



## **Sectoral Integration of Biodiversity in Namibia**

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## **1. Introduction**

Namibia reported<sup>1</sup> that the mainstreaming of biodiversity is the incorporation of biodiversity conservation and environmental considerations into the social, physical, and economic development of the country to achieve sustainable development. Rich biodiversity is critical to sustainable development because biodiversity provides the goods, services and habitats that maintain livelihoods, which foster economic development. Biodiversity conservation and mainstreaming can be achieved through environmentally conscious planning, decision-making, and policy formulation, even in sectors where the environment is not the primary concern. Successful mainstreaming of biodiversity comes through cross-sectoral and public private partnerships, along with good scientific information and understanding, as well as strong institutional capacity and commitment.

The MET has been driving the mainstreaming of biodiversity into other sectors and programmes since the foundation of the National Biodiversity Programme in 1994. Biodiversity conservation is recognized as a key tenet of sustainable development and it is well integrated into Namibia's long term development framework, which comprises of Vision 2030 and a series of 5 year National Development Plans (NDPs). While mainstreaming of biodiversity has taken place to a large extent, Namibia still experiences challenges with regard to the finalization and implementation of policies. The importance of biodiversity conservation is also not fully recognized by other sectors. This chapter seeks to identify Namibia's success and challenges in mainstreaming biodiversity.

### **Integration of Biodiversity into Cross-Cutting Strategies and Relevant Sectors**

Namibia is unique among nations, in that the country has a strong foundation of environmental management and biodiversity conservation. Often these initiatives take a cross-sectoral approach. This section will first look at the overarching policies within Namibia that set the foundation for a multi-sectoral approach to biodiversity conservation. Then the section will list sectors involved in biodiversity conservation, and each sector's responsibility and contributions to environmental management.

## **2. Overarching Guiding Policies**

### **Constitution of Namibia**

Namibia's foundation for environmental stewardship is first and foremost set in the Constitution. The Constitution emphasizes the need for policies that maintain ecosystems, ecosystem processes and biological diversity for the benefit of current and future generations. This foundation stipulates that all policies and legislation in Namibia must be in line with the environmental mandates of the Constitution. Specifically, the Constitution seeks to protect the:

- Over-utilization of living and natural resources

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<sup>1</sup> Namibia (2010). Namibia's Draft Fourth National Report to the United Nations Convention on Biological Diversity (UNCBD), compiled by the Namibian Ministry of Environment and Tourism, August 2010, 153 pp.

- Irrational exploitation of non-renewable resources
- Degradation and destruction of ecosystems
- Failure to protect the beauty and character of Namibia
- Failure to take the appropriate action to call for the remediation, correction and reversal of activities related to the above through means that are fair, proper, and effective

## Vision 2030

Namibia's Vision 2030 serves as the long-term development framework for the country to be a prosperous and industrialized nation by 2030, developed by her human resources, enjoying peace, harmony and political stability. Its vision for the natural resources 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, maximizing comparative advantages and reducing inappropriate resource use practices.

## National Development Plan III (NDP3) and the Millennium Development Goals (MDGs)

It is envisaged that Vision 2030 will be realized incrementally through a series of five year national development plans (NDPs). The main thrust of the current NDP3 (2007/8-2011/12) is to accelerate economic growth while deepening rural development. NDP3 is comprised of eight key result areas (KRAs), one of which is the productive utilization of natural resources and sustainable development. This KRA aims to ensure the development of Namibia's natural capital and its sustainable utilization for the benefit of the country's social, economic and ecological well being. This objective is directly aligned to Millennium Development Goal 7 of ensuring environmental sustainability. The NDP3 recognizes that this aim cuts across sectors, and outlines the ways in which the different sectors should contribute. Similarly environmental sustainability is important to the attainment of all of the MDGs. The links between the environment in Namibia and the different KRAs of NDP3 and the 8 MDGs are presented in the table below.

Table 1: Linkages between the environment and the KRAs of NDP3 and the 8 MDGs (Source: Zeidler 2007)

KRA and Associated Goals	MDGs	Selected key issues relevant to environmental mainstreaming
<p><i>KRA1 – Equality and Social Welfare</i></p> <ul style="list-style-type: none"> <li>▪ Reduce inequality in social welfare</li> <li>▪ A society imbued with culture, tradition and morality</li> <li>▪ Gender equality</li> </ul>	<p>Promote gender equality and empower women – <b>MDG3</b></p>	<ul style="list-style-type: none"> <li>▪ Improved land and NR tenure enhances women's economic empowerment and livelihoods</li> <li>▪ Greater involvement of women in the management of CBNRM initiatives such as the Conservancies enhances gender equality and empowerment.</li> </ul>
<p><i>KRA2 – Peace and Political Stability</i></p> <ul style="list-style-type: none"> <li>▪ Enhanced and sustained participatory democracy</li> </ul>	<p><b>MDG1 – MDG7</b></p>	<ul style="list-style-type: none"> <li>▪ Participatory policy and law making in environment and natural resources enhances democracy and fosters stability.</li> <li>▪ Adequate enforcement of environment and natural resources policies and laws averts plunder of natural resources, enabling seizure of opportunities to</li> </ul>

