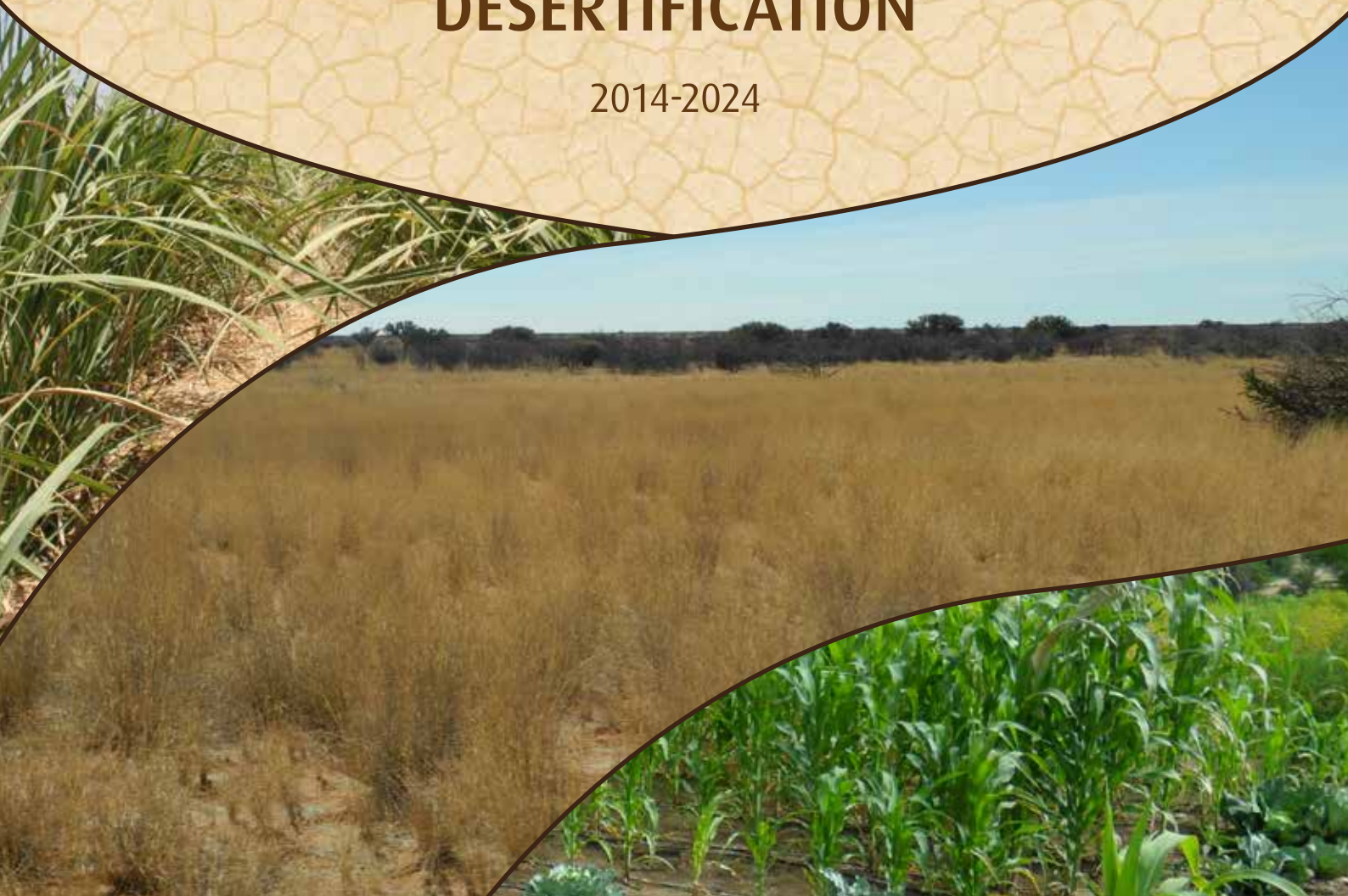




REPUBLIC OF NAMIBIA
Ministry of Environment & Tourism

THIRD NATIONAL ACTION PROGRAMME FOR NAMIBIA TO IMPLEMENT THE UNITED NATIONS CONVENTION TO COMBAT DESERTIFICATION

2014-2024





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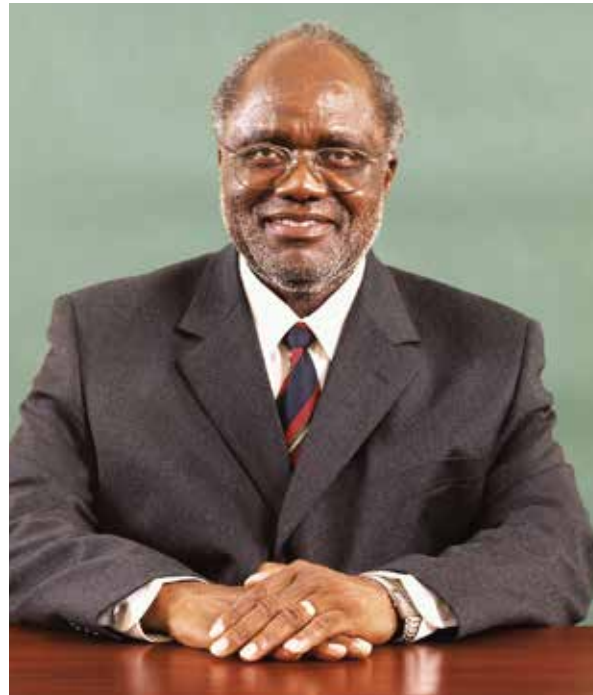
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Foreword

Land degradation is a complex phenomenon. For Namibia, as for other countries, land degradation is not only about land, but also about the people. In our country, the majority of the population is directly affected by the depletion of natural resources. This is aggravated by the erosion of the capacity of our land, water and biological resources to sustain our population.

To overcome these challenges, our Government and people remain committed to the constitutional imperative of conserving the natural environment and our ecosystems. 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 are provided for in Article 95 (1) of our supreme law. In our efforts to fulfil this provision, Namibia has ratified several international instruments including the three Rio Conventions, which emerged from the 1992 Rio Earth Summit, on Biodiversity; Combating Desertification; and Climate Change. The conventions have served as a foundation for the development of legislation, policies and strategies to address constraints related to the management of our natural resources in Namibia.



The successful compilation and launch of the National Action Programme for Namibia to Combat Desertification, Land Degradation and Drought (2014-2024) is a further demonstration of our Government's commitment to integrate sustainable land management into national development priorities. It is a continuation of the good work done under the National Action Programme to Combat Desertification (1994-2005) and the Country Pilot Partnership Programme (2007-2012).

Desertification, Land Degradation and Drought (DLDD) are significant threats to our long term national development objectives. The most alarming effects of land degradation including deforestation, the diminishing availability of flora and perennial grasses, soil erosion and bush encroachment, undermine the functional integrity of our dryland ecosystems. Therefore, the focus of this National Action Programme goes beyond the issue of land degradation and seeks to address DLDD holistically.

I wish to underscore our full commitment to addressing the complex challenges of DLDD. Namibia looks forward to integrating innovative solutions and commitments emerging at the international level to address DLDD. In line with the Namib Declaration, which was adopted at the 11th Conference of the Parties to the UNCCD in 2013, our country is fully committed to the achievement of land degradation neutrality, the advancement of the science policy interface, enhancing drought

mitigation efforts, engaging the private sector, and empowering our local communities and women to tackle the challenge of DLDD.

This approach is consistent with the Government commitments to achieve our long-term national development strategy, Vision 2030. While Vision 2030 recognises that natural resources alone cannot sustain Namibia's long-term development, it re-affirms the need for the country to diversify its economy. In this regard, land and its associated natural resources are recognised as vital elements of Namibia's development. I am confident that the effective implementation of the National Action Programme (2014-2024) will contribute greatly towards the conservation and sustainable utilisation of our land and other natural resources towards the realisation of Vision 2030.



Hifikepunye Pohamba

PRESIDENT

Preface

The Republic of Namibia was one of the first countries in the world to incorporate an environmental and sustainable development clause in its national constitution. To bring this clause into effect, it established a dedicated environmental agency, the Department of Environmental Affairs (DEA), in the Ministry of Environment and Tourism (MET).

As national focal point to the United Nations Convention to Combat Desertification (UNCCD), the DEA has led calls and initiatives aimed at combating desertification, land degradation and drought with excellent support from partner ministries, tertiary institutions, civil society organisations, donor agencies and other stakeholders.



This strategic document seeks to build on the progress we have made through our previous two National Action Programmes (NAPs) to the UNCCD, which were known as the Namibia National Action Programme to Combat Desertification (NAPCOD) (1994-2005), and the Country Pilot Partnership (CPP) Programme (2007-2012) respectively.

These two NAPs placed sustainable land management at the forefront of our efforts to address the threats posed by desertification, land degradation and drought, and have delivered substantial benefits to our affected communities and ecosystems. In spite of these successes, the pressures on our ecosystems and rural communities continue to increase due to impacts from climate change and continuing social challenges.

This Third National Action Programme calls for strong interventions to combat desertification, land degradation and drought based on our national priorities and unique circumstances. It also promotes a more synergistic approach to sustainable land management, climate change adaptation and the conservation and sustainable use of biodiversity, all of which are closely linked in the Namibian context.

While focusing on our national needs and priorities, this National Action Programme also promotes the adoption of emerging best practices at the international level including land degradation neutrality and making the economic case for sustainable land management. Namibia is also committed to working closely with its sub-regional and regional partners given the importance of issues of desertification, land degradation and drought to the African continent.

I would like to acknowledge the intensive two-year consultative process undertaken to develop this National Action Programme. This involved a broad range of stakeholders at both national and international level. I would like to thank all stakeholders for their recommendations and inputs into what is truly a nationally-owned document.

The Ministry of Environment and Tourism looks forward to working with all stakeholders to implement this National Action Programme and improve the conditions of livelihoods and ecosystems affected by desertification, land degradation and drought across the country. This will require the best efforts from all of us.



Uahekua Herunga

Minister of Environment and Tourism

Executive Summary

This document describes Namibia's environment, desertification, land degradation and drought processes, and the threats to its land based agricultural production. The root causes of land degradation are explained, as are the different types of land degradation, which occur due to these root causes. The root causes of land degradation and barriers to the implementation of sustainable land management in Namibia include:

- i. High Levels of Poverty in the rural areas
- ii. Population Pressure
- iii. Land reform, Resettlement and Land Tenure
- iv. Unsustainable use of water resources
- v. Inadequate systemic, institutional and individual Capacity
- vi. Inadequate mechanism for cross-sector collaboration for sustainable land management
- vii. Weak financing mechanisms for sustainable land management
- viii. Inadequate application of technology for dry land production
- ix. Climate Change

These root causes have led to three main types of land degradation in Namibia - namely: I. *Vegetation Degradation*, a category that includes rangeland degradation, deforestation and degradation of dry forests and woodlands, II. *Soil Degradation*, a category that includes wind and water induced erosion of soils and the loss of soil fertility, and III. *Water Degradation*, which refers to the negative effect on water quantity and quality caused by unsustainable water resources management and changes in ecosystem function linked to DLDD.

This Third National Action Programme (NAP3) lays out Namibia's objectives and interventions to address these root causes and manifestations of land degradation. The objectives and desired outcomes of NAP3 also closely align with the strategic and operational objectives of the United Nations Convention to Combat Desertification (UNCCD). Namibia views the sustainable management of land as the key basis for addressing the threats posed by desertification, land degradation and drought (DLDD). The interventions proposed in NAP3 are strategic in nature and intend to mainstream sustainable land management within the programmes of the different land-based sectors and donor-supported projects in Namibia.

The objective of NAP3 is to:

“Prevent and reverse desertification and land degradation in affected areas and to mitigate the effects of drought in Namibia in support of poverty reduction and environmental sustainability”.

It seeks to build on the foundations laid by its earlier national action programmes (NAPCOD and the

CPP Programme) as well as ongoing good practices in the area of sustainable land management. NAP3 is designed around six outcomes, which mainly target the achievement of the first two strategic objectives of the UNCCD 10 Year Strategic Plan - that is to improve the living conditions of affected populations, and to improve the condition of affected ecosystems.

The six desired outcomes of NAP3 cover the themes of advocacy awareness and education; policy and institutional framework for DLDD; monitoring system for DLDD; on-the-ground action to prevent and reverse land degradation; financial support; and research and development. The outcomes and the outputs per outcome are as follows:

Outcome 1: By 2018, information on the risks Namibia faces and the need to combat desertification at a national scale is produced, made easily accessible and actually used by policy makers, land managers, research and educational institutions.

Outputs relevant to Outcome 1

- i. Policy advocacy papers on Sustainable Land Management and desertification produced and publicised, and gender-based dimensions mainstreamed in Sustainable Land Management Programmes and policy issues.
- ii. Annual desertification, land degradation and climate change adaptation newsletter distributed to all educational and research institutions in Namibia.
- iii. Reports on the management, rehabilitation and recovery of focal landscapes.
- iv. Information from the Land Degradation Monitoring System publicised, distributed, and discussed in public fora.
- v. Publication of climate change scenarios and risks for Namibia and their implications on local adaptation needs.

Outcome 2: Policy and institutional frameworks are effectively implemented and strengthened to address desertification, land degradation and drought by 2024.

Outputs relevant to Outcome 2

- i. Permanent institutional structure in place to further cross-sector collaboration on implementation of SLM programmes and initiatives for combating desertification.
- ii. Integration of NAP3 and broader promotion of sustainable land management into Namibia's 5th National Development Plan (2018-2023).
- iii. Local level governance structures linked to sustainable land management further

strengthened and empowered – such as conservancy committees, community forests, communal land boards, basin management committees, water point associations, livestock marketing committees etc.

- iv. Critical review undertaken of implementation of the National Drought Management Policy and Strategy (1997).

Outcome 3: A functional DLDD Monitoring System and supportive processes are in place by 2018 for Namibia to move towards land degradation neutrality.

Outputs relevant to Outcome 3

- i. Institutional collaborative structure in place to collect data and information on land degradation and the health of land in Namibia – including variables such as soil moisture, soil fertility, forest cover changes, rangelands, crop yields, livestock productivity, temperature, rainfall, or flooding patterns.
- ii. Target setting and implementation of the Land Degradation Neutrality concept is undertaken.
- iii. An information gathering protocol and a functional database for storage and retrieval of data and information on the state and degradation of land and its natural resources.
- iv. A shared GIS-Internet Platform (database) for stakeholders to upload and share data and information, administered by a central designated authority.
- v. Publication of and access to data on trends in thematic areas (forest cover, bush encroachment, range conditions, droughts, floods) – and interpretation of the trends in actionable terms.

Outcome 4: Desertification and land degradation processes in Focal Landscapes are halted and reversed by 2024, and affected communities and ecosystems strengthened to mitigate the impacts of drought.

Outputs relevant to Outcome 4

- i. At least 5 focal landscapes in Namibia are identified for best practice SLM and rehabilitation, representing a mixture of land uses and including at least one bush encroached site.
- ii. Publication of baseline environmental and socio-economic data for each focal landscape to aid and guide future monitoring. This will include comprehensive vulnerability assessment reports, particularly with regard to climate change.
- iii. Upscaling of best SLM practices within and around focal landscapes (drip irrigation, sustainable basin-level water resources management, conservation agriculture, improved range management, community based conservation etc) for immediate implementation. This will draw upon the achievements of past initiatives in Namibia namely the CPP and

NAPCOD.

