technologies and infrastructure</li> <li>Policy briefs from research findings relating to biodiversity</li> </ul>						
<b>5.2.1</b>	<b>Promote and encourage research that contributes to the knowledge and understanding of Namibia's biodiversity and ecosystems services and their values</b>	2 RCEs for Khomas and Erongo	Number of RCEs	MoE	NCRST, PoN, UNAM, MET	7 by 2018 and 11 by 2022	10,000,000
	Compile and synthesize existing data and information on biodiversity and ecosystems and make it accessible to a wider audience	4th National Report to the CBD	CBD National Reports printed and widely distributed	MET		2014 and 2018	350,000
	Establish a dedicated programme to support tertiary level Namibian students with research on biodiversity issues	Young Professional Research Associate Programme and Summer Landcare Programme	Number of students supported by programme and the number of different programmes in place	EIF	NCRST, MET, UNAM, PoN	2013 -2022	1,500,000

Strategic Initiative	Indicative Activities	Baseline 02/2013	Indicator(s)	Lead Agency	Partners	Time frame	Cost N\$
	Undertake and continuously update a technology and infrastructure needs assessment for the sustainable management of biodiversity	None	Technology needs assessment report and implementation of recommendations	MET	NCRST, MAWF, MFMR, PoN, UNAM	from 2014 -2022	150,000
	Assess the current capacity gaps in knowledge and science for biodiversity conservation, utilisation and benefit -sharing and feed the outcomes into the curriculum		Assessment report and implementation of recommendations	MET	NCRST, MAWF, MFMR, MoE, MYNSSC, PoN, UNAM	2015	180,000
<b>5.2.2 Enhance national capacity in biosystematics to provide support to biodiversity conservation management</b>	Establish a national working group on biosystematics to improve cooperation on biosystematics	No biosystematics working group	Working group on biosystematics	MET	MYNSSC, NCRST, UNAM, PoN	2015	2,500,000
	Leverage increased investments in infrastructure and modern equipment for storage and collection of biosystematics-related data	None	New infrastructure including a conservation facility at a national museum and modern equipment for biosystematics	MYNSSC	NCRST, MET, MAWF, MFMR, PoN, UNAM	2014 -2022	2,000,000
	Develop a training programme for specialists and technicians to address the shortage of staff in biosystematics	None	Number of specialists and technicians trained and number of training programmes undertaken	MYNSSC	NCRST, MET, MAWF, MFMR, PoN, UNAM	2018	1,700,000
	Develop information technology systems and databases to manage and improve access to biosystematic data	Privately-run biosystematics database	Web-based biosystematics database	MET	MYNSSC, MAWF, MFMR, PoN, UNAM	2014	200,000
	Develop a dedicated programme for improving Namibia's knowledge of microbial diversity and its possible uses for development		Knowledge base on microbial diversity developed	UNAM	NCRST, MAWF, MET, MFMR, MYNSSC	2013 -2022	1,000,000
<b>5.2.3 Foster international cooperation and opportunities for information exchange and support in the field of biodiversity at the regional and international level for mutual benefit</b>	Strengthen cooperation with neighbouring countries and international organisations on key research areas such as ecosystem services and value addition	TFCAs treaties and SADC Treaty exist	Number of biodiversity-related partnerships	MET	NCRST, UNAM, PoN, CSOs	2013 -2022	800,000
	Strengthen Namibia's participation in and integrated implementation of	Namibia is signatory to all environmental MEAs	Number of MEA meetings attended annually; reporting	MET		2013 -2022	1,000,000