<ul style="list-style-type: none"> <li>Strengthened rule of law and social justice</li> <li>Territorial integrity</li> </ul>		<p>generate revenue from NRs and minimizes the risks of extreme weather events associated with environmental degradation.</p> <ul style="list-style-type: none"> <li>Effective transboundary management of shared water resources, migratory wildlife, and marine resources prevents potential conflict.</li> </ul>
<p><i>KRA3 – Productive and Competitive HR and Institutions</i></p> <ul style="list-style-type: none"> <li>Adequate supply of qualified, productive and competitive labour force</li> </ul>	<p>Eradicate extreme poverty and hunger – <b>MDG1</b></p> <p>Achieve universal primary Education – <b>MDG2</b></p>	<ul style="list-style-type: none"> <li>Improved technical and managerial capacity for sustainable utilisation of natural resources enhances resource productivity and benefits economic growth.</li> <li>Earlier socialisation on environmental sustainability through formal and informal education and training on sustainable development issues have medium and long-term benefits for both the environment and development.</li> <li>Enhanced entrepreneurial skills for value addition to NTFPs and other economic empowerment and sustainable use of those resources.</li> <li>Devolution of resource management rights and responsibilities helps establish community-based institutions which are critical to local level empowerment and capacity strengthening.</li> </ul>
<p><i>KRA4A – Macroeconomy Goals</i></p> <ul style="list-style-type: none"> <li>Equality in income distribution</li> <li>Increased and sustainable economic growth</li> <li>Increased employment</li> <li>Increased smart partnerships</li> </ul> <p><i>KRA4B – Infrastructure</i></p> <ul style="list-style-type: none"> <li>Highly developed and reliable infrastructure</li> </ul>	<p>Eradicate extreme poverty &amp; hunger – <b>MDG1</b></p> <p>Ensure environmental sustainability</p>	<ul style="list-style-type: none"> <li>Equitable access to land, water and other productive resources promotes equality of opportunity for development.</li> <li>Sustainable land management, better water governance, sustainable fisheries, sustainable tourism and enhanced capacity to adapt to extreme weather events associated with global warming are good for economic growth and poverty reduction.</li> <li>Infrastructure development that is environmentally sensitive averts negative consequences for the population, promotes provision of sustainable hydropower, enables effective management of protected areas for tourism, and improves markets access for the poor, especially those dependent on the market for dryland products.</li> </ul>
<p><i>KRA5 – Quality of life</i></p> <ul style="list-style-type: none"> <li>Affordable and quality healthcare</li> <li>Reduced spread of HIV/AIDS &amp; mitigation of its effects</li> <li>Eradication of extreme poverty and hunger</li> </ul>	<p>Eradicate extreme poverty and hunger – <b>MDG1</b></p> <p>Combat HIV/AIDS, malaria and other diseases – <b>MDG6</b></p> <p>Improved maternal health – <b>MDG5</b></p>	<ul style="list-style-type: none"> <li>Livelihood strategies and food security of the poor and the medium-term economic growth prospects of a natural resource-based economy are often dependent directly on healthy ecosystems and the diversity of goods and ecological services that they provide.</li> <li>Improved access to water and sanitation reduces health risks and morbidity, undermining labour productivity. Attendant reduced drudgery on women minimizes risks of complications during pregnancy.</li> <li>Averting land degradation and loss of biodiversity that are unique to drylands: (a) Ensures sustainable land productivity on which the economic empowerment and food security of the poor depend. (b) Enables possible development of pharmaceutical products and new crop varieties.</li> <li>Attention to HIV/AIDS helps households to deal with problems of reduced human resources and financial capacity to invest into sustainable land management, as well as impact on labour force.</li> </ul>
<p><i>KRA 6A – Sustainable Utilisation of Natural Resources</i></p> <ul style="list-style-type: none"> <li>Optimal and sustainable utilisation of renewable and non-renewable resources</li> </ul> <p><i>KRA 6B – Environmental sustainability</i></p> <ul style="list-style-type: none"> <li>Environmental Sustainability</li> </ul>	<p>Eradicate extreme poverty and hunger – <b>MDG1</b></p> <p>Achieve universal primary education – <b>MDG2</b></p> <p>Promote gender equality and empower women – <b>MDG3</b></p> <p>Improved maternal health – <b>MDG5</b></p>	<ul style="list-style-type: none"> <li>Ensuring healthy and productive ecosystems promotes economic growth, enhances food security, minimizes natural hazards that are usually associated with degraded ecosystems and avoids future costs of restoration.</li> <li>Seeking and establishing markets for ecosystem services enables generation of additional revenue for investment in resource management and livelihoods of the poor.</li> <li>Adding value to non-renewable resources such as minerals and averting negative environmental consequences of extraction benefits economic growth, human health and ecological integrity.</li> <li>Improved access to water and clean energy services releases women's labour time for productive work, enables full attendance of the female child at school, and reduces morbidity associated with indoor air pollution.</li> </ul>

	Environmental sustainability – <b>MDG7</b>	
<b>KRA7 – Knowledge based &amp; Technology Driven Nation</b> ■ <i>Innovative and productive usage of information and communication technology</i>	Eradicate extreme poverty and hunger – <b>MDG1</b> Combat HIV/AIDS, malaria and other diseases – <b>MDG6</b>	<ul style="list-style-type: none"> <li>■ GIS and Remote Sensing application at national and decentralised levels enhances poverty-environment mapping and enables knowledge-based environmental decision making.</li> <li>■ Strengthening institutional capacity at national and decentralised levels for application of decision tools such as Strategic Environmental Assessment (SEA), Environmental Impact Assessment (EIA), Environmental Resource Accounting (EA) contributes to fostering a culture of knowledge-based policy-making and planning.</li> <li>■ Strengthening capacity for sourcing and provision of satellite-radio based (RADNET) weather information enhances the adaptive capacity to the vagaries associated with climate variability.</li> </ul>
<b>KRA8 – Regional &amp; International Stability &amp; Integration</b> ■ Promote regional integration ■ Strengthened partnerships for development ■ Contribution to regional and global peace and political stability	Develop a global partnership for development – <b>MDG8</b>	<ul style="list-style-type: none"> <li>■ Enhanced capacity for policy-making, planning and resolution of conflicts associated with sharing and management of transboundary resources is beneficial for poverty reduction, peace-building and environmental sustainability.</li> <li>■ Strengthening capacity for effective negotiations on MEAs, especially that pertaining to trade and environment, benefits poverty reduction and environmental sustainability.</li> </ul>

NDP3 also lays out a number of targets, which are monitored and evaluated at a mid-term interval and at the end of each 5 year cycle. The targets relating to KRA6 are closely aligned with those of the NBSAP and include indicators such as the area covered by conservancies, number of protected areas managed according to approved management plans and the percentage of targeted key wildlife species whose populations are stable or increasing. The mid-term evaluation of NDP3 is currently underway and the preliminary results show that Namibia is on track to meet many of its environment-related NDP3 goals by 2012.