- iv. Empowerment plans for women and vulnerable groups, linked to restoration programmes in the focal landscapes.
- v. Programmes to improve the structures and functions of local institutions (Conservancy and Community Forestry Committees, Community-based Water Point Management, Integrated Water Resources Management at basin level, Forums for Integrated Resource Management or FIRMS, Livestock Marketing and Range Management Committees) who will be partners in the management and restoration of the 'Focal Landscapes'.
- vi. Research and publication of baseline land use and socio-economic data for each focal landscape to aid and guide future monitoring. Empowerment plans for women and vulnerable groups in the focal landscapes.

Outcome 5: Financial lending and grant making facilities are in place and supporting communities and small farmers to implement sustainable land management by 2017.

Outputs relevant to Outcome 5

- i. A competitive grants schemes for individual farmers and farmer associations or groups.
- ii. Strategy on farmer support financing including low interest loans for SLM and improved production technologies and practices.
- iii. A forum for the promotion of financing of improved land and natural resources management – led by an institution such as the Environmental Investment Fund or AgriBank.
- iv. A dedicated government fund for multi-sector projects associated with SLM, in effect a Statutory SLM Fund.

Outcome 6: Research on aspects of sustainable land management and climate change science in support of adaptation and mitigation are mainstreamed in research and tertiary educational institutions and extension services by 2020.

Outputs relevant to Outcome 6

- i. An assessment report on required capacities to implement a national programme to promote SLM and combat desertification.
- ii. A technical skills development plan to improve national capacity for research, monitoring and implementation of SLM and anti-desertification programmes (Examples: climate change modelling and scenario building, GIS and Remote Sensing, stress physiology in crops, animal and plant breeding).
- iii. A research plan to assess the sensitivity and response of Focal Landscapes to rehabilitation programmes – (Research themes – climate change and stress tolerance in crops and

animals, water and nutrient efficiency in crops, climate induced movement of flora and fauna, development of degradation indices, modelling economic aspects of degradation, desertification and adoption of improved technologies).

- iv. Training modules on climate change and SLM issues developed for inclusion into the curricula of tertiary institutions of Namibia.
- v. Institutional partnerships, including public private partnerships, for research and training created and existing ones strengthened.

The implementation of NAP3 will be coordinated by the Department of Environment Affairs of the Ministry of Environment and Tourism, as the national focal point to the UNCCD. The Department of Environmental Affairs will also serve as Secretariat to a national Sustainable Land Management Committee to oversee the implementation of NAP3. This technical committee will involve a number of ministries (particularly the ministries engaged in land and natural resources management), donor agencies, tertiary institutions, civil society organisations and private sector representatives.

The monitoring and evaluation of NAP3 will also be coordinated through the Department of Environmental Affairs with support from the cross-sectoral Sustainable Land Management Committee. All of the activities prioritised in NAP3 are to be implemented by institutions represented on the Sustainable Land Management Committee, which will facilitate the in-house monitoring of NAP3 on an annual basis. An independent mid-term evaluation of NAP3 will be undertaken in mid-2018 as well as a final independent evaluation in 2024, which will also provide lessons and direction for the development of a fourth NAP as appropriate.

For the first 5-year period of NAP3, the required total budget is estimated at N\$51.3 million, of which 63.5 % will be devoted to actual restoration and SLM programmes in the five focal landscapes and 16.4 % on programme coordination, including the monitoring and evaluation of NAP3. The budget will be reviewed after a comprehensive assessment of needs for the remaining period of NAP3 based on what has been achieved in the first five years.

Acknowledgements

The Department of Environmental Affairs, Ministry of Environment and Tourism, acknowledges those cooperating partners who co-funded the consultative process that led to the drafting of this document. The stakeholders in Namibia who were consulted prior to the drafting of the document and those who participated in the meetings to review and improve the document are also acknowledged and commended for their valuable insights. The Department of Environmental Affairs recognises the importance that various local and international stakeholders attach to the issue of combating desertification, land degradation and drought. Consequently we re-affirm our commitment to implement this action programme, which is not only in the national interest and will give meaning to Namibia's constitutional provisions on environment and sustainable development, but will also contribute to global benefits.

We thank the Environmental Investment Fund, Gesellschaft für Internationale Zusammenarbeit and the Secretariat of the United Nations Convention to Combat Desertification for their financial and technical support.



Acronyms and Abbreviations

AGRA	Agricultural Cooperative of Namibia
CALLC	Enhancing Institutional and Human Resource Capacity through Local Level Coordination of Integrated Rangeland Management and Support
CANAM	Conservancy Association of Namibia
CBNRM	Community Based Natural Resource Management
CCA	Climate Change Adaptation
CPP	Country Pilot Partnership
DEA	Department of Environmental Affairs
DLDD	Desertification, Land Degradation and Drought
DRFN	Desert Research Foundation of Namibia
EIF	Environmental Investment Fund
FIRM	Forum for Integrated Resource Management
GEF	Global Environment Facility
GoN	Government of Namibia
IGM	Innovative Grant Mechanism
IRDNC	Integrated Rural Development and Nature Conservation
ISLM	Integrated Sustainable Land Management
KMS	Knowledge Management System
LDMS	Land Degradation and Monitoring System
LFA	Logical Framework Analysis
LLM	Local Level Monitoring
LMCs	Livestock Marketing Committees
LUP	Land Use Planning
M&E	Monitoring and Evaluation
MAWF	Ministry of Agriculture, Water and Forestry
MDG	Millennium Development Goal
MET	Ministry of Environment and Tourism
MF	Minister's Forum
MFMR	Ministry of Fisheries and Marine Resources
MGECW	Ministry of Gender Equality and Child Welfare
MLR	Ministry of Lands and Resettlement
MME	Ministry of Mines and Energy
MOF	Ministry of Finance
MRLGHRD	Ministry of Regional and Local Government and Housing and Rural Development
NAP	National Action Programme

NAPCOD	Namibia Programme to Combat Desertification
NACSO	Namibia Association of CBNRM Support Organisations
NAU	Namibia Agricultural Union
NDP	National Development Plan
NDT	Namibia Development Trust
NGOs	Non-Governmental Organisations
NNF	Namibia Nature Foundation
NNFU	Namibia National Farmers Union
NNDFN	Nyae Nyae Development Foundation of Namibia
NPC	National Planning Commission
OROI	One Region One Initiative
NSA	Namibia Statistics Agency
PCU	Programme Coordination Unit
PESILUP	Promoting Environmental Sustainability through Improved Land Use Planning
PON	Polytechnic of Namibia
RDCC	Regional Development Coordination Committees
RDCs	Regional Development Committees
REMUs	Regional Emergency Management Units
SDAC	Sustainable Development Advisory Council
SDI	Sustainable Development Index
SLM	Sustainable Land Management
SLM-SAM	Sustainable Land Management and Adaptive Management
SPAN	Strengthening the Protected Area Network
UNCCD	United Nations Convention to Combat Desertification

1. Desertification, Land Degradation and Drought – A critical threat to national development in Namibia

1.1 Background

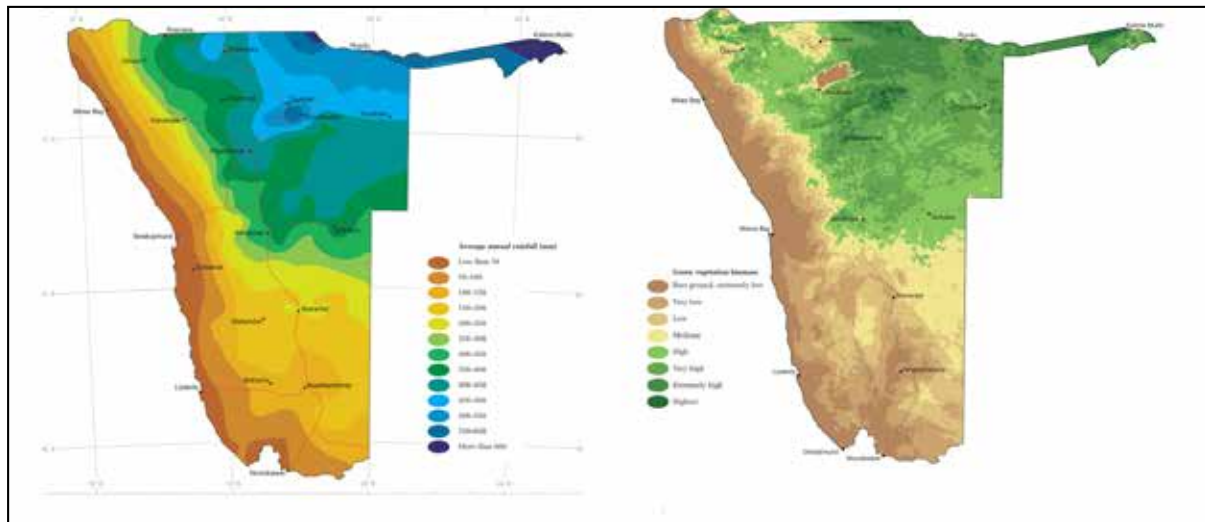


Figure 1: Average annual rainfall (I) and average plant production in Namibia (Source: Mendelsohn et al 2006).

Namibia is the driest country in sub-Saharan Africa, with a mean precipitation rate of less than 250mm per year. Namibia's physical environment presents serious challenges in terms of desertification, land degradation and drought (DLDD). It is a vast, sparsely populated country comprising an area of some 823,680 km².

The climate is highly variable and unpredictable, and is typified by great temporal and spatial variability in rainfall patterns. About 8% of the country falls within the dry sub-humid belt, while the rest of the country is characterized by semi-arid through arid to hyper-arid conditions, the latter being predominant in the west and south. High temperatures lead to high evaporation rates resulting in a net water deficit. Namibia's only perennial rivers are on its southern and northern borders, and all have their sources in neighbouring countries.

The causes and impacts of DLDD are likely to be exacerbated through anthropogenic climate change. Although a small contributor to greenhouse gas emissions, the agriculture and tourism sectors are particularly vulnerable to the impacts from climate change associated with increasing temperatures, increased number of drought and flood events, and even greater rainfall variability.

Faced with these challenges, Namibia ratified each of the Rio Conventions on climate change, desertification, and biodiversity and has actively implemented the provisions of each of these Conventions at the national level.

1.2 Status of Land Degradation

Land degradation is a serious and increasing problem in Namibia. There are three main types of land degradation namely: I. *Vegetation Degradation*, a category that includes rangeland degradation, deforestation and degradation of dry forests and woodlands, II. *Soil Degradation*, a category that includes wind and water induced erosion of soils and the loss of soil fertility, and III. *Water Degradation*, which refers to the negative effect on water quantity and quality caused by unsustainable water resources management and changes in ecosystem function linked to DLDD.

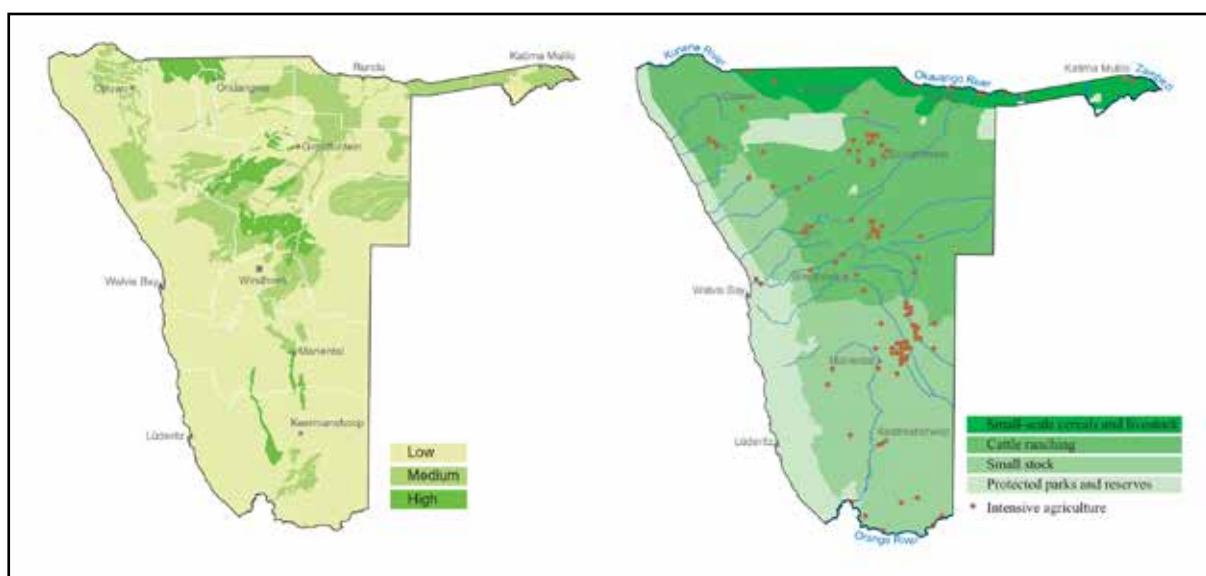


Figure 2: Namibia is the classic example of an arid country in which agricultural potential is limited by infertile soils, variable rainfall and high temperatures (map on left shows soil suitability for crop cultivation). Nevertheless agriculture and livestock production is practised on around 71% of the land (r) which makes the country highly vulnerable to desertification (Source: Mendelsohn (2006)).

Livestock production, including small-stock farming and cattle ranching, is undertaken on approximately 70% of Namibia's landmass. Much of this rangeland is highly vulnerable to land degradation, given the inherent infertility of the soil and the low levels and high variable nature of rainfall.

Crop cultivation is focused in the northern communal areas, where approximately 10% of the land surface supports approximately 50% of the population. Crop cultivation in the form of mixed subsistence agriculture is the main land use in these areas, which have been identified as a main high-risk area for desertification.

The Drought Investigation Committee came to the conclusion that rangeland degradation and soil

erosion had started in Namibia as long ago as 1924. Declines in carrying capacity of Namibia's rangelands are estimated to be as high as 100% or more and that bush encroachment alone is contributing to an economic loss to farmers in excess of about N\$700 million per annum (MET, 2005; CBEND, 2009). Soil productivity is also considered to be declining in the crop-growing northern communal areas, but there is little systematic scientific monitoring of this.

1.3 Causes of Desertification and Land Degradation

Although desertification and land degradation in Namibia are caused mainly by inappropriate land uses and agricultural practices, several structural root causes drive these inappropriate practices, which need to be addressed through this National Action Programme and to inform the design of remedial measures against land degradation.