Strategic Initiative	Indicative Activities	Baseline 02/2013	Indicator(s)	Lead Agency	Partners	Time frame	Cost N\$
5.2.4	Develop the modalities of a possible science policy interface on environmental issues	MEAs related to biodiversity Establish a science-policy interface to communicate environment-related research findings to policy and decision-makers	requirements to MEAs fulfilled Science-policy interface	MET	NCRST, PoN, UNAM	2016	1,000,000
5.3	<b>By 2022, mobilization of financial resources from all sources has been increased compared to the period 2008-2012 to allow for the effective implementation of this strategy and action plan</b> <b>Key Performance Indicators:</b>						
5.3.1	Develop and realise a comprehensive resource mobilization strategy for implementation of NBSAP2	Assess baseline level of financial resources made available for biodiversity management Integrate the costs of implementation of NBSAP2 into the national budget and lobby for increased annual contributions Report to the 12th Conference of Parties (CoP) to the CBD on Namibia's financial gaps and priorities for NBSAP2 implementation Develop new and revise existing market-based environmental revenue streams for sustainable financing of biodiversity priorities	No comprehensive baseline No resources allocated	MET MoF MET	EIF NPC, MET MET, MoF	2013 2014-2022 2014	250,000 1,000,000 1,000,000



## 7. FUNDING PLAN AND STRATEGY

A conservative estimate of the funding required to fully implement the strategy and action plan is N\$ 494 million over the next nine years. The estimated costs of indicative activities is included in the last column of the Action Plan.

These figures refer only to these specific activities but not to the ministerial operational budget framing them.

Inadequate funding levels are a major impediment to effective national biodiversity conservation and can severely affect the attainment of set targets. Unfortunately conservation spending baseline data is difficult to collate and incomplete in many countries. Namibia is no exception. It is therefore vital that activities are undertaken to quantify the relative adequacy of the levels of Namibia's conservation finance.

It is also important that such baseline assessment adequately carry out a gap analysis of the level of underfunding in biodiversity conservation. Pointers can be derived from previous estimates of the MET's Strategic Plan which had annual spending need for implementation close to three times higher than the average budget appropriations of the MET's Medium Term Expenditure Framework (MTEF). Rough estimates during the NB-SAP I period depicts government spending accounting between 65%-75% of total biodiversity funding on average, whilst donor aid covered the remaining 25%. This underpins the strategic importance of donor aid in ensuring optimal conservation funding in Namibia and in narrowing funding gaps.

Leveraging on ensuring the diversification of sources of funding as a strategy is also very important. This should ensure that domestic spending is aided by donor spending, private philanthropy and conservation trust funds. Finally innovative forms of financing should also be explored to ensure that appropriate economic instruments and financing mechanisms are identified and utilised. The utilisation of such economic instruments and financial mechanisms should be driven by their practicality in implementation as well as their congruency with the broader economic, political and social and equity dynamics of the country.

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## Annex 1: LIST OF INTERVIEWED STAKEHOLDERS

PERSON	DESIGNATION	EMAIL	AREA OF INTEREST
1. Colgar Sikopo	Director, Parks and Wildlife Management	csikopo@met.na	Protected areas
2. Teo Nghitila	Environmental Commissioner	tnghitila@yahoo.com	NBSAP priorities
3. Kenneth Uiseb	Deputy Director Of Natural Resources Management	kuiseb@met.na	Wetlands
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# Annex 2: ALIGNMENT OF NBSAP2 WITH THE CBD STRATEGY (2011-2020) AND AICHI TARGETS

CBD Strategic Plan Strategic Goals and Targets		Namibia's NBSAP2 Strategic Goals and Targets	
<b>Strategic Goal A: Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society</b>		<b>Strategic Goal 1: Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society</b>	
1.	By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably	1.1	By 2020, at least 75 per cent of surveyed key target groups know the meaning of biodiversity and can identify important reasons for biodiversity
2.	By 2020, at the latest, biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes and are being incorporated into national accounting, as appropriate, and reporting systems.	1.2	By 2018, biodiversity values and prioritized ecosystem services are quantified, monitored and mainstreamed to support national and sectoral policy-making, planning, budgeting and decision-making frameworks
3.	By 2020, at the latest, incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed in order to minimize or avoid negative impacts, and positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the Convention and other relevant international obligations, taking into account national socio-economic conditions.	1.3	By 2018, selected incentives for biodiversity conservation and sustainable use are in place and applied, and the most harmful subsidies are identified and their phase out is initiated
4.	By 2020, at the latest, Governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits.		None
<b>Strategic Goal B: Reduce the direct pressures on biodiversity and promote sustainable use</b>		<b>Strategic Goal 2: Reduce the direct pressures on biodiversity and promote the sustainable use of biological resources</b>	
5.	By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.	2.1	By 2022, the rate of loss and degradation of natural habitats outside protected areas serving as ecological corridors or containing key biodiversity areas or providing important ecosystem services is minimized through integrated land use planning
6.	By 2020, all fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem-based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits.	2.2	By 2022, all living marine and aquatic resources are managed sustainably and guided by the ecosystem approach
7.	By 2020, areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.	2.3	By 2022, Principles of sound rangeland and sustainable forest management, and good environmental practices in agriculture are applied on at least 50 per cent of all relevant areas
8.	By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity.	2.4	By 2022, pollution, including from excess nutrients, has been brought to levels that are not detrimental to biodiversity and ecosystem health and functioning
9.	By 2020, invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment.	2.5	By 2015, National review of invasive alien species in Namibia from 2004 is updated (including identification of pathways), and by 2018 priority measures are in place to control and manage their impact