### 3. Sectoral policies developed by line ministries relevant to biodiversity

Socio-economic development in Namibia is constrained by the country's natural aridity, combined with the high reliance of the majority of the population on natural resources and the growing pressure on these resources as the population grows rapidly. These constraints are compounded by the legacy of settler colonialism and apartheid which have both left an indelible mark on the country with the majority of the population neglected in terms of access to housing, sanitation, health, education and productive land. This combination of factors prompted the post-independence government to formulate a series of policies, legislation and strategies that aim to lead Namibia on a path towards a more sustainable and equitable development. This is an ongoing process and the importance of a healthy and functioning environment is increasingly being recognised by most of these policies. For the sake of continuity only policies developed during the lifespan of the NBSAP are considered in this section.

#### **4. Ministry of Environment and Tourism**

As custodian of Namibia's natural environment, the MET seeks to be a role model in the conservation and use of biodiversity, the promotion of natural resource-based livelihoods, environmental management and tourism development through innovation and partnerships in order to contribute to rural development and economic growth. Environmental sustainability is a key element of sustainable development and the MET plays a lead role in setting relevant policies and in advocacy work, promoting environmental sustainability concerns among other sectors (MET 2007). Examples of policies and legislations that impact on other sectors and biodiversity, and that have been developed or are being developed mainly through the MET are included below:

##### **Environmental Investment Fund Act**

This act was promulgated in 2001, and was intended to pave the way for the operationalization of Namibia's Environmental Investment Fund. However complications over capitalization arose and the fund has only become active in 2010. The fund intends to provide support to community-based environmental projects.

##### **Draft Wetland Policy (2005)**

A wetlands policy, drafted in 2005, aiming at the integration of sustainable wetland management, protection and conservation into decision-making at all levels has yet to be submitted to parliament for approval.

##### **Environmental Management Act (2007)**

This landmark Act provides the foundation for the wise management of the country's fragile environment and the sustainable use of its natural resources. It also provides the legal basis for the assessment and control of activities across all sectors which may have harmful effects on the environment, including land use planning, resource extraction and mining, water abstraction, infrastructure and industrial development, tourism, agricultural processes and waste disposal amongst others. In this way the Act impacts upon all sectors of society and the MET has done much to raise awareness among other sectors and the public at large about the importance of this Act to sustainable development in Namibia.

##### **Tourism Concessions Policy (2007)**

It is having an important impact on biodiversity by promoting eco-tourism activities with the involvement of local communities. These high value low impact activities are benefiting both biodiversity and rural communities.

##### **Protected Area and Wildlife Management Bill (2010)**

This long overdue legislation has been in draft form for many years. When promulgated, it will provide a regulatory framework for the protection, conservation and rehabilitation of species and ecosystems, the sustainable use and sustainable management of indigenous biological resources, and the management



of protected areas so as to conserve biodiversity and contribute to national development. It will also repeal the Nature Conservation Ordinance 4 of 1975.

### **National Policy on Human Wildlife Conflict Management (2009)**

This policy provides a framework and guidelines for management of HWC in a way that recognizes the rights and development needs of local communities as well as the need to promote biodiversity conservation. It also promotes self-reliance and ensures that decision-making is quick, efficient and based on the best available information.

### **Draft National Climate Change Policy (2009)**

A draft climate change policy was set in motion in 2009 with the following objectives:

- Address root causes of vulnerability, especially at regional and local levels where rural people and commercial enterprises (e.g. livestock and crop farming) are predicted to suffer the most from climate change impacts;
- Protect essential ecosystems, creating conservation areas with high levels of biodiversity;
- Enhance environmental planning and coordination procedures within government;
- Strengthen capacities at all levels (individual, institutional and systemic) for climate change monitoring and assessment, integrated planning and decision making;
- Generate awareness, educate people and improve access to information about climate change and potential impacts for Namibia.

This policy is also a key measure for attracting investment in sustainable development projects and the development of renewable energy projects in Namibia.

### **Coastal Zone Management White Paper (2010)**

The development of this policy represents a major achievement in putting biodiversity high on the agenda in the management of Namibia's sensitive and biodiversity-rich coastal zone.

### **Draft National Policy on Mining and Prospecting in Protected Areas (2009)**

This policy development is still in its early stages but is evidence of the danger that mining-related activities are posing to biodiversity in protected areas. The purpose of this policy is to promote Namibia's sustainable development by guiding prospecting and mining in the country's sensitive protected areas.

### **Draft National Policy on Protected Areas, Neighbours and Resident Communities (2009)**

It is one of the MET's objectives that protected areas serve as "economic engines" for growth in the surrounding areas. This policy aims to improve the conservation of Namibia's protected areas, to provide greater social equity in the distribution of benefits from protected areas and to stimulate local and regional economies. It gives particular attention to promoting the socio-economic development of these communities and their involvement in the planning and development of protected areas.

### **Draft National Environmental Education Policy**

This policy existed as far back as 1999, but the MET has taken positive steps to update and refine it during 2009 and 2010. The MET and Ministry of Education are taking the lead in this, with support from other partners including the CEGEM project, through the establishment of the Namibia Environmental Education Network. This is an important step in mainstreaming environmental education in Namibia's national curriculum.

### **5. Ministry of Agriculture, Water and Forestry (MAWF)**

The MAWF is inherently involved in biodiversity conservation due to its goal of promoting sustainable development through the use of agriculture, water and forestry.

#### **National Forest Act and Policy (2001)**

Their main aims are to protect and make Namibia's forests productive for the economic welfare of rural communities. They also lay down guidelines as to how forest resources may be used and the responsibilities of the users.

#### **National Water Resources Management Act (2004)**

This Act has laid the basis for devolving rights and responsibilities over water management to communities and basin management committees. It is aimed at improving the management, development, protection, conservation, and use of water resources.