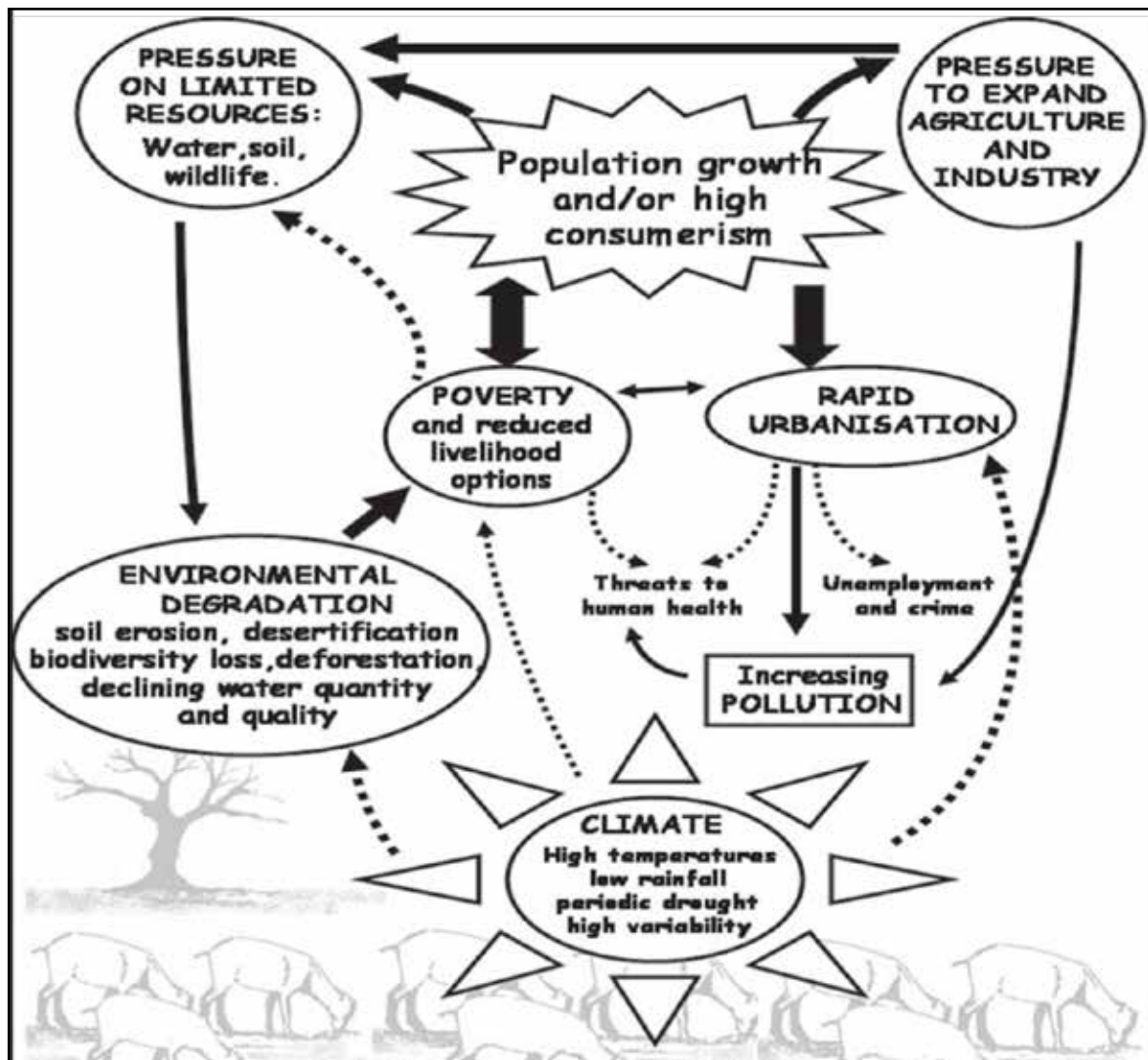


Figure 3: The linkages and interconnections between human populations, poverty, development, poverty and other economic activities on the environment, leading to degradation and desertification (Source: Vision 2030 Figure 3.7).

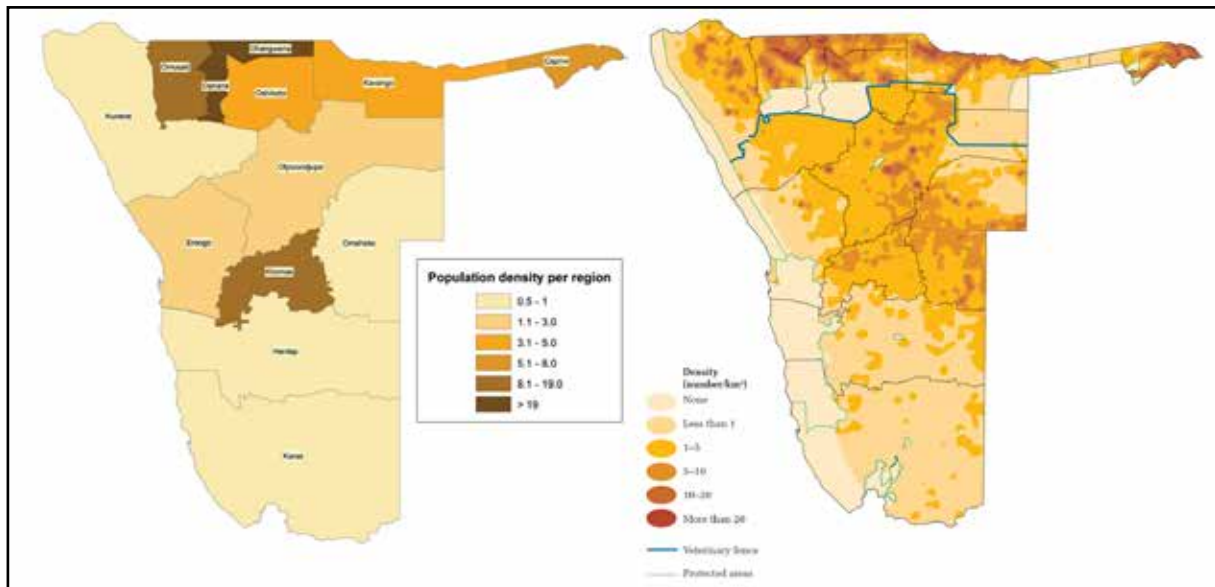


Figure 5: Human population density (l) and cattle density (r) in Namibia (Source: Mendelsohn et al 2002).

1.3.3 Land Reform and Resettlement and Land Tenure

At independence, Namibia inherited a racially skewed land distribution pattern with about 43% of the available agricultural land owned by some 4,500 mainly white commercial farmers, while more than 150,000 households had access to only 42% of the land (Werner 1997). The Government has sought to implement a commercial land reform programme to address this difficult legacy. Approximately 139 farms were acquired from 2001 -2010, covering almost 976,000 hectares and the resettlement of 2,537 people.

Harring and Odendaal (2002) argue that the Namibian government is yet to integrate environmental considerations into its programme to resettle previously disadvantaged Namibians on Government-purchased farms. In most cases, the purchased farms are carved up into smaller units, which are not large enough to support sustainable and profitable farming enterprises. Post-resettlement support is also an area of weakness, and resettlement farms tend to be characterized by extremely poor veld conditions due to overgrazing or poor grazing management.

The lack of secure and exclusive group land tenure over grazing resources is a major constraint to SLM in communal areas. The policies and legislation have given communities rights over wildlife, forest resources and water, but not over the land itself. This prevents farmers from keeping others off the land they might wish to manage sustainably (e.g. by resting it), prevents them from being able to raise capital loans using the land as security, and makes it unattractive for investors to start capital projects since the risk is high.

1.3.4 Unsustainable Use of Water Resources

Despite its modest contribution to GDP, agriculture accounts for an estimated 66.4% of all water used in Namibia, with crop irrigation alone accounting for almost 40% of all water use, and there are plans for expansion. Namibia's Third National Development Plan (NDP3) notes how water productivity is lowest in the agriculture sector, with it adding value of just N\$4.5 per m³ of water used compared to a non-agricultural average of N\$203.8 per m³. It was estimated that irrigation schemes on communal land were making a negative contribution to GDP. In a country where water is the key constraint to economic development, it is imperative that it is put to the best possible use.

1.3.5 Inadequate Capacity

Inadequate capacity has been identified as a cause of desertification and land degradation at systemic, institutional and individual levels, and is addressed throughout NAP3 as a cross-cutting element.

Systemic capacity problems refer to policies, which provide the framework conditions for government programmes and action programmes. In the case of Namibia, these are manifested by policies that are not always supportive of each other and in some cases give perverse incentives that may aggravate land degradation or inadvertently impede SLM. Policies in water management and the absence until recently of a rangeland management policy and policy for conservation agriculture are examples of this.

Institutional capacity mainly refers to the structures of both central and local governments created to implement policies. In Namibia, institutional capacity issues seen as constraints to achieving SLM include centralized planning by service ministries with little involvement of land managers. The mandates for land management are spread among different government ministries, which do not plan in an integrated way - a situation that often leads to duplicated or even conflicting efforts. This is the underlying reason for the development of cross-sector collaborative structures emphasised in this document.

Individual capacity problems manifest themselves in the form of low numbers of technically qualified personnel, difficulty in retaining key staff where they are needed most, and limited knowledge and technology for land management at the local level.

1.3.6 Inadequate Mechanism for Cross-Sectoral Collaboration on Sustainable Land Management

The responsibility over land management is vested in many different institutions, which have not harmonised their policies and interventions relating to SLM. As yet, there is no mechanism either to

facilitate harmonisation or to encourage strong and functional cross-sector collaboration to promote SLM. In addition, the capacity of communities to make informed management decisions are also limited on even the most widespread land use, that is, livestock husbandry. Simple and practical locally based decision-support systems such as the “Local Level Monitoring” tool were developed under NAPCOD and CPP, providing information on important parameters such as rangeland condition, bush densities, carrying capacity, livestock condition and rainfall. However these systems need to be further rolled out and adopted and applied by communities.

1.3.7 Weak Financing Mechanisms for Sustainable Land Management

There are weak mechanisms in place to support dedicated SLM interventions at the community level. This is compounded by inadequate access to markets, and an overall lack of incentives for investment in improved land management practices, particularly on rural communal lands. The lack of financial mechanisms also prevents the uptake of promising technologies and the ability of rural communities to diversify their livelihoods and reduce their vulnerability to climate variability.

1.3.8 Inadequate Application of Technology for Dry Land Production

Namibia has yet to apply the most appropriate water use efficient agriculture and range management systems. Examples such as rotational grazing to allow range recovery has not been adequately tested and mainstreamed, and the use of water saving ‘drip irrigation techniques’ and conservation agriculture approaches are not widespread.

1.3.9 Climate Change

Climate change adds a new dimension to the root causes of desertification and land degradation listed above. Reid *et al* (2007) using a climate change model, predicted that Namibia’s climate will become hotter and drier in the future, with more variability in rainfall and increased frequency of drought events. These predicted changes will greatly threaten the livelihoods of rural populations and the health of ecosystems across the country. In practical production terms, Reid *et al* (2007) estimate that losses in agricultural productivity as a result of climate change could amount to 1.5- 3.5% of GDP per year. This would mainly affect the commercial production of livestock, which currently dominates Namibia’s agricultural sector, and which heavily depends on rainfall sensitive rangeland conditions (Midgley *et al* 2005).

In a recent climate change modelling based study on Namibia’s commercial agriculture which is dominated by livestock husbandry, Brown (2009) worked on the potential effects on the commercial farming sector, under future scenarios in precipitation and the associated economic losses. The study suggests that production of livestock will be seriously constrained under climate change unless adaptation mechanisms are put in place and further that under more arid conditions in the central parts of Namibia, wildlife production could replace livestock farming since local wildlife species are generally better than livestock under harsh environmental conditions.

The climate change scenarios predicted by these studies suggest that this National Action Programme must promote the development and adoption of policies and management mechanisms that will

enable adaptation to even harsher environmental conditions.

1.4 Manifestations and Impacts of Land Degradation in Namibia

The following manifestations of land degradation are most commonly found on both communal and commercial lands in Namibia:

1.4.1 Overgrazed and Overstocked Land

Generally in the communal farming areas, overstocking and overgrazing have led to loss of ground cover and land productivity as well as increased vulnerability to drought. This problem is particularly acute in Northern Namibia, along the Okavango River, on the eastern floodplains in Zambezi and in a number of other scattered places, typically around large settlements. In extreme cases, such as around Ondangwa, stocking density exceeds carrying capacity by over 40%. Open access to land and unsuitable distribution of watering points, including boreholes, is a major driver for overstocking.

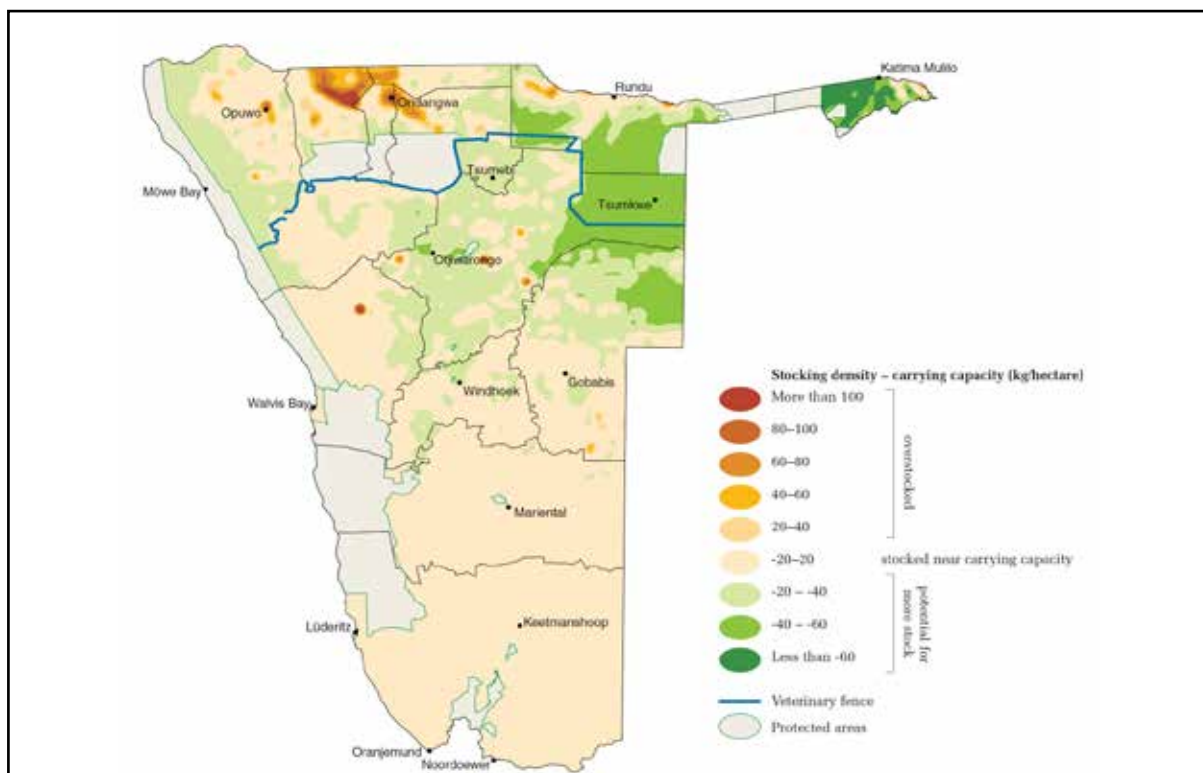


Figure 6: Stocking density in carrying capacity in terms of kg/hectare in Namibia, showing areas that overstocked, stocked close to carrying capacity and those with potential for more stock (Source: Mendelsohn 2002).

Inappropriate drought aid (particularly the expansion of poorly planned permanent water points and fodder subsidies) contributed to overstocking, especially during drought periods when it was warranted to reduce livestock numbers in order to relieve pressure on the land. Animal feed subsidies

and development of emergency water points during droughts served as perverse incentives as they enabled livestock owners to maintain their stocking levels even during droughts.

This situation improved with the advent of the National Drought Policy and Strategy in 1997, which introduced incentives for destocking during dry spells. The 1997 policy provides for marketing incentive schemes in the form of financial rewards to farmers for every head of livestock sold up to a certain limit (Aribeb and Mosimane, 2011). This policy further commits the government to investigate several additional schemes aimed at encouraging the reduction of livestock on rangelands during disaster droughts. These include subsidies for livestock transportation to leased emergency grazing and to abattoirs and quarantine camps.

1.4.2 Bush Encroached Land

Bush encroachment is believed to be a result of a number of complex interacting factors such as overgrazing and reduced browsing in favour of cattle production, exclusion of veld fires, and climatic and soil moisture conditions caused by prolonged droughts. It occurs predominantly on commercial agricultural land in the central and eastern areas and only in localised parts of the communal areas in the north. Overall, it is estimated that around 26 million hectares of land is affected and economic losses incurred have been estimated to be up to N\$ 700 million per year.