CBD Strategic Plan Strategic Goals and Targets		Namibia's NBSAP2 Strategic Goals and Targets	
10.	By 2015, the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning.	2.6	By 2016, ecosystems most vulnerable to climate change and their anthropogenic pressures are identified, and by 2018 appropriate adaptation measures are developed and implemented in priority areas
<b>Strategic Goal C: Improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity</b>		<b>Strategic Goal 3: Improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity</b>	
11.	By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscape and seascapes	3.1	By 2018, existing terrestrial protected areas (national parks) are conserved, effectively and equitably managed, within an ecologically representative and well-connected system, and by 2020, coastal and marine areas, of particular importance to biodiversity and ecosystem services are identified and measures for their protection initiated
12.	By 2020, the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.	3.2	By 2016, threatened and vulnerable species lists are updated and measures implemented by 2019 to improve their conservation status
13.	By 2020, the genetic diversity of cultivated plants and farmed and domesticated animals and of wild relatives, including other socio-economically as well as culturally valuable species, is maintained, and strategies have been developed and implemented for minimizing genetic erosion and safeguarding their genetic diversity.	3.3	By 2020, Genetic diversity of cultivated plants and farmed animals is maintained and enhanced
<b>Strategic Goal D: Enhance the benefits to all from biodiversity and ecosystem services</b>		<b>Strategic Goal 4: Enhance the benefits to all from biodiversity and ecosystem services</b>	
14.	By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable	4.1	By 2022, ecosystems that provide essential services and contribute to health, livelihoods and well-being are safeguarded, and restoration programmes have been initiated for degraded ecosystems covering at least 15 per cent of the priority areas
15.	By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.	4.2	By 2015, national legislation giving effect to the Nagoya Protocol is in force and by 2018, fully operational to ensure that benefits are fair and equitably shared from the conservation and sustainable use of biodiversity
16.	By 2015, the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization is in force and operational, consistent with national legislation	<b>Strategic Goal 5: Enhance implementation of NBSAP2 through participatory planning, knowledge management and capacity building</b>	
17.	By 2015, each Party has developed, adopted as a policy instrument, and has commenced implementing an effective, participatory and updated national biodiversity strategy and action plan.	Not applicable	
18.	By 2020, the traditional knowledge, innovations and practices of indigenous and local communities relevant to the conservation and sustainable use of biodiversity, and their customary use of biological resources, are respected, subject to national legislation and relevant international obligations, and fully integrated	5.1	By 2020, Traditional knowledge and the innovations and practices of indigenous and local communities relevant to the conservation and sustainable use of biodiversity are recognised, respected and promoted

<b>CBD Strategic Plan Strategic Goals and Targets</b>	<b>Namibia's NBSAP2 Strategic Goals and Targets</b>
<p>and reflected in the implementation of the Convention with the full and effective participation of indigenous and local communities, at all relevant levels.</p> <p>19. By 2020, knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied.</p>	<p>5.2 By 2022, knowledge, science base and technologies relating to biodiversity and eco-system management are improved and made relevant to political decision-makers</p>
<p>20. By 2020, at the latest, the mobilization of financial resources for effectively implementing the Strategic Plan 2011- 2020 from all sources and in accordance with the consolidated and agreed process in the Strategy for Resource Mobilization should increase substantially from the current levels.</p>	<p>5.3 By 2022, mobilization of financial resources from all sources has been increased compared to the period 2008-2012 to allow for the effective implementation of this strategy and action plan.</p>