#### **Draft National Seed Policy (2005)**

Among the aims of this policy are to increase seed accessibility in general, as well as the availability of improved seed varieties, particularly drought tolerant and early maturing varieties, as well as the safeguarding of genetic purity and variation in crops.

#### **Green Scheme Policy (2004 and revised 2008)**

The Green Scheme aims to encourage the development of irrigation based agronomic production in Namibia to increase the contribution of agriculture to the country's Gross Domestic Product and to simultaneously achieve the social development and upliftment of communities located within suitable irrigation areas. It is being undertaken along the country's northern perennial rivers. There is concern as to whether this scheme offers optimum potential in terms of resource use (mostly low value crops such as maize and wheat that are grown) and economic returns. Biodiversity is also threatened by land clearing and pollution from fertilizers and pesticides.

#### **Water Supply and Sanitation Sector Policy (2008)**

This policy identifies the following elements as part of its long-term policy to improve the supply of water and sanitation services:

- Communities should have the right, with due regard for environmental needs and the resources and information available, to determine which water and sanitation solutions and service levels are acceptable to them within the boundaries of the national guidelines; and
- Environmentally sustainable development and efficient utilization of the water resources of the country and environmentally sustainable development of sanitation services should be pursued in addressing various needs, and should be strongly supported by information campaigns and continuous educational interventions at all levels.

## **6. Ministry of Fisheries and Marine Resources (MFMR)**

Biodiversity issues have been very well mainstreamed into the responsibilities of the MFMR. Some recent pertinent legislation is outlined below:

### **Aquaculture Act (2002)**

The Aquaculture Act regulates and controls aquaculture activities and the sustainable development of aquaculture resources. It allows the Minister to “formulate policy based on social, economic and environmental factors, the best scientific information and advice... to promote sustainable aquaculture and manage, protect and conserve aquatic ecosystems”. Environmental Impact Assessments are also required prior to the designation of an Aquaculture Development Zone. A licence may be withheld if the enterprise poses a significant risk of pollution or otherwise adversely affects the environment. A licence may be suspended or cancelled to ensure protection and conservation of the environment. The Act also includes strong measures against the import and transfer of alien species and genetically modified organisms.

### **Inland Fisheries Act (2003)**

This Act deals with the conservation and utilisation of inland fisheries resources. It prohibits the introduction, transfer, import and export of any species of fish or crustacean without written permission.

## **7. Ministry of Health and Social Services**

### **The Atomic Energy and Radiation Protection Act (2005)**

This Act is concerned with the health and safety of workers, public and the protection of the environment from the harmful effects associated with radiation. It lays the basis for the development and implementation of a regulatory regime and the management of radioactive waste.

## **8. Ministry of Lands and Resettlement**

### **The Communal Land Reform Act 2002**

This act has important implications for sustainable land management, biodiversity conservation and sustainable development in Namibia’s communal regions. There has been good cooperation between MET and MLR to ensure that environmental factors are taken into account by the newly mandated Communal Land Boards in decision-making.

## 9. Ministry of Mines and Energy

While no new pertinent legislation has been promulgated through the MME in recent times, it has coordinated a voluntary pilot SEA on the uranium mining industry in the Erongo region. EIAs for new mining sites are adding to our knowledge of biodiversity. The MME also set up the Namibian Renewable Energy Programme (NAMREP) to promote renewable energy initiatives in 2003, with support from the GEF. The MME has also been involved in renewable energy projects, research activities and awareness campaigns through the multi-stakeholder Renewable Energy Efficiency Institute (REEI). ). A 2007 cabinet directive has also made solar water heating systems mandatory for all public and semi-public buildings.

## 10. National Planning Commission

The NPC is tasked to identify priorities and chart the course of national development through the orientation, design and surveillance of economic social plans and policies. The NPC designs and coordinates Namibia's NDPs and is also involved with developing regional poverty profiles and is home to the EU Rural Poverty Reduction Programme.

### National Poverty Reduction Action Programme (NPRAP 2002)

Namibia's NPRAP was designed to implement and elaborate on Namibia's Poverty Reduction Strategy of 1998 during the period 2001-2005. A review of the NPRAP completed in 2005, indicates that appropriate environmental related strategies were not sufficiently included in the NPRAP. The report found that areas of particular concern were sectors related to the management of sustainable natural resources and the involvement of environmental professionals in the formulation, implementation and monitoring of its strategies and actions (NPC 2005). Biodiversity needs to be a critical component any poverty reduction strategy for Namibia especially given the dependence of a high percentage of the population on the resource base.

## 11. Budget Allocation towards Biodiversity Conservation-related Activities

In addition to assessing recently developed policy and legislative frameworks, trends in government budgetary allocations towards biodiversity-related activities offer an indication as to how seriously biodiversity is being prioritized in Namibia. Recent research by the Environmental Economics Unit within the MET used planned expenditure data from certain directorates within the MET, MAWF and MFMR to approximate maximum government spending on biodiversity since 1990.



**Fig 2: Maximum total government spending on biodiversity (N\$ 000s, 2010 prices) (Calculated from Ministry of Finance budget records)**



**Fig 3: Index of relevant ministry planned expenditure over time using 1990/1 as a base year (Calculated from Ministry of Finance budget records).**

It is possible to deduce tentatively from the figures above that government investment in biodiversity is increasing. The data is based on the total expenditures of the Directorates of Parks and Wildlife and Scientific Services at the MET, Forestry, Research and Resource Management at MAF and Resource Management and Operation and Surveillance at MFMR, which are the main directorates involved in biodiversity conservation in Namibia. While government investment in biodiversity appears to be increasing, it should be noted that this investment currently only accounts for approximately 3% of total government expenditure.

Figure 3 gives a good quantitative summary as to the investment government is putting into the fisheries sector. The MFMR has invested heavily since the mid 1990s on research and the development for a more effective management capacity. These investments in areas such as monitoring, control and surveillance as well research and training represent a good example of long term government commitment to biodiversity conservation of marine resources. While expenditures on parks and wildlife management and forestry research and management also show upward trends, this needs to be substantially increased given Namibia's expanding protected area network and CBNRM programme.