The phenomenon of bush encroachment is particularly prevalent in the central and eastern parts of Otjozondjupa and Omaheke where intensive commercial cattle farming predominates – and where the density of plants varies between 2,500 and 10,000 bushes per hectare, and hence is considered “encroached”.

The main species causing the encroachment problem are *Acacia mellifera* (Black thorn), *Dichrostachys cineria* (Sickle bush), *Terminalia sericeae* (Silver terminalia), *Terminalia prunoides* (Purple-pod terminalia), *Acacia erubescens* (Blue thorn), *Acacia reficiens* (False umbrella thorn) and *Colophospermum mopane* (de Klerk, 2004).

1.4.3 Deforested Land

Deforestation poses a serious threat to habitats, reducing capacity for carbon sequestration, as well as hydrological and nutrient cycling functions. It is most prevalent in the North and North Central regions and is due largely to unsustainable uses of trees to build houses and provide fuel, clearing of land for dry-land cropping, and unsuitable fire management. It is estimated that wood is the primary energy source for at least 60% of Namibia’s population. Several studies reveal that for example in the Zambezi Region, 96% of all households use wood for fuel and 80% of all dwellings are made from wood (Ashley and La Franchi 1997; Mendelsohn and Roberts 1997). These studies however agree that land clearing for agricultural purposes account for most of the deforestation experienced in Namibia. Deforestation, particularly if it occurs along rivers, impacts heavily on the healthy functioning of wetland ecosystems and is a major cause of soil erosion, declining water quality and flood control.

Unmanaged fires are also a factor in deforestation. It is estimated that the total area burnt between 1996 and 2000 averaged 51% per year. According to the Monthly Burned Area Report of September 2012 (MAWF 2012), this devastating impact of unmanaged fires has not changed. It has been established that excessive human induced fires expose the top soil and contribute to large losses of organic matter and soil nutrients. This exposed soil is particularly susceptible to erosion.

In the woodlands of the north-central and north-eastern regions of Namibia, deforestation arising from over-exploitation and conversion of woodlands to agricultural fields remain the main causes of forest cover losses and the deforested areas tend to be subjected to overgrazing, injudicious use of fires and unsustainable agricultural practices which tend to encourage degradation and loss of agricultural production, besides the carbon emissions associated with loss of forest cover.

1.4.4 Soil Degradation

Soil degradation is considered an increasing problem, caused by erosion from wind and water, and associated with declining fertility and loss of organic matter. However, soil health is not systematically monitored throughout Namibia. Impoverished soils and cases of soil compaction have been identified in northern Namibia due to dryland cropping over many years with limited nutrient inputs or soil fertility management under subsistence agriculture and through unsuitable tillage methods. Recent trials under the CPP Programme showed that minimum tillage methods coupled with deep ploughs (rippers) which break sub-surface hard-pans actually improve percolation, food development and crop yields.

1.4.5 Water Degradation

Water degradation refers to decreased water quantity and decreased water quality. Strong population growth, rapid urbanisation and industrialisation and expanding national economic output all place increasing demands on a resource already under stress and have the potential to jeopardize the quality of the resource. Current land management practices are also leading to water degradation through:

- Over-extraction of water through dams and boreholes
- Inappropriate irrigation management which can cause salinisation
- Lowering of water tables and dessication of springs through invader bush species.

2. Building on a Solid Foundation – Policy Framework for Sustainable Land Management and National Programmes on Sustainable Land and Natural Resources Management

Namibia has a comprehensive and sound policy framework in place for addressing issues of DLDD.

2.1 Vision 2030

Namibia's long term planning framework of Vision 2030 recognizes land and its associated natural resources as a vital component of Namibia's development. The vision for the natural resource sector states that Namibia shall develop its natural capital for the benefit of its social, economic and ecological well-being, by adopting strategies that promote the sustainable, equitable and efficient use of natural resources, maximising comparative advantages and reducing inappropriate resource use practices. It further directs that land must be used in appropriate and equitable ways to significantly contribute to food security at household and national levels and to support the sustainable and equitable growth of Namibia's economy, while maintaining and improving land capability and ecosystem function.

2.2 National Development Plan 4

Namibia's fourth National Development Plan (NDP4) is under implementation for the period 2012-2017. Agriculture is identified as a priority focus area under NDP 4, which calls for a) 4% growth in agriculture per year, b) increased household food security, c) large-scale development of agribusiness and agro-industrial sectors and d) increase in land carrying capacity. The ambitious targets in agricultural development in an arid country imply that the country must be ready to understand and tackle the environmental challenges of production - namely drought, water management and land degradation, among others.

2.3 Land Management Policies and Practices to address Desertification, Land Degradation and Drought

2.3.1 Agriculture Sector

The majority of land degradation processes are directly linked to agriculture and natural resource use activities. In Namibia cultivation practices, soil fertility management, livestock densities, irrigation methods, maintenance of forest cover and range management are key issues, which have a bearing on land degradation.

From a policy perspective, the Ministry of Agriculture, Water and Forestry (MAWF) has a mandate to promote, develop, manage and utilise agriculture, water and forestry resources sustainably. A number of policies address agricultural production in Namibia directly, while others do so indirectly. The most prominent policies include:

- National Agricultural Policy (1995), currently under revision,
- National Drought Policy and Strategy (1997),
- Green Scheme Policy (2008), and the
- National Rangeland Management Policy and Strategy (2012).

The agricultural policy recognises its key tasks as:

- i. Maximise broad-based participation
- ii. Phase out subsidies that discourage private sector investment
- iii. Facilitate independent marketing
- iv. Encourage value addition
- v. Integrate agriculture with other sectors
- vi. Facilitate secure land tenure and
- vii. Encourage drought preparedness.

While the Drought Policy and Strategy is acknowledged to be very thorough, forward thinking and in line with SLM, the severe impacts of the 2013 drought have demonstrated that drought preparedness was not adequate. Adaptive responses to droughts such as de-stocking or reduction of livestock numbers continue to be hindered by cultural traditions and pricing policies among others, and it is recommended to explore through NAP3 how to improve the implementation of this policy and strategy.

There is an estimated 50,000 hectares of underdeveloped land along perennial rivers and in areas with adequate underground water sources in Namibia. The Green Scheme, an initiative of the MAWF, seeks to make use of these areas for increased agricultural production through irrigation. The Scheme follows a Public-Private Partnership (PPP) approach to implementation. There is a strong emphasis on social equity with most schemes open to small-scale communal farmers as well as commercial investors, while adjacent rural communities are prioritised to benefit from employment.

The National Rangeland Policy and Strategy of 2012 is currently under implementation through a national task force and seeks to enable that rangelands are managed in such a way so that productivity and biodiversity are restored and maintained. This is a key piece of legislation given that rangelands cover approximately 70% of the Namibian landmass.

The challenges to production and the further development of the agricultural sector suggest a few issues, which the sector ought to take into serious consideration from the perspective of SLM and combating degradation and desertification.

- i. As an arid country, which according to climate change modelling, may experience even greater moisture deficits, water saving technologies through innovative tillage, crop improvement, judicious use of scarce water and choice of crops are an imperative.
- ii. Rangeland management with a view to adapting to range conditions imposed by the physical environment and responding in a consistent and concerted manner to prevailing or predicted conditions should be mainstreamed particularly in the communal areas. In this context, bush encroachment is a special phenomenon that must be addressed both in the commercial and communal areas.
- iii. An aggressive training programme in range management and dry land and irrigated crop production aspects should enjoy a special status during the course of NDP4 and subsequent development periods.
- iv. The long term monitoring of climatic and ecological conditions should form part of Namibia's drought preparedness and early warning system, as these often directly affect agricultural production. Fortunately agriculture already hosts a remote sensing facility which already does fire mapping and whose mandate could be expanded to include general ecological monitoring as a strategic information gathering tool.
- v. The green scheme could be further enhanced with strong support from agricultural economists so that the choice of crops and the technologies used to produce them should ensure the best economic use of scarce water resources.

2.3.2 Water Sector

The relevant water policies include Water Supply and Sanitation Policy (WASSP, 1993), National Water Policy White Paper (2000), Revised Water Supply and Sanitation Policy (WASSP 2008) and the Water Resources Management Act (2004 and amended in 2013). In practice the Department of Water Affairs (DWA), has created basin management committees (BMCs) which operate at the level of catchments and bring together a number of stakeholders under the supervision of the DWA. While the BMCs provide opportunities for cross-sector interactions, Local Authorities have had difficulties recovering the costs of water supply, particularly in urban areas and a number of the Local Authorities are in debt to the water supply authority – NamWater, largely because of tariff levels that do not internalise the costs of water supply.

Based on the current issues on rural and urban water supply, some remedial issues could be considered:

- i. Basin Management Committees and Water Point Committees provide strategic and opportunities to manage and protect water supply sources and should be further empowered to improve their roles.
- ii. There is an urgent need to create an authority - a Water Regulator under the Water Supply and Sanitation Policy.
- iii. Tariff systems for water by all local authorities should be reasonably standardised and made to reflect the cost of water supply and reduce wastage, but with safeguards against becoming unaffordable to poor people.

- iv. While the emergency water supply during extended dry seasons or exceptionally dry years (emergency boreholes) makes economic and social sense, they should be carefully planned and prohibited from becoming permanent as they tend to lead to localised overgrazing in areas that are naturally suited to extensive grazing systems, which entails the movement of livestock to allow range recovery.
- v. Systematic production of water resource accounts to guide water resources use.

2.3.3 Forestry and Wildlife and Environment Sectors

The policies that regulate this cluster of sectors are the Forest Policy (2001), the Forest Act (2001), Wildlife Management, Utilisation and Tourism in Communal Areas Policy (1995), CBNRM Policy (1995 and 2012), Amendment to the Nature Conservation Ordinance (1996), and the Promotion of Community Based Tourism Policy (1995). A policy on human-wildlife conflict was completed in 2009. In addition there is the Environmental Assessment Policy (1995) now strengthened by the Environment Management Act (2007).

Within this cluster of sectors an example of relevant policy reforms is that of Community-based Natural Resource Management, which allows for the devolution of tenure, rights and authority over open-access common property resources to communities at the local-level. The policy makes provision for group management and group accountability for stewardship of natural resources. In the case of wildlife, forestry and commercial tourism, the rights are exclusive to the respective community members, but this is not yet the case for rangelands. This policy has been implemented to good effect in Namibia through the Conservancy and Community Forest programmes. Despite the current focus on wildlife and forest management, conservancies and community forests offer ideal local entry points for an integrated sustainable land management programme, since they both lead to the formation of local institutions which have broader landscape level perspectives than possible under family level farming units.

Despite the success with conservancies and community forests, some of the key challenges within the wildlife and forestry sectors that are important from the perspective of SLM and degradation are:

- i. Finding alternatives to wood energy as a mechanism to reduce the overdependence on wood for energy particularly in urban centres, a development, which tends to lead to deforestation and degradation.
- ii. Management and protection of forests and woodlands to maintain their structural and spatial integrity.
- iii. The balancing of wildlife management lands against those needed for cropping and livestock is an important aspect, which recognises that traditional livelihood practices need not be replaced by wildlife management. Hence 'multiple use of lands' and integrated systems of land management are needed to cope with land scarcity and are also a mechanism for adaptation to changing climates.

- iv. Mitigating human-wildlife conflict.
- v. Strengthening the roles of Regional and Local Authorities as custodians of conservation and managed natural spaces.
- vi. Improving the coordination between sectors such as agriculture, forestry and wildlife and offering coordinated extension services in agricultural and natural resource management to achieve efficiencies in natural resource management.

2.3.4 Lands Sector

The policies relevant to this mandate are the National Land Policy (1998), National Resettlement Policy (2001), Agricultural (Commercial) Land Reform Act (1995), Communal Land Act (2002) and the Draft National Land Tenure Policy (in preparation since 2005).

The National Land Policy requires the Ministry of Lands and Resettlement (MLR) to implement land use planning and oversee natural resource management and related issues. Communal Land Boards have been set up and are operational to ensure that planning, land administration, land development and environmental sustainability are promoted in communal areas. An inter-ministerial Steering Committee is also in place to oversee Integrated Land Use Planning (SCIRLUP), and Integrated Regional Land Use Plans were produced for the Hardap and //Karas regions.

In terms of resettlement farms, the MLR is considering a grant scheme to conduct both pre-settlement orientation and provide concessionary start-up capital for resettled farmers. Without accessible financial and technical support and without a functional partnership with MAWF to improve the capacity of farmers to produce, it is unlikely that the challenges of land degradation and the poverty associated with it can be comprehensively addressed. An unintended consequence of insufficient support to resettled farmers is that some have no alternative but to sub-let their farms.

On the issue of empowerment of local communities on land management issues, it is instructive to look at what has happened in other sectors. In the water sector, Water Point Associations are given ownership over boreholes and their management. Wildlife Conservancies and Community Forests are also given proprietorship over wildlife and forests, including grazing rights within those forest lands. The Communal Land Reform Act (CLRA) has not conferred control and ownership of grazing lands outside conservancies and community forests to local communities. Such rights could actually improve local control over rangeland management and help reduce improvident behaviour (overstocking, unplanned and uncontrolled burning, illegal fencing) that often contribute to further degradation of common grazing grounds.

The key issues that MLR needs to resolve and which are important to integrated sustainable land management (ISLM) are:

- i. Speeding up the communal land registration process.
- ii. Strengthening the capacity of Communal Land Boards and SCIRLUP for enhanced environmental governance.
- iii. Increasing the capacity and budget of MLR to support the resettlement process and generally oversee planning and land care processes in conjunction with relevant ministries such as MAWF, MET and MRLGHRD.
- iv. Addressing the key question of rights over common grazing grounds and the supply of water for livestock in an environmentally sustainable manner.

2.4 Learning from Previous Programmes on Land and Natural Resources Management

Namibia has taken a proactive approach to combating desertification since the 1990s, and has been implementing programmes on the ground since then. Various attempts have been implemented to halt, and reverse, desertification in the context of the UNCCD, from which a wealth of experience has been gained and is being used to inform NAP3.

2.4.1 Namibia's Programme to Combat Desertification, 1994-2005 (NAPCOD)

Namibia started implementing NAPCOD some 3 years before UNCCD was formally established and this initiative served as a *de facto* first NAP from 1994-2005.

This programme was framed with a strategic view on cross-sector collaboration; particularly between the environment and agriculture sectors in Namibia. NAPCOD raised awareness about causes and effects of land degradation, both on national and local level. It also generated improved information about the location and rate of land degradation, as well as a national indicator-based land degradation monitoring system.

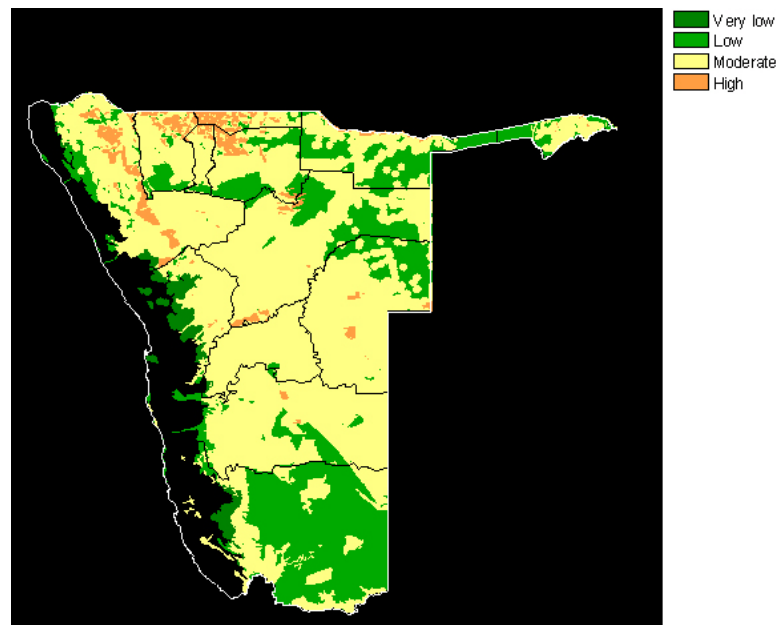


Figure 7: Land degradation risk map of 1997 (Source: Klintonberg and Seely)

Local-level activities were focused on three communities and included the establishment of Forums for Integrated Resource Management (FIRMs) and the Local Level Monitoring (LLM) tool. These are both products based on participatory approaches designed for use by resource managers at the local level.