# Annex 3: ALIGNMENT OF NBSAP2 WITH THE SADC REGIONAL BIODIVERSITY STRATEGY AND ACTION PLAN (B-SAP)

SADC Regional B-SAP		Relevant Reference Point in Namibia's NBSAP2
<b>Strategic Area 1: Biodiversity Governance</b>		
1.1	Effective biodiversity management policies and legislation	2.1; 2.2; 2.3; 2.5; 3.1; 3.2; 3.3; 4.1; 4.2; 5.2
1.2	Synergies and the effective implementation of MEAs and Regional Environmental Protocols	1.1; 2.3; 2.6; 3.2; 3.3; 4.1; 4.2; 5.2
1.3	Functional institutional frameworks for biodiversity management	1.2; 2.1; 2.2; 2.3; 2.5; 3.1; 3.2; 3.3; 4.1; 4.2; 5.2
1.4	Improvements in the TFCA Governance Frameworks	3.1; 4.1
1.5	Fostering Equity and Benefit -Sharing from Biodiversity	2.3; 3.1; 3.3; 4.1
<b>Strategic Area 2: Biodiversity-Based Community Livelihoods</b>		
2.1	Consolidation of CBNRM	2.3; 3.1; 4.1
2.2	Diversification of Community Biodiversity- Based Livelihood Options	2.2; 2.3; 3.1; 3.3; 4.2
2.3	Development of the Medicinal Plants sector	2.3; 4.2; 5.1; 5.2
2.4	Climate Change Resilient Biodiversity- Based Livelihoods	2.3; 2.6; 3.1; 3.3; 4.1; 4.2
<b>Strategic Area 3: Economic Development and Biodiversity</b>		
3.1	Development of natural resource- based enterprises	2.2; 2.3; 3.1; 3.3; 4.2; 5.1; 5.2
3.2	Biodiversity- Based Tourism	2.1; 3.1; 3.2
3.3	Bio Trade and Diversification of Economic Activities	2.2; 2.3; 3.1; 3.3; 4.2; 5.1; 5.2
3.4	Biodiversity Certification Scheme	None
3.5	Mainstream biodiversity into regional and national development plans	1.2

SADC Regional B-SAP	Relevant Reference Point in Namibia's NBSAP2
3.6 Facilitate the development of a comprehensive Payment for Ecosystems Services scheme for the Region	1.2; 5.3
<b>Strategic Area 4: Biodiversity Management Systems</b>	
4.1 Biodiversity Inventory and Monitoring	2.1; 2.2; 2.3; 3.1; 3.2; 4.1; 5.2
4.2 Effective Protected Areas Management Systems	3.1; 4.1
4.3 Promotion of CBNRM as a Biodiversity Conservation Tool	2.3; 3.1; 4.1
4.4 Rehabilitation and Restoration of degraded ecosystems	2.3; 4.1
4.5 Conserving Agricultural Biodiversity	2.3; 3.3
4.6 Prevention, Control and Management of Invasive Alien Species	2.5
<b>Strategic Area 5: Biodiversity and Climate Change</b>	
5.1 Biodiversity and Ecosystems Vulnerability Assessment	2.6
5.2 Managing biodiversity for climate change adaptation and mitigation	2.3; 2.4; 2.6; 3.3
5.3 Capacity Building for Climate Change Adaptation	None
<b>Strategic Area 6: Biodiversity, Energy and other development initiatives</b>	
6.1 Managing the Impacts of the Bio- fuels Industry on Biodiversity	N/a
6.2 Promoting Biodiversity- Friendly Charcoal Sector	2.3; 4.1
6.3 Catalysing Sustainable Energy Development	N/a
6.4 Promote appropriate mitigation methods and safeguards in infrastructure development	2.4













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