## 12. Challenges to Mainstreaming Biodiversity

From the list of policies and legislation quoted above, it is clear that environmental sustainability, and by extension biodiversity, are quite well considered in the formulation of policies by different sectors. However it is difficult to measure the extent to which this is realized in the on-the-ground translation of these policies into action. In general thorough implementation of Namibia's excellent policy framework is lacking owing to shortages in human and financial resources, as well as the lack of a properly functioning decentralized system. Each different region in Namibia faces very different threats to their environments to which flexible approaches and responses are required. The empowerment of environmentally knowledgeable regional councils with support from MET regional offices would be the ideal solution to this scenario. However attempts to instigate such an approach at the coast through the

NACOMA project show serious capacity constraints at both levels as well as the need for concerted funding and empowering legislation.

The finalization of policies remains a key obstacle to mainstreaming biodiversity. The number of MET policies and legislation in draft form is an indication of this problem. Examples include the Pollution and Waste Management Bill (in draft form since 1999) and the Protected Areas and Wildlife Management Bill, which has also been in draft form for many years. These pieces of legislation have very important roles to play in biodiversity conservation, and in mitigating some of the threats to biodiversity outlined in section 1.4. Namibia is in clear need of a framework to manage waste and pollution given the largely uncontrolled expansion of urban areas, dumping of rubbish in the coastal areas (as outlined in coastal EMPs) and the large-scale intensive farming practices being promoted along Namibia's perennial rivers among others. The Protected Areas and Wildlife Management Bill has a major responsibility to address the issue of alien invasive species, which is an area clearly requiring much awareness raising, action and capacity building.

Even when important policies are finalized, regulations to make these policies legally binding often take many years to be approved. Regulations for the Environmental Management Act (2007) and the Forest Act (2001) are for example still not in place. This problem undermines the implementation of these policies and the proper enforcement of the punitive measures outlined in these acts.

Harmonization of policies relating to natural resource management is a much-cherished ideal in Namibia, however significant conflicts in policies still remain most obviously in agriculture. There is a clear trade off here between economic and political interests and environmental sustainability. From an environmental perspective it is difficult to justify the promotion of large-scale irrigation schemes in a country where availability of water is the main constraint to development, and the importance of biodiversity along perennial rivers (Ramsar sites at the Okavango delta (largest in the world) and Orange River mouth).

Evidence from other dryland countries suggests that these schemes tend to be unsustainable over the long term (the Murray Darling basin in Australia is a well known example of this). It is also noted in NDP3 that agriculture accounted for 74% of all water consumed in Namibia, while contributing just 7% to GDP in 2001/2. Value added per unit water used showed N\$4.61per m<sup>3</sup> for commercial irrigation and N\$-.49per m<sup>3</sup> for communal irrigation initiatives compared to a N\$57.23per m<sup>3</sup> sector average (NDP3 pg. 123). Other concerns include pollution from fertilizers and herbicides as well as the focus on low value crops such as maize and wheat, which have high water demands. Similar concerns exist with regard to the nascent bio-fuels industry.

Overall it appears that the NDP3 system offers the most useful mechanism for monitoring how effectively biodiversity is being mainstreamed into Namibia's development process. While it is mainly focused on economic indicators, the KRA on sustainable development offers a real opportunity to further promote the importance of environmental sustainability to Namibia and to promote the notion

of conservation and the sustainable use of wildlife and indigenous resources as being viable land uses from both an environmental and economic perspective. Useful baseline data on biodiversity is available from 2006, and the mid-term and end of cycle reporting requirements offer an opportunity to demonstrate systematically the improvements that biodiversity conservation and sustainable use are making to the economy, rural livelihoods and the environment.

### **13. National Coordination Mechanisms**

Given the raft of different policies and institutions (not only ministries but also donors and other stakeholders) affecting biodiversity, it is clear that a coordinating mechanism is necessary to bring these stakeholders together. The National Biodiversity Task Force, formed in 1995 as part of the National Biodiversity Programme (NBP), which included eight ministries, tertiary education institutions, parastatals, the private sector, NGOs and unions, was recognized as a successful and innovative national coordinating mechanism. However the task force was never mainstreamed into the MET as had been planned for after the end of the NBP and external funding in 2005.

This void has been filled in an ad-hoc manner with a number of recent GEF-funded projects such as the CPP and NACOMA embracing a multi-stakeholder project steering committee approach. Other national mechanisms active in the areas of biodiversity conservation, sustainable use and the fair and equitable sharing of benefits include the IBPC and the IPTT, both of which are functioning well. These are both government-mandated mechanisms and are well-anchored within the chairing ministries (MET for the IBPC and MAWF for the IPTT), which is important for their long-term sustainability.

The CPP programme can be seen as an umbrella organization that coordinates land management efforts across sectors. The management committee of the project is comprised of eight government ministries (MAWF, MET, MLR, MRLGHRD, MME, NPC, Ministry of Finance and MFMR), various NGOs, and UN agencies. The mandate of the CPP programme is to reduce land degradation through integrated cross-sectoral approaches, thereby contributing to environmental sustainability, and the preservation of dryland ecosystems and ecosystem services integrity. This is done through capacity building at institutional and individual levels and cross-sectoral coordination and implementation of ISLM activities and policies, which integrate environmental and economic objectives. The programme actively pursues synergies between climate change adaptation, biodiversity conservation and the battle against land degradation.

The NACOMA Project is also an example of a coordination mechanism to mainstream biodiversity conservation into wider development, albeit only along the coastal zone. The Government of the Republic of Namibia (GRN) is implementing the project with support from a MET Project Coordination Office (PCO) based in Swakopmund, which is responsible for the day-to-day project management and coordination. A Project Steering Committee guides MET and its project team in the implementation of the project. It comprises of MET (chair) and MRLGHRD (deputy-chair), MFMR, MME, MAWF, Ministry of Works and Transport, NPC and Chief Executive Officers (CEOs) of Kunene, Erongo, Hardap and Karas

Region. The sustainability of the CPP and NACOMA coordinating mechanisms beyond the project lifecycles are key challenges that both of these projects are currently trying to address.