FIRMs were born out of the need for the communities to coordinate external development assistance rendered to them by various service providers such as different government ministries/agencies, NGOs and even donor agencies. Communities experienced excessive demands on their time from these support agencies whose activities were not coordinated. This led to duplication of efforts and also avoidable competition among some support agencies. The FIRM approach sought to reverse this trend by placing communities in the driver's seat. Through FIRM, CBOs and service providers worked together in building capacity at community level through which they jointly identified and addressed challenges to sustainable land management. This helped the communities to prioritise effectively, made effective use of their time and resources, and minimised duplication of efforts.

The following achievements are attributed to the FIRM approach in the communities where NAPCOD was implemented:

- i. Greater ownership by communities over development processes.
- ii. Clearer vision for future plans and their implementation at community level.
- iii. Improved capacity to identify development priorities and solicit external support based on agreed policies and procedures.
- iv. Less duplication of services provision.
- v. Less conflicting services provided.

LLM is a tool used for improved decision-making based on monitoring of biophysical indicators that farmers themselves identify. LLM under NAPCOD was designed to monitor five indicators: livestock conditions, rainfall, rangeland conditions (especially grass), carrying capacity and bush density. Farmers themselves were responsible for the monitoring using field guides developed with the assistance from NAPCOD.

2.4.2 Country Pilot Partnership (CPP) Programme (2007-2012)

The CPP Programme was launched in 2007 as the umbrella for land degradation reversal in Namibia. It was a partnership of 9 ministries which include the Ministry of Environment and Tourism, Ministry of Agriculture, Water and Forestry, Ministry of Lands and Resettlements, Ministry of Regional and Local Government and Housing and Rural Development, Ministry of Mines and Energy, National Planning Commission, Ministry of Finance, Ministry of Fisheries and Marine Resources, and Ministry of Gender Equality and Child Welfare.

The CPP comprised a suite of interventions to address the underlying causes of land degradation in Namibia. The goal of the Programme was to combat land degradation using integrated cross-sectoral approaches which would enable Namibia to reach its MDG #7: “environmental sustainability” and, to ensure the integrity of dry land ecosystems and ecosystem services. The objectives were:

- a) to build and sustain capacity at systemic, institutional and individual level, ensuring cross-sectoral and demand-driven coordination and implementation of sustainable land management activities, and
- b) to identify cost effective, innovative and appropriate SLM methods which integrate environmental, social and economic objectives.

The programme embraced a programmatic approach, comprising linked projects such as Enhancing Institutional and Human Resource Capacity through Local Level Coordination of Integrated Rangeland Management and Support (CPP NAM CALLC), Adapting to Climate Change through the Improvement of Traditional Crops and Livestock Farming (CPP NAM CCA), Support / Adaptive Management (CPP NAM SLM SAM).

The CPP was fully endorsed by Government at all levels to align and integrate new SLM interventions. Oversight and guidance was provided at four levels, namely, at the highest decision-making level composed of Ministers in the Ministers Forum, Permanent Secretaries providing cross-sectoral oversight in the Governing Body, at the Technical Coordination and at decentralised regional steering committee levels. A summary of the CPP’s achievements are provided in the table below:

SUMMARY OF KEY ACHIEVEMENTS OF CPP PROGRAMME

- Integrated sustainable land management activities were being practised in 37 pilot sites covering over 47,000 km² and some 152,000 people. Through this at least 11 natural resource based enterprises with 62 full-time jobs and more than 250 part-time jobs and seasonal income generating activities were created.
- Unique partnership established between 9 ministries, civil society organisations, private sector, CBOs, and academic institutions. This was aimed at facilitating cross-sectoral coordination.
- Through CPP's Innovative Grants Mechanism small-scale innovative methods and models were piloted and tested at local level. Under this, 23 community-based organizations were supported with over N\$5 million to implement livelihood-based activities, which are socially, economically and ecologically beneficial for local people and their environment.
- Capacity building initiatives such as the Summer Landcare Programme, Young Professional Research Associate (YPRA) and the Young Professional Intern Programme were undertaken in partnership with the 2 main Namibian institutions of tertiary education. Under the YPRA, 17 grants were awarded, resulting in 5 PhD graduates and 12 Masters Degree graduates. Twenty one (21) young Namibians completed the Summer Land Care Programme training course under the Desert Research Foundation of Namibia and Gobabeb Training and Research Centre, while over 100 practitioners benefitted from applied field research at the Polytechnic of Namibia and the University of Namibia.
- A number of best practice activities were identified, piloted and upscaled: Olushandja Horticultural Association in the Omusati Region which made use of conservation and drip irrigation agriculture; guinea fowl rearing projects in Ohangwena Region; distribution and testing of improved goat breeds; manufacture and distribution of plastic granaries; and the production and subsidised sale of energy-saving Esy stoves.
- Support to 2 resettlement farms in Omaheke and Kunene regions with SLM activities. Through this initiative 336 resettled farmers on 6,000 ha were supported.
- A climate change community adaptation toolkit was produced and distributed to communities in the north-central regions. A manual for the sustainable management of communal rangelands has also been produced for dissemination to local farmers.

Table 1: Achievements of the CPP Programme (Source: MET, 2013).

2.4.3 Namibia's Community Based Natural Resources Management Programme (CBNRM)

The community based natural resources management programme (CBNRM) in Namibia was launched as a national programme in 1993 as a collaborative effort between the Government of Namibia and the United States Agency for International Development (USAID), which created the WWF LIFE Programme as the implementation agency in conjunction with local non-governmental organisations. The project emerged from one of the most significant policy shifts ever seen in Namibia with respect to wildlife management. This was simply a landmark decision by the government of a newly independent Namibia to devolve rights to local communities to manage and directly benefit from wildlife resources on their lands; a situation which until then, had been the preserve of the government and a minority commercial farming class in the pre-independence era.

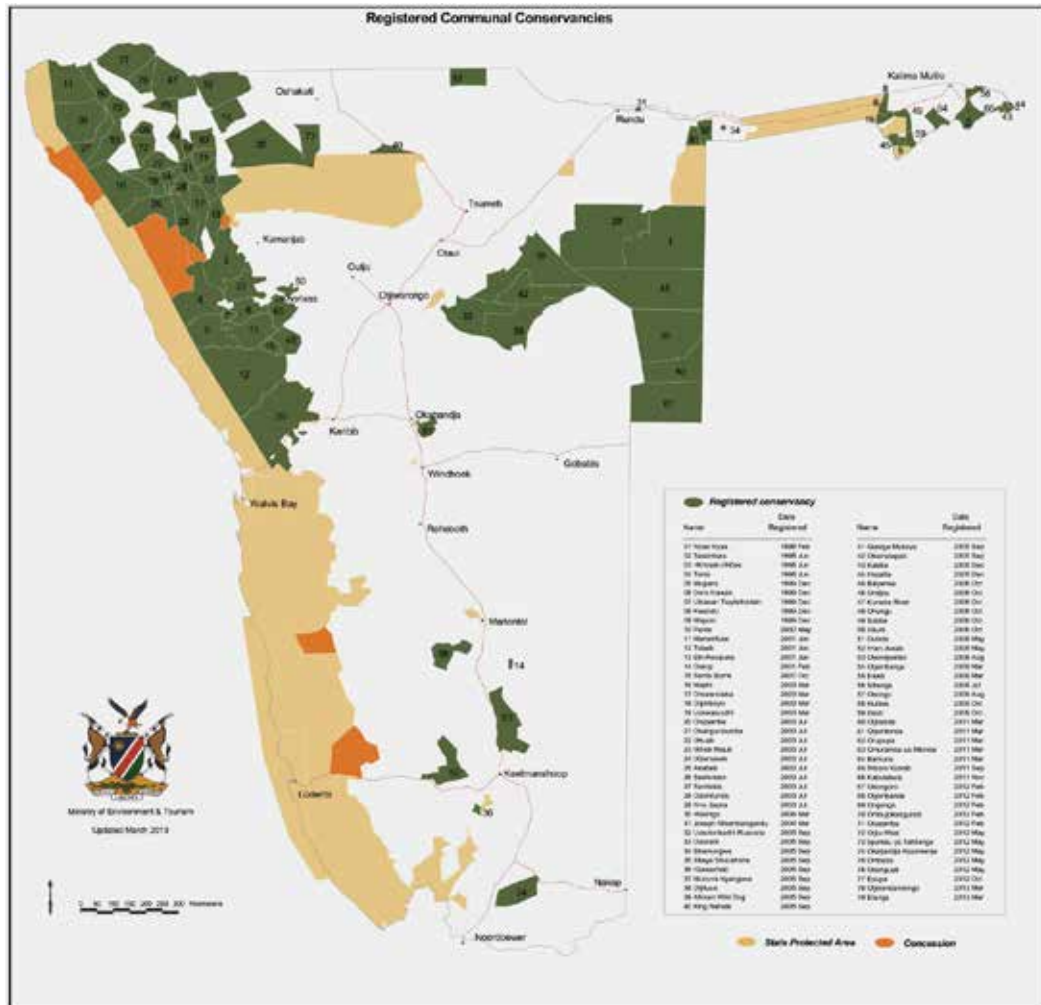


Figure 8: Map Registered Conservancies 2013 Source: www.nacso.org.na

By 2009, a total of 55 communal conservancies had been registered of which the first lot were registered in 1998. By 2013, the number had reached 79, four were awaiting registration and an additional 14 are in the making. At current rates and with the limits imposed by availability of communal land, CBNRM pundits have suggested that a maximum number of 100 registered conservancies appears to be the limit. Closely related to the wildlife conservancies in Namibia are Community Forests, which were enabled by Namibia’s Forest Act of 2001 and by 2013, the number of registered community forests stood at 32 and requests for new registrations were pending. What is significant about these developments is that by 2013, the area under conservancies and community forests constitutes a formidable 19% of Namibia’s total land surface; a fact that is important in any sustainable land programme and any national efforts to combat desertification.

From a sustainable land management and desertification perspective, wildlife conservancies and community forests are quite relevant because they both require the management of land to support wildlife habitats, create linkages with protected areas, provide a variety of wood and non-wood products and enable harvesting of both game and forest products on a sustainable basis. In

addition, the areas under management are much larger than individual farming units, particularly in Namibia's communal areas and this enables the sustainable management of land at scales that make ecological sense and facilitates the functioning of ecological processes. They are also suitable for facilitating large scale adoption of improved management practices since a large number of people, functioning through formal committees are involved in their management. The table below is a verbatim extract from the Namibian Association for CBNRM Support Organisation's (NACSO) 2012 annual report, which aptly illustrates the contributions of this sector towards sustainable natural resources management and improvements of rural livelihoods.

AT THE END OF 2012 THERE WERE:

- 77 registered conservancies
- 1 community conservation association in a national park
- 13 registered community forests
- 66 community rangeland management areas, and
- 3 community fish reserves in the communal areas of Namibia

COMMUNITY CONSERVATION FACTS:

- Covers over 159,755 km², which is about 52.2% of all communal land with about 172,000 residents
- Conservancies manage 158,247 km², which is about 19.2% of Namibia
- Community forests cover 4,385 km², much of it overlapping with conservancies
- Community rangeland management areas cover 4,004 km², much of it overlapping with conservancies
- From the beginning of 1991 to the end of 2012, community conservation contributed about N\$ 2.9 billion to Namibia's net national income
- During 2012, community conservation generated over N\$ 58.3 million for local communities
- Community conservation facilitated 6,477 jobs in 2012
- 55 conservancies had a total of 99 enterprises based on natural resources in 2012

Table 2: Achievement of Namibia's CBNRM at the end of 2012 (Source: NACSO 2012).

2.4.4 Bilateral and Multilateral Projects linked to Desertification, Land Degradation and Drought

Namibia has been one of the most successful countries in Africa in attracting funding for and executing land degradation-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 and will directly contribute to the implementation of NAP3. A list of the most significant projects and their areas of intervention is below:

NEW AND ONGOING PROJECTS ADDRESSING SUSTAINABLE LAND MANAGEMENT, DEGRADATION AND DESERTIFICATION IN NAMIBIA		
Project Title	Project Objective	UNCCD objectives & operational outcomes addressed
AGRICULTURE PROJECT OF THE MCA (2009-2014)	Reduce rural poverty through investments that achieve a sustainable increase in the economic performance of the agricultural sector. Includes (i) Land Access and Management; (ii) Livestock Support; and (iii) Indigenous Natural Products (INP).	2.1, 5.1, 5.5
SAREP (2010-2015)	Promote a trans-boundary approach to resource management and climate resilience to preserve the Okavango basin and provide sustainable and equitable development opportunities for its inhabitants	2
TNC (2012-2015) (GEF)	To enhance Namibia's capacity to better deal with climate change risks and create opportunities at individual, institutional and systemic levels.	3.1, 3.2, 3.4
BMCC Project (2013-2020 - MET/GIZ)	i. Capacity development for community-based natural resource management in a changing climate in selected pilot regions ii. Cross-sectoral mainstreaming of biodiversity, adaptation to climate change and a green economy	2, 3, 4
PASS Project (2014-2019) (GEF)	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	5.1, 5.2, 5.4
NAFOLA (2014-2019) (GEF)	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.	3.1, 3.2, 3.4
SCORE (2014-2019) (GEF)	Strengthen adaptive capacity and reduce the vulnerability of 4,000 households, 80% of which are female-headed and 75 schools, to droughts and floods in Northern Namibia by scaling up climate-smart livelihoods.	3.1, 5
Kalahari Namib Project (2014-2018)	Support communities and policy makers in Botswana, Namibia and South Africa to effectively implement and upscale SLM in the Molopo-Nossob catchment area and thereby contribute to restoration of the integrity and functioning of the entire Kalahari-Namib ecosystem.	2.1, 2.3,

Table 3: New and ongoing projects addressing SLM and UNCCD objectives in Namibia.

2.4.5 Funding Mechanisms for Sustainable Land Management in Namibia

Namibia has two functional conservation or environmental trust funds as well as a bank dedicated to agricultural development in Namibia – the Agricultural Bank of Namibia. The Game Products Trust Fund (GPTF) supports conservation across Namibia, particularly community-based conservation initiatives or programmes. The Environmental Investment Fund (EIF), which was officially launched in 2012, is an innovative financing mechanism for the environment, in line with other environmental funds in Africa and elsewhere. It raises funds locally and its sources range from grants to environmental levies on consumer products, which have a direct or indirect bearing on the environment through some form of emissions or environmental ‘footprint’. The EIF programme areas encompass conservancies, land use planning, renewable energy, waste management, pesticide use, green technology, research and awareness. This programme portfolio makes it a natural partner to any process in Namibia to promote sustainable land management and combat desertification.

It is noteworthy that the adverse economic impact of bush encroachment on livestock production has also been recognised in the financial sector. As a result, the First National Bank of Namibia and the state-owned Agricultural Bank of Namibia introduced loan products for de-bushing for freehold farmers in 2014.