Another potential national coordinating mechanism is the Sustainable Development Advisory Council. The establishment of this council is one of the requirements of the Environmental Management Act of 2007. It is to be appointed by the Minister of Environment and Tourism and composed of eight officials; four government and four non-government members who represent the interests of environmentally conscious organizations. The Act stipulates that the council must take a cross-sectoral approach and promote cooperation and coordination on environmental issues between the public and private sectors. The Council will also function as an advisor to the Minister on environmental policy development and evaluation, as well as monitoring environmental management compliance, and issues of biodiversity conservation, sustainable use of resources, and access to genetic resources. Thus it will have a vital role in mainstreaming and protecting biodiversity.

#### **14. Tools for Mainstreaming Biodiversity**

Namibia uses a number of tools to mainstream biodiversity effectively in its development. This section gives an indicative list of these tools. The application of many of these tools has been relatively recent in most cases, and therefore only a preliminary assessment is given of their effectiveness.

#### **15. Environmental Management and Protection**

##### **Strategic Environmental Assessments SEAs**

SEAs are a key tool to ensure that environmental considerations are better considered in the formulation and implementation of policies, plans and programmes, which are likely to have a significant impact on the environment. The Environmental Management Act of 2007 provides the overall framework for SEAs, and while the regulations for this Act have yet to be completed, a number of voluntary pilot SEAs have recently been conducted in Namibia, including an SEA on uranium mining in the Central Namib, on each of the Coastal regions to inform the decision making process affecting biodiversity and sustainable coastal development, and on bio-fuels in the north-eastern regions of Namibia.

The SEAs on uranium mining and bio-fuels provide a good example of highlighting the threats of economic development for biodiversity conservation. The uranium SEA assesses mining's impact on critical issues such as water and electricity supply, land use options, radiation and health, as well as tourism, social and transport infrastructure, all of which will have knock on effects on biodiversity in the Central Namib biodiversity hotspot. This SEA is not yet complete and counts as a more reactive tool in this case. The other SEAs are more proactive. The SEA for the coastal regions is being integrated into the planning process as a standard tool to accommodate natural-resource requirements, promote sustainable land use and to inform communal conservancies of environmental constraints (Nghitila *et al* 2009). In addition the data and findings from the coastal SEAs are being transferred into a Decision



Support Tool in order to assist political and technical decision makers at local, regional and national level to make wise decisions on biodiversity, conservation, land use planning and social and economic development along the coastal zone. Bio-fuels plantations have not yet taken off on a large-scale basis in Namibia and the SEA will give a good advanced indication of their economic, social and environmental viability.

### **Environmental Impact Assessments (EIAs)**

The Environmental Management Act of 2007 also lays the legal basis for EIAs in Namibia, which aim to better reflect environmental considerations in specific developments, which may impact on the environment. An EIA must contain:

- A description of the proposed project and its purpose
- A description of the environment that will be affected by the project and alternative projects
- A description of the potential environmental impact, and an estimation of the importance of the impact
- A description of the effects on Namibia's cultural heritage, as well as the social and economic costs
- A description of the mitigation measures
- A description the research, data, and predictions in the report
- Identification of gaps in knowledge or uncertainties about environmental impacts
- A description of steps taken to consult affected parties
- An outline for monitoring and evaluation strategy
- A description of rehabilitation and restoration measures
- A summary in non-technical language

So far the mandatory requirements of EIAs including environmental descriptions of the project area and the potential environmental impacts of the particular development, have been useful in improving our knowledge of local biodiversity, particularly of insect and plant species. A major challenge for the successful implementation of EIAs is that they are currently not legally binding and are only weakly enforced.

### **Biodiversity Offsets**

Namibia does not currently have a biodiversity offset policy, however the concept appears very relevant in the context of Namibia's development. A preliminary workshop on the issue was held in Windhoek in 2010, in association with Fauna and Flora International and the Business and Biodiversity Offsets Programme, and it is being explored as to how this concept can be integrated into Namibia's existing frameworks.

### **Urban Area Environmental Management Plans (EMPs)**

The MET recently commissioned four EMPs for the coastal towns of Henties Bay, Swakopmund, Luderitz, and Oranjemund, in light of the increasing demands being put on the resource base by these towns. The EMPs use a participatory approach to identify the root causes of key pressing environmental problems, the environmental and socio-economic impacts of these problems, and an action plan of how these problems. These EMPs are yet to be finalized, but stakeholder input meetings and focus groups occurred in July 2010 (SAEIA 2010).

A similar process is underway in Windhoek, though in this case instigated by the City of Windhoek Municipal Authority. A biodiversity inventory has been completed of Windhoek's municipal area and a biodiversity forum has been set up to collaboratively manage and address biodiversity issues in Windhoek.

## **16. Land Management and Land Use**

### **Integrated Regional Land Use Plans (IRLUPs)**

Integrated Regional Land Use Plans (IRLUPs) are intended to be a reference document to explore the biodiversity, land use capacity and the potential land use options for specific regions of the country. The MLR has begun to develop an IRLUP for the Karas region, which is to set the standard for further IRLUPs in Namibia. This IRLUP integrates elements of SEAs and also incorporates a policy review, assessment of conflicting and complementing land uses, stakeholder consultations, and data analysis.

The ultimate goal is to compile a plan that proposes the most optimal land use with consideration to both local level land uses, such as conservancies and small-scale farms, as well as more economic activities, such as mining and large-scale agriculture. In order for the IRLUPs to remain up to date and relevant, standard continuous adjustments must be made to account for changes in technology, such as the use of digital spatial GIS data, and new planning concepts. The Karas region IRLUP is making use of new research and planning techniques. This approach to IRLUPs accounts for biodiversity conservation by producing options and a rational basis for sustainable land use planning. As additional IRLUPs are completed using this standard method, biodiversity mainstreaming and conservation will be increasingly be accounted for in land use planning.