2.5 Key Lessons Learned

Namibia’s pursuit of sustainable land and natural resources has delivered a number of key lessons learned, which will be further built on through this Third National Action Programme:

- i. A variety of good practices in the area of sustainable land management suited to Namibia’s variable environment have been identified through previous National Action Programmes and other interventions including:
 - The use of water efficient practices in agriculture, particularly drip irrigation, which has been tested mainly in the Omusati Region in northern Namibia.
 - The establishment of Livestock Marketing Committees in rural areas with a view to use improved marketing and access to markets as an incentive to improve the management of livestock and instill a more positive attitude to de-stocking during drought.
 - Community-Based Rangeland and Livestock Management - this aimed to enhance perennial grasses and overall rangeland conditions through rotational grazing, minimising animal impact and herding of livestock. This was particularly practised through the CPP Programme in north-west Namibia and through the Millennium Challenge Account.
 - Improved livestock productivity and ecosystem health has been achieved with the introduction of indigenous and hybrid breeds of livestock. This area requires further research and support.
 - Small and medium enterprises have been developed linked to the sustainable use

of and value addition to natural resources. However the marketing of farm and veld products needs to be an integral part of programme planning. It is not enough to improve production capacity and techniques of communities; value addition and development of the value chain for products requires equal attention and support.

- Individual Capacity Building - a number of post graduate scholarships were offered to students in various aspects of SLM
- ii. The wise management of Namibia's land and natural resources is dependent on the ability of land users to derive benefits therefrom. This has been demonstrated through the CBNRM Programme, which has put incentives in place for the conservation of wildlife. Similar incentives should be put in place for land users and communities to benefit fair and equitably from value addition to their natural resources and the sale of livestock.
 - iii. There are good opportunities for empowering women in the area of sustainable land management. The increased use of participatory approaches in the design and implementation of activities (such as Community Visioning exercises) is opening up opportunities for women to become centrally involved in these activities. Women are also increasingly represented on devolved management structures such as conservancy committees, HIV/AIDS committees, FIRMs, water point committees and other CBOs. It is strongly recommended for interventions under this National Action Programme to be gender sensitive and enable the full empowerment of women.
 - iv. Namibia has in place a relatively comprehensive policy framework for sustainable land management. NAP3 must dedicate itself to the effective implementation of this framework, especially through improved sectoral coordination. Until now, coordination arrangements for sustainable land management have been temporary mechanisms (NAPCOD and CPP programmes). NAP3 must put a permanent institutional structure in place to ensure its effective implementation.
 - v. Namibia has considerable experience, through the Innovative Grants Mechanism, Small Grants Programme and Environmental Investment Fund, in supporting the development of community-based Small and Medium Enterprises. Scaling up best practices requires concerted efforts within government departments and as an example it was recommended that a SME Financial Facility within an existing bank could be a useful mechanisms to finance adoption of best practices should be set up. This however requires innovative marketing to convince conservative financial institutions to support small farmers and equally innovative ways to encourage farmers to adopt business principles in farming.
 - vi. Capacity building continues to be required at the systemic, institutional and individual levels.
 - vii. Inadequate implementation mechanisms and monitoring systems have been identified as the main weakness in terms of the SLM policy framework. More emphasis should be directed towards strengthening systemic and institutional capacities to effectively implement policies and deliver services in a more coordinated and cross-sectoral approach.

3. Implementing International Best Practices and Developments at Home

A number of developments at the international level have given increased importance to issues of DLDD. Namibia has followed closely these developments, which have also served to shape and inform NAP3. The key developments are noted in the following sections.

3.1 The Adoption of the Global UNCCD Strategy (2008-2018)

In 2007, the UNCCD adopted a 10-Year Strategy (2008-2018) to enhance implementation of the Convention with an overall objective “to forge a global partnership to reverse and prevent desertification/land degradation and to mitigate the effects of drought in affected areas in order to support poverty reduction and environmental sustainability”.

The Strategy contains four strategic objectives, as well as five operational objectives. The four strategic objectives are:

- i. To improve the living conditions of affected populations
- ii. To improve the condition of affected ecosystems
- iii. To generate global benefits through effective implementation of the UNCCD
- iv. To mobilize resources to support implementation of the Convention through building effective partnerships between national and international actors

The five operational objectives are each linked to thematic areas as portrayed in the table below:

Operational Objective	Thematic Area
To actively influence relevant international, national and local processes and actors in adequately addressing desertification/land degradation and drought-related issues.	Advocacy, awareness raising and education
To support the creation of enabling environments for promoting solutions to combat desertification / land degradation and mitigate the effects of drought.	Policy framework
To become a global authority on scientific and technical knowledge pertaining to desertification / land degradation and mitigation of the effects of drought.	Science, technology and knowledge

To identify and address capacity-building needs to prevent and reverse desertification / land degradation and mitigate the effects of drought.	Capacity building
To mobilise and improve the targeting and coordination of national, bilateral and multilateral financial and technological resources in order to increase their impact and effectiveness.	Financing and technology transfer

Table 4: Summary of operational objectives of the UNCCD Global Strategy.

3.2 Desertification, Land Degradation and Drought post Rio+20 Summit

The Future We Want Outcome Document from the Rio+20 Summit in 2012 resolved to strengthen the UNCCD and called for urgent action to reverse land degradation and to achieve a land degradation neutral world.

It recognised the need for urgent action to reverse land degradation and the achievement of a land degradation neutral world in the context of sustainable development. The document also resolves to support and strengthen the implementation of the UNCCD, and to take coordinated action (nationally, regionally and internationally) in accordance with the UNCCD to monitor globally land degradation and restore degraded lands in arid, semi-arid and dry sub-humid areas.

The Future We Want further stressed the importance of the further development and implementation of scientifically based, sound and socially inclusive methods and indicators for monitoring and assessing the extent of desertification, land degradation and drought, as well as the importance of efforts under way to promote scientific research and strengthen the scientific base of activities to address desertification and drought in accordance with the UNCCD.

Namibia embraces each of these outcomes from the Rio+20 Summit, in particular to achieve Land Degradation Neutrality and to ensure Zero Net Land Degradation by 2030 as a prerequisite for assuring water, food and energy security, alleviating poverty and to adapt to the impacts of climate change.

In follow up to Rio+20, DLDD has also been included in the post-2015 sustainable development goals, which highlights the importance of tackling DLDD at both the national and global levels.

3.3 The Namib Declaration from UNCCD COP11 in Windhoek

Decision 36 from UNCCD COP 11 in 2013 adopted the Namib Declaration, which sets out Namibia's vision for strengthening the implementation of the UNCCD at national and global levels. It includes

the following elements:

1. Strengthening UNCCD leadership for the future we want
2. Addressing drought mitigation as a matter of priority
3. Advancing the science-policy interface
4. Focusing on local Communities
5. Engaging with the private sector
6. Empowering women in SLM

This Third National Action Programme seeks to give effect to the Namib declaration and the above elements are strongly reflected in the framework of the National Action Programme in section 4.

3.4 Relevant African Union Decisions

Given the special significance of the UNCCD to African countries, there is strong political will for Africa to show leadership in its implementation. This is evidenced by a number of recent decisions.

Decision 479 from the 21st Ordinary Session of the AU Summit from 25-26th May 2013 on the need to strengthen African leadership in the UNCCD process, urged Member States to place desertification, land degradation and drought related issues at the centre of the debate on the Post-2015 Development Agenda, and recognize it as one of the sustainable development goals, particularly the concept of Zero Net Land Degradation.

Decision 492 of the 22nd Ordinary Session of the AU Summit from 30-31 January 2014 contains a number of pertinent resolutions including:

- i. Renewing its commitment to the Namib Declaration
- ii. Endorsing the establishment of an African working group on desertification and sustainable land management
- iii. Requesting the Commission to review the African coordination mechanism in place in order to strengthen it and to improve Africa's engagement in UNCCD processes

3.5 Promoting Synergies with National Instruments to implement the United Nations Conventions on Climate Change (UNFCCC) and Biodiversity (CBD)

DLDD issues are closely linked to the conservation and sustainable use of biodiversity as well as climate change adaptation and mitigation in Namibia, especially because of its severe aridity.

The need for synergies is therefore highlighted here as well as in Namibia's Second National Biodiversity Strategy and Action Plan (2013-2022) and the National Climate Change Strategy and Action Plan (2013-2020).

DLDD are key drivers of biodiversity loss 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. Agriculture, including livestock and crop farming, is a particularly vulnerable sector to climate change. With rangelands for cattle ranching and small-stock farming covering approximately 71% of Namibia's land area (Mendelsohn 2006), their wise management is particularly important for biodiversity conservation.

Unsustainable land management practices have been identified as one of the major threats to biodiversity, and need to be eliminated so that land maintains its productivity and ecosystem breakdown and species loss is avoided over the long-term. This is likely to be best achieved through the ecosystem approach to adaptation, which includes the sustainable management, conservation and restoration of ecosystems to provide services that help people adapt to the adverse effects of climate change.

Given the heavy dependence of rural communities on wood for cooking and lighting needs, the dissemination of solar energy infrastructure and fuel efficient technologies such as the Ezy-Stove cooker are important climate change mitigation strategies, which will also contribute to reduced deforestation and maintenance of ecosystem integrity.

Further synergies will be explored in the areas of advocacy, awareness and education as well as science, research and technology and capacity development.

4. Framework of the Third National Action Programme to Combat Desertification, Land Degradation and Drought

4.1 Methodology

The following key activities formed the basis of the methodology to develop Namibia's Third National Action Programme:

- i. Desktop review of relevant documentation linked to sustainable land management with particular focus on key processes and programmes that Namibia has put in place to address land degradation and desertification and the identification and description of key gaps or weaknesses which should be addressed
- ii. Identification of draft priority intervention areas
- iii. National Workshop to work through draft priority intervention areas and to assess alignment with the UNCCD Strategy (2008-2018)
- iv. High level meetings between MET and MAWF and MET and MLR to receive further inputs into the draft NAP3 and to strengthen political will and commitment
- v. Revision of draft NAP3 based on comments and inputs received from high level meetings
- vi. Final National Workshop to present NAP3 for final inputs on interventions as well as the proposed institutional arrangements for implementation
- vii. Peer Review of final draft document through national and international experts
- viii. Approval of NAP3 by Cabinet

4.2 Objective of NAP3

NAP3 has the following objective:

"To prevent and reverse desertification and land degradation in affected areas and mitigate the effects of drought in Namibia in support of poverty reduction and environmental sustainability".

4.3 Key Outcomes of NAP3

NAP3 contains six main desired outcomes, which cover the themes of advocacy awareness and education; policy and institutional framework for DLDD; monitoring system for DLDD; on-the-ground

action to prevent and reverse land degradation; financial support; and research and development. The outcomes are as follows:

- i. By 2018, information on the risks Namibia faces and the need to combat desertification at a national scale is produced, made easily accessible and actually used by policy-makers, land managers, research and educational institutions.
- ii. Policy and institutional frameworks are effectively implemented and strengthened to address desertification, land degradation and drought by 2024.
- iii. A functional DLDD Monitoring System and supportive processes are in place by 2018 for Namibia to move towards land degradation neutrality.
- iv. Degradation and desertification processes in Focal Landscapes are halted and reversed by 2024, and affected communities and ecosystems strengthened to mitigate the impacts of drought.
- v. Financial lending and grant making facilities are in place and supporting communities and small farmers to implement sustainable land management by 2017.
- vi. Research on aspects of sustainable land management and climate change science in support of adaptation and mitigation are mainstreamed in research and tertiary educational institutions and extension services by 2020.

4.4 Key Outputs per Outcomes

4.4.1 Outcome 1: By 2018 information on the risks Namibia faces and the need to combat desertification at a national scale is produced, made easily accessible and actually used by policy makers, land managers, research and educational institutions.

This objective of this outcome is to actively influence relevant international, national and local processes and actors in adequately addressing DLDD issues.

In the area of advocacy, awareness and education, and given its aridity, the MET will advocate the promotion of SLM to tackle DLDD and raise the awareness of the public on the long-term dangers of unsustainable land management and options for effective climate change mitigation and adaptation. These issues should not only be in the curricula of schools and training institutions but must be made available to the general public through multi-media and information and communication technology campaigns.

Policy makers, land managers, research and educational institutions will be the main target audiences for advocacy, awareness and education on SLM. Namibia will continue to share its experiences in combating DLDD through the UNCCD and regional fora.

Outputs relevant to Outcome 1

- i. Policy advocacy papers on DLDD produced and publicised, and gender-based dimensions mainstreamed into all DLDD-related programmes and policy issues.
- ii. Annual DLDD newsletter distributed to all educational and research institutions in Namibia.
- iii. Reports on the management, rehabilitation and recovery of focal landscapes.
- iv. Information from the DLDD Monitoring System publicised, distributed, and discussed in public fora.
- v. Publication of climate change scenarios and risks for Namibia and their implications on local adaptation needs.

4.4.2 Outcome 2: Policy and institutional frameworks are effectively implemented and strengthened to address desertification, land degradation and drought by 2024

The objective of this outcome is to support the creation of an enabling environment to promote solutions to combating DLDD.

Namibia has in place a relatively comprehensive policy framework for SLM. The focus of this outcome is the effective implementation of this framework, especially through improved sectoral coordination. Until now, coordination arrangements for SLM have been temporary mechanisms (NAPCOD and CPP programmes). NAP3 will put a permanent institutional structure in place to ensure the effective implementation of NAP3 and SLM in Namibia and to promote the use of incentives to foster better land husbandry, technology adoption and to achieve cross-sector collaboration. The strengthening of local governance structures linked to SLM is also a vital component of this outcome.

Outputs relevant to Outcome 2

- i. Permanent institutional structure in place to further cross-sector collaboration on implementation of SLM programmes and initiatives for combating desertification.
- ii. Integration of NAP3 and broader promotion of sustainable land management into Namibia's 5th National Development Plan (2018-2023).
- iii. Local level governance structures linked to sustainable land management further strengthened and empowered – such as conservancy committees, community forests, communal land boards, basin management committees, water point associations, livestock marketing committees etc.
- iv. Critical review undertaken of implementation of the National Drought Management Policy and Strategy (1997).

4.4.3 Outcome 3: A functional DLDD Monitoring System and supportive processes are in place by 2018 for Namibia to move towards land degradation neutrality

The overall objective of this outcome is to establish a functional DLDD monitoring system to facilitate Namibia's national level implementation of the Land Degradation Neutrality concept.

It has been observed that there is a lack of rigorous long term scientific monitoring and measurement of land degradation and its different manifestations. There is thus limited knowledge of the current extent and trends of land degradation in the country, with different variables of land degradation being measured by different institutions with limited collaboration, and other important variables such as soil health not being systematically monitored. The effectiveness of Namibia's Early Warning Systems for drought has also been called into question by the impacts of the drought of 2013. The DLDD monitoring will seek to bring together these different elements in a comprehensive GIS-based system, which can also inform the regional and global levels of DLDD trends in Namibia.

Outputs relevant to Outcome 3

- i. Institutional collaborative structure in place to collect data and information on DLDD and the health of land in Namibia – including variables such as soil moisture, soil fertility, forest cover changes, rangelands, crop yields, livestock productivity, temperature, rainfall, and flooding patterns.
- ii. Target setting and implementation of the Land Degradation Neutrality concept at national level.
- iii. An information gathering protocol and a functional database for storage and retrieval of data and information on the state and degradation of land and its natural resources.
- iv. A shared GIS-Internet Platform (database) for stakeholders to upload and share data and information, administered by a central designated authority.
- v. Publication of and access to data on trends in thematic areas (forest cover, bush encroachment, range conditions, droughts, floods) – and interpretation of the trends in actionable terms.

4.4.4 Outcome 4: Desertification and land degradation processes in Focal Landscapes are halted and reversed by 2024, and affected communities and ecosystems strengthened to mitigate the impacts of drought

The objective of this outcome is to address issues of DLDD in a manner that is feasible and at scales that will yield both national and global benefits. At least five 'Focal Landscapes' will be identified to promote land management practices that are consistent with its policies and those articulated under UNCCD - based on local experiences from NAPCOD, CPP and other past initiatives as well as

from global best practice. The focal landscapes will showcase Namibia's practical on-the-ground efforts to combat DLDD and promote SLM. As such, they will need to be characterised in both bio-physical and socio-economic terms, to provide baseline data and information against which the success of management interventions will be monitored and evaluated.

For purposes of this document, an operational definition of a landscape is a large area of land on which a number of land uses are operational and in which the land and its natural resources are in various stages of degradation. With respect to Namibia such a landscape may contain some or all of the following features:

- i. Communal farm land which is under cultivation – this could be a mixture of rain-fed and irrigated cropping but with land degradation challenges.
- ii. Pastures and woodlands which are not under any formal management plans – also with ongoing degradation processes.
- iii. Resettlement Farm.
- iv. Presence of a community based wildlife conservancy or a community forest.
- v. A strategic wildlife corridor which is not gazetted but under multiple use – with threats of degradation.
- vi. An area which is under 'bush encroachment'.
- vii. An area adjoining or contiguous with a formally protected area.

Outputs relevant to Outcome 4

- i. At least 5 focal landscapes in Namibia are identified for best practice SLM and rehabilitation, representing a mixture of land uses and including at least one bush encroached site.
- ii. Publication of baseline environmental and socio-economic data for each focal landscape to aid and guide future monitoring. This will include comprehensive vulnerability assessment reports, particularly with regard to climate change.
- iii. Upscaling of best SLM practices within and around focal landscapes (drip irrigation, sustainable basin-level water resources management, conservation agriculture, improved rangeland management, community based conservation etc) for immediate implementation. This will draw upon the achievements of past initiatives in Namibia namely the CPP and NAPCOD.
- iv. Empowerment plans for women and vulnerable groups, linked to restoration programmes in the focal landscapes.
- v. Programmes to improve the structures and functions of local institutions (Conservancy and Community Forestry Committees, Community-based Water Point Management, Integrated Water Resources Management at basin level, Forums for Integrated Resource Management or FIRMS, Livestock Marketing and Range Management Committees) who will be partners in the management and restoration of the 'Focal Landscapes'.

- vi. Research and publication of baseline land use and socio-economic data for each focal landscape to aid and guide future monitoring. Empowerment plans for women and vulnerable groups in the focal landscapes.

4.4.5 Outcome 5: Financial lending and grant making facilities are in place and supporting communities and small farmers to implement sustainable land management by 2017.

The objective of this outcome is to mobilize and improve the targeting and coordination of financial resources from all sources for SLM to increase their impact and effectiveness, particularly at the local level.

Namibia must continue to mobilise funds both multilaterally and bilaterally to upscale the good practices identified through the NAPCOD and CPP Programmes, particularly to empower rural populations and women who are most vulnerable to degradation induced poverty and ensure that issues of biodiversity conservation and sustainable use practices are promoted.

With regard to innovative funding, Namibia already boasts of the Game Products Trust Fund, the Environmental Investment Fund and the Agricultural Bank of Namibia. There is a clear need to mainstream support to SLM interventions through specific windows within these funds.

Avenues to engage the private sector in financing also need to be explored including support from commercial banks to interventions such as conservation agriculture and de-bushing, and insurance companies to buffer the impacts from drought events.

Outputs relevant to Outcome 5

- i. A competitive grants schemes for individual farmers and farmer associations or groups.
- ii. Strategy on farmer support financing including low interest loans for SLM and improved production technologies and practices.
- iii. A forum for the promotion of financing of improved land and natural resources management – led by an institution such as the Environmental Investment Fund or AgriBank.
- iv. A dedicated government fund for multi-sector projects associated with SLM, in effect a Statutory SLM Fund.

4.4.6 Outcome 6: Research on aspects of sustainable land management and climate change science in support of adaptation and mitigation are mainstreamed in research and tertiary educational institutions and extension services by 2020.

The objective of this outcome is to further research linked to SLM through tertiary institutions and the MAWF and to promote the adoption of this research on-the-ground through extension services and tertiary institutions. It is particularly linked to innovative technologies and practices for SLM and climate change adaptation as well as the monitoring of DLDD issues and the different manifestations of land degradation.

Namibia's National Commission on Research, Science and Technology (NCRST), which 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, will have a key role to play in the achievement of this outcome.

Outputs relevant to Outcome 6

- i. An assessment report on required capacities to implement a national programme to promote SLM and combat desertification.
- ii. A technical skills development plan to improve national capacity for research, monitoring and implementation of SLM and anti-desertification programmes (Examples: climate change modelling and scenario building, GIS and Remote Sensing, stress physiology in crops, animal and plant breeding).
- iii. A research plan to assess the sensitivity and response of Focal Landscapes to rehabilitation programmes – (Research themes – climate change and stress tolerance in crops and animals, water and nutrient efficiency in crops, climate induced movement of flora and fauna, development of degradation indices, modelling economic aspects of degradation, desertification and adoption of improved technologies).
- iv. Training modules on climate change and SLM issues developed for inclusion into the curricula of tertiary institutions of Namibia.
- v. Institutional partnerships for research and training created and existing ones strengthened.

5. Institutional Arrangements for Implementation of NAP3

NAP3 will be implemented over a 10 year period from 2014-2024. The 10 year period is considered realistic for Namibia to put the necessary structures in place to oversee and give effect to the effective implementation of NAP3. It will also be an optimum time period to attract and implement projects to fulfil the outcomes and outputs outlined in section 4.

5.1 Key Stakeholders for Implementation of NAP3

As focal point to the UNCCD, the Ministry of Environment and Tourism (MET), through the Department of Environmental Affairs (DEA), will coordinate the elaboration of NAP3.

A National Sustainable Land Management Technical Committee will be established to oversee the implementation of NAP3, including its monitoring and evaluation. The committee will also serve to galvanise concerted and holistic action among government agencies and their partners on issues of sustainable land management. The committee will follow the cross-sectoral coordination approach utilised by NAPCOD and CPP and draw representatives from some of the institutions listed in the table below:

PARTNERS FOR THE IMPLEMENTATION OF THE NATIONAL ACTION PROGRAMME	
INSTITUTION / ORGANISATION	SPECIFIC REMARKS
Ministry of Environment and Tourism (MET)	The MET is the ministry with the mandate to promote sustainable development and is also the national focal point to the Rio Conventions.
National Planning Commission (NPC)	Is the highest planning authority which can mainstream policies on combating DLDD and also allocate budgets.
Ministry of Agriculture, Water and Forestry (MAWF)	Is the key ministry on land use and land management and key policies such as those on Green Schemes, drought, bush encroachment and others.
Ministry of Regional and Local Government and Housing and Rural Development (MRLGHRD)	Is an important partner to adopt national policies at local levels and help mobilise local communities. MRLGHRD is also responsible for bringing development to the rural areas.
Ministry of Lands and Resettlement (MLR)	Is a key partner in land use planning and land allocations for development as well as for supporting resettlement partners.
Ministry of Gender Equality and Child Welfare (MGECW)	The Ministry was one of the partners in the CPP and are important in promoting women in development & environment.
Sustainable Development Advisory Council (SDAC)	The SDAC is a newly constituted body to advise the Minister of Environment and Tourism and has the potential to play a significant advocacy role within and outside government.

Community-based organisations (CBOs)	Are already proven partners in the Community Based Natural Resources Management Programme in Namibia.
Private sector	The private sector is a valuable partner in financing value-added manufacturing, tourism related enterprises, technology adoption and marketing. It is important that commercial farmers are also brought on board through the Namibia Agricultural Union. Green Scheme operators are also important stakeholders, as are private insurance companies, which need to be mobilised in the area of drought mitigation.
Non-governmental Organisations/ Community Support Organisations (NGOs/ CSOs)	NGOs provide valuable support to rural development, conservation and nature based enterprises. They are also a powerful lobby for environment at all levels. In Namibia they are represented by organizations such as NACSO, DRFN, IRDNC, NNF, WWF, NDT, Komeho and others.
National Commission on Research, Science and Technology (NCRST)	The NCRST is responsible to coordinate, monitor and supervise research, science and technology and to provide policy guidance to the research, science and technology innovation systems in Namibia.
Academia	UNAM and the Polytechnic of Namibia are particularly important to train professional land and resource managers, conduct research and can inculcate awareness on desertification and SLM in their students.
Namibia Statistics Agency	The institution already collects socio-economic data and can be instrumental to help organise data on environmental monitoring the links between socio-economic and environmental trends.
Donor Agencies	Donor agencies such as the GIZ and UNDP are particularly important partners in the implementation of projects linked to sustainable land management and natural resources management.

Table 5: List of national partners for the implementation of NAP3.

The Division of Multilateral Environmental Agreements from the Department of Environmental Affairs will serve as Secretariat to the Committee, facilitate programme implementation at the various project levels, communicate with and supervise project implementers and consultants, and compile progress reports from the various project activities and condense these reports for submission to appropriate authorities.

5.2 Monitoring and Evaluation of NAP3

The monitoring and evaluation of NAP3 will follow a practical approach and will be coordinated through the Division of Multi-Lateral Environmental Agreements under the MET, with support from

the cross-sectoral Sustainable Land Management Committee. All of the activities prioritised in NAP3 are to be implemented by institutions represented on the Sustainable Land Management Committee, which should facilitate the process of coordination, monitoring and evaluation.

It is envisaged that the different key institutions represented on the Sustainable Land Management 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 outcomes of NAP3. The MET will take responsibility to compile these reports, which will provide a baseline on the status of implementation, serve as a guide for future strategic planning, and contribute information towards Namibia's national reporting to the UNCCD in 2016, 2018, 2020, 2022 and 2024.

An independent mid-term evaluation of NAP3 will be undertaken in mid-2018. This will also provide an assessment of Namibia's contribution towards the UNCCD Strategy, which comes to an end in 2018. It is envisaged that the mid-term evaluation will also provide recommendations on possible adjustments and amendments for the remaining period of NAP3, as well as the financial needs for the remaining period. A final independent evaluation will be undertaken in 2024, which will also provide lessons and direction for the development of a fourth NAP as appropriate.

5.3 Estimated 5-year Budget for National Action Programme of Namibia

The budget estimates listed here are for an initial 5-year period (2014 -2019), which will be reviewed after a comprehensive assessment of needs for the remaining period of NAP3 based on what has been achieved in the first five years. For the first 5-year period, the required total budget is estimated at N\$51.3 million, of which 63.5 % will be devoted to actual restoration and SLM programmes in the five focal landscapes and 16.4 % on programme coordination, including the monitoring and evaluation of NAP3. The table below provides a summary of the 5-year budget for the National Action Programme.

OUTCOME OF THE NATIONAL ACTION PROGRAMME	5-YEAR BUDGET IN NAMIBIA DOLLARS
1. Awareness creation and public participation	2,000,000
2. Policy & Institutional Framework	1,850,000
3. Environmental / ecological monitoring system	2,350,000
4. Work on 5 "Focal Landscapes"	33,000,000
5. Financial framework for SLM	1,300,000
6. Research and Education	2,300,000
7. Programme Coordination	8,500,000
8. TOTAL 5-YEAR COSTS	51,300,000

Table 6: Summary of estimated 5-year budget for NAP3.

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Outcome 1: By 2018, information on the risks Namibia faces and the need to combat desertification at a national scale is produced, made easily accessible and actually used by policy-makers, land managers, research and educational institutions.		INDICATORS	KEY AGENCIES	INDICATIVE 5-YEAR BUDGET N\$
UNCCD Operational Objectives Addressed: Operational Objective 1 on Advocacy, awareness raising and education, Outcomes 1.1 to 1.3 on communication, public and civil society participation, Operational Objective 1 Advocacy, awareness raising and education:				
OUTPUTS	ACTIVITIES	INDICATORS	KEY AGENCIES	INDICATIVE 5-YEAR BUDGET N\$
Policy advocacy papers on Sustainable Land Management (SLM) produced and publicised by Technical Committee on SLM	Acquire and translate data from environmental monitoring programmes into information for public distribution Production of 'state of environment reports' and key policy messages Engage with media to publicise policy advocacy materials and promote best practices Develop popular articles from published scientific research as inputs for advocacy on environmental management and	Reports on wildlife population trends, deforestation rates, crop yields, fire severity and frequencies by 2015 Launch of 'State of Environment' Reports by 2016 Media articles, distribution lists	MET, MAWRD, MFMIR, DRFN, NNF, MEDIA, TRADITIONAL AUTHORITIES, FARMERS UNIONS, MEAT BOARD, AGRA, DEVELOPMENT & COMMERCIAL BANKS	450,000
Annual desertification, land degradation and climate change adaptation newsletter distributed to all educational and research institutions in Namibia	Produce policy position papers on SLM and initiatives such as 'climate smart agriculture' and promote their inclusion in planning documents such as NDP 5 and in sector plans - agriculture, forestry, lands and resettlement	SLM in NDP and land use sector programmes in the next NDP Version 2018?	MET, NPC	250,000

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Reports on the management, rehabilitation and recovery of 'focal landscapes'	Set up M and E programmes and action programmes on the focal landscapes	Annual reports on Focal Landscapes	MET, ACADEMIA, LOCAL GOVT, TRADITIONAL AUTHORITIES	400,000
Simplified 'State of the Environment Reports' produced, discussed in public fora, publicised and distributed Publication of climate change scenarios and risks for Namibia their implications on local adaptation needs	Commission papers to provide information on degradation risks and promote climate adaptation policies in the key sectors of Namibia - Agriculture, Water, Infra-structure, Environment Namibia	Climate change adaptation meetings and climate change adaptation plans in sector programme documents by 2016 and in future NDPs	MET, ACADEMIA, NNF, DRFN	400,000
	Host annual discussion fora on climate change adaptation Prepare reports on climate change implications for the land and natural resource sectors of Namibia	Dissemination of reports by 2015	MET, MAWFRD NACSO	150,000

Annex I: Tables of Key Outcomes, Outputs and Indicative Activities of the Third National Action Programme

Outcome 1: By 2018 information on the risks Namibia faces and the need to combat desertification at a national scale is produced, made easily accessible and actually used by policy makers, land managers, research and educational institutions.				
UNCCD Operational Objectives Addressed: Operational Objective 1 on Advocacy, awareness raising and education, Outcomes 1.1 to 1.3 on communication, public and civil society participation, Operational Objective 1 Advocacy, awareness raising and education:				
OUTPUTS	ACTIVITIES	INDICATORS	KEY AGENCIES	INDICATIVE 5-YEAR BUDGET N\$
Policy advocacy papers on Sustainable Land Management (SLM) produced and publicised by Technical Committee on SLM	Acquire and translate data from DLDD monitoring system into information for public distribution Production of 'state of land degradation reports' and key policy messages Engage with media to publicise policy advocacy materials and promote best practices Develop popular articles from published scientific research as inputs for advocacy on DLDD issues	Reports on wildlife population trends, deforestation rates, crop yields, fire severity and frequencies by 2015 Launch of 'State of Land Degradation' Reports by 2018 Media articles, distribution lists	MET, MAWF, MFMR, DRFN, NNF, MEDIA, TRADITIONAL AUTHORITIES, FARMERS UNIONS, MEAT BOARD, AGRA, DEVELOPMENT & COMMERCIAL BANKS	450,000
Annual DLDD newsletter distributed to all educational and research institutions in Namibia	Produce policy position papers on SLM and initiatives such as 'climate smart agriculture' and promote their inclusion in planning documents such as NDP 5 and in sector plans - agriculture, forestry, lands and resettlement	SLM in NDP and land use sector programmes in NDP5	MET, NPC	250,000

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<p>Reports on the management, rehabilitation and recovery of 'focal landscapes'</p>	<p>Set up monitoring and evaluation programmes and action programmes on the focal landscapes</p>	<p>Annual reports on Focal Landscapes</p>	<p>MET, ACADEMIA, LOCAL GOVT, TRADITIONAL AUTHORITIES</p>	<p>400,000</p>
<p>Simplified 'State of Land Degradation Reports' produced, discussed in public fora, publicised and distributed</p> <p>Publication of climate change scenarios and risks for Namibia their implications on local adaptation needs</p>	<p>Commission papers to provide information on degradation risks and promote climate adaptation policies in the key sectors of Namibia - Agriculture, Water, Infra-structure, Environment Namibia</p> <p>Host annual discussion fora on climate change adaptation</p> <p>Prepare reports on climate change implications for the land and natural resource sectors of Namibia</p>	<p>Climate change adaptation meetings and climate change adaptation plans in sector programme documents by 2016 and in future NDPs</p>	<p>MET, ACADEMIA, NNF, DRFN</p>	<p>400,000</p>
		<p>Dissemination of reports by 2015</p>	<p>MET, MAWFRD NACSO</p>	<p>150,000</p>

Outcome 2: Policy and institutional frameworks are effectively implemented and strengthened to address desertification, land degradation and drought by 2024.