### **Devolved Decision Making and Capacity Building**

Since the promulgation of the Communal Land Reform Act of 2002, communal land boards have emerged as a potentially useful tool for mainstreaming biodiversity conservation in rural areas. The land boards are multi-stakeholder entities with representatives from local traditional authorities, members of the local farming community, an officer from the regional council, two women engaged in farming activities, two women with expert knowledge relevant to the functions of the Land Board, one representative of conservancies, and one representative from the MLR, MET, MAWF and MRLGHRD.

While communal land boards are not directly mandated to conserve biodiversity, their decisions have the potential to negatively affect the environment in communal areas. Land allocated for agricultural plots can lead to over clearing and deforestation, which can damage natural habitats and riparian zones. Land board decisions on tourism and other economic developments can also affect the environment through increases in pollution and soil erosion. In an effort to mainstream biodiversity conservation, the MET and MLR developed a training course for Communal Land Boards on “Sustainable Development and Environmentally-sound Decision-Making. In addition, all land boards received a special checklist to aid in sustainable development and environmentally conscious decision-making on leasehold applications. In this way the land boards have a major role to play in environmentally sustainable development in rural areas.

The evidence from the NACOMA project’s attempts at supporting decentralization suggests that similar capacity building and support is needed for Namibia’s Regional Councils so that they are able to ensure effective environmental protection. Challenges that need to be addressed in this regard include limited funding, the absence of empowering legislation, limited involvement by MET’s regional and national staff and delays in devolving some of its functions to the sub-national level.

### **Ecosystem Approach and the CBNRM Programme**

At COP5 to the CBD in 2005, the ecosystem approach was endorsed and it was recommended that parties apply this approach. The CBD defines the ecosystem approach as “a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way. Application of the ecosystem approach will help to reach a balance of the three objectives of the convention: conservation; sustainable use; and the fair and equitable sharing of benefits arising out of the utilization of genetic resources.”

The ICEMA project has been driving the implementation of the ecosystem approach in Namibia since 2004 with excellent results. It supports the activities of 16 targeted conservancies within the larger national CBNRM framework. The main aim of the ICEMA Project is to conserve the natural resources of its target conservancies and to encourage their sustainable use so as to promote the development of economic activities which are both environmentally sound and profitable to the community. This innovative and promising approach has been hindered by strong constraints: low investment capacity in the local communities, important needs in training, land insecurity, veterinary restrictions, lack of co-ordination, and the necessity of improving the technologies of biodiversity valorisation.

The Project invests in two main components, namely, high value plant species and high value animal species (HVAS), to assist communities in overcoming the afore-mentioned constraints. With respect to high value plant species, examples of major activities undertaken include the scaling up of supply chains for various indigenous plant products such as Kalahari Melon seeds and Ximenia kernels, support to honey production initiatives, expanding the sustainable harvesting and organic certification of Devil’s Claw tubers and supporting cultivation of Hoodia plants in the South.

With respect to high value animal species, the major activity undertaken has been game translocations to communal conservancies. Some 10,000 head of wildlife has been translocated to communal conservancies over the past decade, often involving the reintroduction of species into areas that had been part of their historic range. The ICEMA Project has developed a number of innovative approaches to ensure that the contribution of wildlife to community livelihoods is sustained. These include equipment that supports the monitoring of the introduced game, such as radio collars. Aerial surveys and annual game counts have also been conducted in the different regions, while areas within many of the conservancies have been zoned exclusively for wildlife and tourism purposes. Translocations and the sustainable utilization of wildlife by communities have proved very successful tools in meeting the objectives of the convention. The ICEMA project has set an excellent best practice example for other conservancies and rural communities to follow, and many of its excellent activities are now being built on by the MCA and the wider CBNRM programme.

## **17. Working Groups**

Working groups in Namibia have played an important role in the past in many aspects relating to biodiversity conservation. The 21 technical working groups set up during the NBP played a central role in implementing Namibia's NBP and in formulating the NBSAP. While these working groups operated with varying degrees of success, the overall achievements of the working groups were excellent and wide-ranging in scope. Many of the working groups were adversely affected by the termination of funding associated with the end of the NBP and the collapse of the BDTF as a coordinating mechanism.

Nevertheless the evidence from Namibia suggests that only a small level of funding is required for these working groups. The alliance of a core group of voluntary dedicated and diverse persons offers a flexible platform for the efficient achievement of objectives. In the case of the NBP's technical working groups, these achievements ranged from policy formulation to the computerization of a vast amount of biodiversity-related data to awareness-raising and knowledge management.

While many of these groups are no longer functional, some have diversified and become more specialized such as the Crane Action Group and the Birds of Prey Action Group. The CPP and CBNRM programmes have both set up cross-sectoral working groups to improve their functioning mechanisms. For example the natural resources working group of the CBNRM programme, coordinated by the NNF, has proved an effective tool to address institutional issues for conservancies as well as livelihood improvement strategies. The integrated natural resources working group of the CPP aims to harmonize the sustainable land management policy environment by identifying and ironing out policy conflicts.

## **18. Synergies in National Implementation of Related Conventions**

Namibia has signed and ratified all of the Rio Conventions: the UN Convention to Combat Desertification (UNCCD), the UN Framework Convention on Climate Change (UNFCCC) and the Convention on Biological Diversity (CBD) and its associated Cartagena Protocol on Bio-safety. Other

relevant Conventions Namibia adheres to include the Ramsar Convention on Wetlands and the Convention on International Trade in Endangered Species (CITES).

Synergies between the Rio Conventions are clearly being pursued through initiatives such as the CPP programme. The linkages between climate change, biodiversity loss and land degradation are well recognized by government institutions, NGOs and donors alike. The Climate Change Adaptation (CCA) Project through the improvement of traditional crops and livestock farming is a good example of the pursuit of such synergies. Studies such as that on the impact of climate change on Namibia's protected areas is another example of how Namibia is exploring the linkages of these conventions.

There is room for improved coordination between the implementation of the CITES and UNCBD conventions. For example threats such as alien invasive species need to be addressed through close collaboration between the implementing agents of these conventions. Stricter control measures with regard to the trade of resources are especially required.