UNCCD Objectives Addressed: Operational Objective 2 on Policy Framework to create an enabling environment. Relevant to all the outcomes 2.1, 2.3, 2.4 and 2.5 on assessing and addressing policy barriers, integration of SLM in national policies and programmes, and creating synergies between this plan and related conventions. Outcome 2.2 is addressed under Outcome 3.

OUTPUTS	ACTIVITIES	INDICATORS	KEY AGENCIES	INDICATIVE 5-YEAR BUDGET N\$
Establishment of a permanent SLM Technical Committee	Development of cross-sector collaboration models for DLDD and submission to the NPC. Examples: Create an inter-sector Technical and Policy Coordination Committees on DLDD and Climate Change 2014 Appointment of Committee Members, development of TORs and results-based programme of work	Official reports on committee deliberations reports and special technical and policy papers 2015	MET, MAWF, MLR, MRLGHRD, ACADEMIA, CIVIL SOCIETY, TRADITIONAL AUTHORITIES	350,000
Integration of NAP3 and broader promotion of sustainable land management into Namibia's 5 th National Development Plan (2018-2023)	Prepare a science-based policy document to integrate DLDD and the promotion of SLM within NDP 5	Strong integration of DLDD issues within NDP5	MET / MAWF / OPM / SDAC / NPC	250,000

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<p>Local level governance structures linked to sustainable land management further strengthened and empowered – such as conservancy committees, community forests, communal land boards, basin management committees, water point associations, livestock marketing committees etc.</p>	<p>Assess the challenges and successes of the different local level governance structures relating to natural resources Target interventions based on assessments to strengthen local level governance structures</p>	<p>Monitoring and evaluation of local level environmental governance structures</p>	<p>MET / MAWF / MLR / MRLGHRD / NACSO</p>	<p>400,000</p>
<p>Proposal on policy level incentives for cross-sector collaboration to promote the implementation of SLM programmes and combatting desertification</p>	<p>Prepare and propose a funding policy for LD / SLM – Demonstrate an economic argument for short and long-term investments in SLM Development of incentives for cross-sector collaboration on LD and Desertification – reference to the CPP – 2015 Incorporate the concept of “Climate Smart Agriculture” in all the Departments of Agriculture Formalise activities to hold stakeholders accountable to Climate Smart Agricultural Practices Provide policy support to Namibia’s CBNRM Programme, particularly communal area conservancies and community forests</p>	<p>Official adoption and public declaration of funding policy by 2016. Increase in funding allocations to LD by 2017 Joint funding proposals and reports by Government Agencies by 2016 MOUs between MET and MAWF, between MET and Agronomy Board and the Private Sector by 2016</p>	<p>MET, MAWF, MLR and NPC SDAC AGRONOMIC BOARD, NACSO</p>	<p>450,000</p>
<p>Critical review undertaken of implementation of the National Drought Policy and Strategy (1997)</p>	<p>Carry out review of implementation of National Drought Policy and Strategy Distribute findings of review and implement recommendations to enhance drought preparedness</p>	<p>Revised drought policy and strategy Human and social costs from drought events</p>	<p>MET, MAWF, OPM</p>	

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<p>Gender based dimensions mainstreamed in SLM Programmes</p>	<p>Dissemination of information on climate change, desertification and risks to women and vulnerable groups Research and report on the role of women in combating desertification, adaptation and mitigation Offer training on combating desertification, adaptation and mitigation</p>	<p>Training session reports Publications Targeted financial and technical support to women groups in focal landscapes</p>	<p>MET, MAWF, MGECLW</p>	<p>800</p>
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Outcome 3: A functional DLDD Monitoring System in place by 2018 and supportive processes are in place by 2018 for Namibia to move towards land degradation neutrality				
UNCCD Objectives Addressed: Operational Objective 1 on communication and awareness creation, and education. Operational Objective 2, Outcome 2.2 on collection of baseline biophysical and socio-economic information and data. Operational Objective 3 on Science Technology and Knowledge and all its outcomes 3.1 to 3.4. Outcome 3.1 on national monitoring and vulnerability assessments is also under Outcome 4 in this NAP				
OUTPUTS	ACTIVITIES	INDICATORS	KEY AGENCIES	INDICATIVE 5-YEAR BUDGET N\$
<p>A proposed institutional collaborative structure to collect data and information on degradation processes in Namibia – water, wildlife, forest cover changes, rangelands, crop yields, livestock yields, soils, temperature, rainfall, flooding patterns</p> <p>An information gathering protocol and a functional database for storage and retrieval of data and information on the state and degradation of land and its natural resources</p> <p>A shared GIS-Internet Platform (data-base) for stakeholders to upload and share data and information, administered by a central designated authority</p>	<p>Set up a structure or system for the monitoring of DLDD in Namibia with a view to achieving land degradation neutrality at the national level</p> <p>Build capacity to monitor and interpret results into practical actions</p> <p>Identify and describe highly vulnerable or high risk landscapes from which to choose Focal Landscapes for restoration work, research and education</p> <p>Assess and document the status of existing monitoring programmes from various institutions: MAWF, MET, METEOROLOGICAL SERVICE, DRFN, MLR, MIFMR</p> <p>Compile / collect baseline data on key environmental variables e.g.</p> <ul style="list-style-type: none"> • Wooded area and historical deforestation rates • Drivers of deforestation and forest degradation • Soil health • Area and density classes of bush encroached areas • Fire frequency and severity • Areas under high risk of degradation • Stocking densities in livestock-rich areas • Land use planning practices • Climatic data – agro-climatic 	<p>Technical reports on the extent of desertification and degradation by 2018</p>	<p>MET, MAWF, DRFN, Academia</p>	<p>1,000,000</p>

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Publication of and access to data on trends in land degradation in thematic areas (forest cover, bush encroachment, range conditions, droughts, floods) – and interpretation of the trends in actionable terms	Commission analyses on the drivers of degradation / desertification in Namibia and their implications on the design of mitigation actions by relevant agencies Set up an institutional mechanism to collect, analyse and use the results Interpretation of trends in land use planning	Technical reports launched from 2015 onwards	MEI, MAWF DRFN, Academia, NCRST, MWTC	500,000
Regular production of the ‘state of land degradation reports’ for Namibia	Provide capacity for production of policy documents derived from scientific reports Assess and report on how the State of Conservancies Report has been sustained Building both scientific (knowledge generation) and technological (applications) expertise in dry land management - fellowships and partnerships with research institutions	Scientific papers, policy briefs	MEI, DRFN, Academia,	500,000

Outcome 4: Desertification and land degradation processes in Focal Landscapes are halted and reversed by 2024, and affected communities and ecosystems strengthened to mitigate the impacts of drought

UNCCD Objectives Addressed: Operational Objective 3 on Science, Technology and Knowledge, Operational Objective 4 on capacity building, particularly of rural populations. Addresses Namibia’s own policies on Agriculture and Rural Development.

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i. OUTPUTS	ACTIVITIES	INDICATORS	KEY AGENCIES	INDICATIVE 5-YEAR BUDGET NAM \$
A document on the description of at least 5 landscapes in Namibia, representing a mix of land uses and including at least one bush encroached site	Describe the state of management / degradation of land and its resources in the Focal Landscapes and the challenges to be addressed	Status reports	MET, MAWF, MLR, PRIVATE SECTOR	500,000
Publication of baseline environmental and socio-economic data for each focal landscape to aid and guide future monitoring. This to include comprehensive 'vulnerability assessment reports', particularly to climate change	Collect baseline information; both bio-physical and socio-economic for monitoring the future impacts of improved management Development of a data collection protocol and or guidelines to ensure consistency and adherence to minimum standards	Reports	MET, MAWF, HEALTH SECTOR, NATIONAL STATISTICS AGENCY, PRIVATE SECTOR, LAND USERS, NGOs	750,000

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<p>Implementable protocols to upscale best SLM practices within and around focal landscapes (drip irrigation, conservation agriculture, improved range management, community based conservation) for immediate implementation. This will draw upon the achievements of past initiatives in Namibia namely the CPP and NAPCOD.</p>	<p>Develop and co-implement restoration / recovery plans, based on available 'best practices' for identified vulnerable "Focal Landscapes"</p> <p>Develop a 'Climate Smart Agriculture' programme in conjunction with MAWF by 2016 for implementation within the focal landscapes</p> <p>Based on experiences of CPP and others in Namibia, implement and up-scale best practices in:</p> <ul style="list-style-type: none"> • Drip irrigation • Conservation agriculture" • Bush management • Community based conservation • Improved rangeland management – e.g. rotational grazing • Community based wildlife management <p>Develop sustainable funding plans to maintain SLM programmes within the focal landscapes</p> <p>Recruit 5 'Landscape Leaders or Coordinators'</p>	<p>Area under restoration by 2017</p> <p>M and E Reports, economic and bio-physical assessment reports</p> <p>Implementation plans</p> <p>Technical reports</p> <p>Improved production</p> <p>Rate of adoption</p>	<p>MRLGH, MAWF, MET, TRADITIONAL AUTHORITIES</p>	<p>31,000,000</p>
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Empowerment plans for women and vulnerable groups, linked to restoration programmes in the focal landscapes	Assess the organizational, technical and financial needs for women and vulnerable groups Propose empowerment strategies to facilitate their participation in landscape restoration work	Published empowerment plans The number of women and vulnerable groups involved in restoration programmes	MET, MAWF, MGECW, TRADITIONAL AUTHORITIES, NGOs	Already budgeted for under outcome 2
Programmes to improve the structures and functions of local institutions (Conservancy and Community Forestry Committees, Forums for Integrated Resource Management or FIRMS, Livestock Marketing and Range Management Committees) who will be partners in the management and restoration of the 'Focal Landscapes'	Review the achievements of NAPCOD and CPP and MAWF on local level coordination. Design actions to improve their functioning and implement in Focal Landscapes	Formal recognition of local land and resource management structures by all organs of government Functional committees around Focal Landscapes	MRLIGH, MAWF, MET, TRADITIONAL AUTHORITIES, LOCAL COMMUNITY ORGANISATIONS	750,000

Outcome 5: Financial lending and grant making facilities are in place and supporting communities and small farmers to implement sustainable land management by 2017.				
UNCCD Objectives Addressed: Operational Objective 4, Outcomes 5.1 and 5.4. Other outcomes such as 5.2. 5.3, and 5.5, on Global Negotiations and fundraising capacity are also addressed in this NAP.				
OUTPUTS	ACTIVITIES	INDICATORS	KEY AGENCIES	INDICATIVE 5-YEAR BUDGET N\$
Policy on farmer support financing – to be linked to current policy on small and medium enterprises	Engage the NPC to allocate funds earmarked for LD/SLM related work	New development budgets on LD/SLM by 2017	MEI, NPC, MOF, MLR	250,000
A forum for the promotion of financing of improved land and natural resources management – Led by an institution such as the Environmental Investment Fund Functional low interest loans for SLM and improved production technologies and practices – A competitive grants schemes for individual and farming associations A dedicated government fund for multi-sector projects associated with SLM – a Statutory SLM Fund	<p>Create financial instruments to support SLM & rural development Recommended examples are:</p> <ul style="list-style-type: none"> • An SLM Fund in Government, • Competitive Grants for SLM (multi-donor basket fund), • Special Loan Schemes to aid technology adoption, diffusion and up-scaling among rural farmers • Creating provision for the empowerment of women through financial incentive schemes • Financing scheme for bush utilisation and pasture improvement • Testing and promotion of Micro-financing schemes that have worked elsewhere 	Call for funding proposals, invitation for small loan schemes, by 2016	MEI, NPC, BANKS, MLR, DONORS	300,000

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New funding from bi and multilateral sources	Fundraising through proposals to multi-lateral sources such as GEF and bilateral sources Engagement in the global dialogue for non-Annex I countries to access more funds for combating degradation and adaptation. In the process, also seek funding for technology transfer and adoption	Project documents, new grants by 2015 Country and SADC Position Papers	MET MET, Civil Society	250,000 500,000
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Outcome 6: Research on aspects of sustainable land management and climate change science in support of adaptation and mitigation are mainstreamed in research and tertiary educational institutions and extension services by 2020.				
UNCCD Objectives Addressed: Operational Objective 4 on capacity building and also Operational Objective 1 on advocacy and awareness, Operational Objective 3 on science, technology and knowledge.				
OUTPUTS	ACTIVITIES	INDICATORS	KEY AGENCIES	INDICATIVE 5-YEAR BUDGET N \$
An assessment report on required capacities to implement a national programme to promote SLM and combat desertification A technical skills development plan to improve national capacity for research, monitoring and implementation of SLM and anti-desertification programmes (Examples: climate change modelling and scenario building, GIS and Remotes Sensing, stress physiology in crops, animal and plant breeding) A research plan to assess the sensitivity and response of Focal Landscapes to rehabilitation programmes – (Research themes – climate change and stress tolerance in crops and animals, water and nutrient efficiency in crops, climate induced movement of flora and fauna, development of degradation indices, modelling economic aspects of degradation, desertification and adoption of improved technologies) Training modules on climate change and SLM issues developed for inclusion into the curricula of tertiary institutions of Namibia.	Review of Namibia's capacity self-assessment at the three levels but mainly at institutional and individual levels to define and describe gaps that should be addressed alongside the other operational objectives. Funding of capacity building programmes through - formal training at university level, research programmes (monitoring, GIS, modelling, sustainable use guidelines on natural resources, mentorship, design of courses	Report by 2015 Post-graduate Theses reports, technical reports, policy level briefs – from 2016	MET, MAWF, Academia, MOE	2,000,000

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<p>Institutional partnerships for research and training launched or strengthened</p>	<p>Institutional Capacity - creation of cross-sector collaborative mechanisms to maximize use of available skills in Namibia Creation of partnerships between government, farming communities and the private sector Research and training grants for cross-sector collaborative projects</p>	<p>Number of MOUs signed</p>	<p>MET, MAWF, NPC, Public Service Commission (PSC)a</p>	<p>500,000</p>
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