## **19. Biodiversity considered in International Development Assistance Programmes**

Biodiversity is very well considered in international development assistance programmes and typically benefits from support in the focal areas of natural resources management and rural development. Examples of specific bi-lateral investments into biodiversity-related areas include support from the German Agency for Technical Cooperation (GTZ), on behalf of the German Ministry for Economic Cooperation (BMZ), to the MET in the areas of biodiversity and sustainable land management. The German Development Bank (KfW) is supporting various projects such as the strengthening of the management of parks in north-eastern Namibia, and N\$33 million was recently pledged to phase II of this project (MET 2010b). The German Development Service (DED) is also the key supporting agent behind community-forestry projects in northern Namibia. The German Ministry of Education and Research is to invest 50 Mio Euro over the coming 4 years for the establishment of the Regional Science Service Center (RSSC), a newly established transboundary programme with strong biodiversity conservation relevance.

The French Government has also co-financed several of the GEF projects, most notably NACOMA and ICEMA, while the Spanish Agency for Development is also supporting the development of tourist information centres in remote communal conservancies. In addition a national climate change adaptation project (Namibia African Adaptation Project) was launched in 2010 with support from the Government of Japan.

As part of a bilateral agreement between the USA and Namibia, the Millennium Challenge Account (MCA) is implementing some US\$57.2 million worth of funding to improve the management and infrastructure of Etosha National Park and to develop the capacity of communal conservancies to attract investments in ecotourism and to capture a greater share of the revenue generated by tourism. A further US\$25.8 million is being put towards the diversification of livelihoods for rural farmers by the

MCA through support to livestock development and the indigenous natural products industry (CPP in press). The MCA project got underway in 2009 and is set to run for five years.

<b>NBSAP Strategic Objective VII: Integrated Planning for Biodiversity Conservation and Sustainable Development</b>	
<b>Outcome 7.1: Mechanisms for integrating sectoral planning and implementation activities improved</b>	
<b>Progress</b> <ul style="list-style-type: none"> <li>• A new framework for IRLUPs has been developed taking into account environmental considerations and conservancies and community forests as viable land uses</li> <li>• Communal Land Boards fully operational</li> <li>• SEAs and EIAs are now mandatory for a range of activities that may impact negatively on the environment</li> <li>• Awareness-raising on biodiversity issues has increased particularly in light of 2010 being the International Year of Biodiversity</li> </ul>	
<b>Achievement of Specific Targets</b> <ul style="list-style-type: none"> <li>• Sustainable Development Commission established and existing intersectoral fora on land issues strengthened ➡</li> <li>• Seminars, awareness days and written materials targeted at government planners, farmers and other resource users delivered on a regular basis ✓</li> <li>• Working groups of the biodiversity task force and related organisations strengthened and broadened ✗</li> <li>• Bi-annual public fora on biodiversity conservation established ➡</li> </ul>	
<b>Challenges</b> <ul style="list-style-type: none"> <li>• Slow processing of regulations for the Environmental Management Act, which will make SEAs and EIAs legally binding instruments</li> <li>• Slow processing of regulations for the Environmental Management Act has also delayed the establishment of the Sustainable Development Commission</li> <li>• Many working groups collapsed after the termination of the NBDTF</li> </ul>	
<b>Outcome 7.2: Policy and legal frameworks streamlined and reviewed</b>	
<b>Progress</b> <ul style="list-style-type: none"> <li>• Policy review of policies relating to sustainable land management undertaken and recommendations and best practices suggested to improve policy implementation and harmonization</li> <li>• Integrated Natural Resources Working Group set up under the auspices of the CPP programme</li> </ul>	
<b>Achievement of Specific Targets</b> <ul style="list-style-type: none"> <li>• Comprehensive policy review, and agreed revisions to relevant policies and legislation enacted and implemented ➡</li> </ul>	
<b>Challenges</b> <ul style="list-style-type: none"> <li>• Ongoing policy conflict and inappropriate resource uses continue to pose threats to biodiversity conservation</li> </ul>	
<b>Outcome 7.3: Government's decentralization process strengthened through regional biodiversity and environmental management</b>	
<b>Progress</b> <ul style="list-style-type: none"> <li>• The NACOMA project has followed an approach seeking to devolve authority over environmental issues to Regional Councils, Local Authorities and Local Municipalities</li> <li>• Projects such as ICEMA have trained MET Regional Staff in diverse areas such as resource monitoring and IT skills</li> <li>• Restructuring process underway within MET involving measures aimed to increase devolution and decentralization</li> </ul>	
<b>Achievement of Specific Targets</b> <ul style="list-style-type: none"> <li>• Regional Councils' capacities and responsibilities clearly defined through a "vertical" process of dialogue among government and other stakeholders ➡</li> </ul>	

<ul style="list-style-type: none"> <li>• <b>Appropriate capacity building strategies for MET's regional offices formulated and implemented</b> ✓</li> <li>• <b>Appropriate strategy for devolution of biodiversity management responsibility and authority to natural resource managers formulated and implemented</b> ➡</li> </ul>
<p><b>Challenges</b></p> <ul style="list-style-type: none"> <li>• Limited funding</li> <li>• Absence of empowering legislation</li> <li>• Limited involvement by MET's regional and national staff and delays in devolving some of its functions to the sub-national level.</li> </ul>
<p><b>Outcome 7.4:</b>  <b>Partnership between Government, NGOs and the private sector fostered</b></p>
<p><b>Progress</b></p> <ul style="list-style-type: none"> <li>• Private sector has become a key partner in the conservation of biodiversity in Namibia</li> <li>• Key focal areas include supporting conservation-based enterprises and biodiversity-related research, development of private nature reserves and restoration ecology</li> </ul>
<p><b>Achievement of Specific Targets</b></p> <ul style="list-style-type: none"> <li>• <b>At least 20 public-private partnerships for effective biodiversity conservation underway nationwide and demonstrating positive results</b> ✓</li> </ul>