

EXTENDED SUMMARY



MINISTRY OF ENVIRONMENT AND TOURISM

REPUBLIC OF NAMIBIA

POLICY REVIEW

ON ISSUES PERTINENT TO THE IMPROVEMENT OF LAND MANAGEMENT AND BIODIVERSITY CONSERVATION IN NAMIBIA

MARCH 2005

EXTENDED SUMMARY

INTRODUCTION

Desertification and biodiversity loss are recognised as major global issues - ones that are closely linked to climate change, deforestation, water depletion and degradation and, to each other. Much of Namibia is highly vulnerable to desertification and there is a need for all government sectors to acknowledge that coherency between well-formulated multisectoral policies plays a vital role in laying a foundation for combating desertification and biodiversity loss. To this end, an important review of national policies and legislation pertinent to combating desertification in Namibia was undertaken in 1996.

This 1996 report, entitled *Policy factor & Desertification - Analysis & Proposals* (otherwise known as the *Dewdney Report*), identified several important omissions, contradictions and disincentives in Namibia's legislative framework regarding combating and preventing desertification. It found that the policies most pertinent to desertification issues were those relating to: *land management and resettlement reform, water pricing, reviewing drought aid, the integration of natural resource accounts into economic planning, and providing incentives for services*. This report emphasised the economic value of natural resources and the importance of assigning realistic values to natural resources as a means of encouraging sustainable practices.

THE PURPOSE OF THIS STUDY

Since the Dewdney Report several policies have been revised and new ones drafted. The purpose of this desktop study is to analyse these policies with regards to how well they have responded to Dewdney's 1996 recommendations and the degree to which they display coherency with new environmental legislation. In the process, this document aims to increase awareness amongst all sectors and at all levels, of the need for an appropriate and consistent policy environment to promote sustainable land management and biodiversity conservation.

SECTION 1.

BACKGROUND INFORMATION ON DESERTIFICATION & BIODIVERSITY LOSS

DESERTIFICATION

Land degradation in arid, semi-arid and sub-humid areas is called desertification - a phenomenon that is severely exacerbated by drought. Desertification results in a decline in plant cover or in one type of vegetation being replaced with other, less productive, species. Desertification results in a loss of habitat and is one of the major causes of a decline in biodiversity.

The principle processes of desertification include:- *soil erosion; bush encroachment ; soil salinisation; depletion of soil nutrients; and/or the accumulation of pollutants* in the soil. In Namibia, it is estimated that bush encroachment alone currently translates into economic losses of more than N\$700 million per annum.

BIODIVERSITY LOSS

Biodiversity is defined as *the variety and variability among living organisms and the natural environments in which they occur*. Namibia's biodiversity includes innumerable species of wild plants and animals, collectively called 'wildlife'.

Despite the fact that only some wild plants and animals appear to be directly useful to humans as sources of food, fiber, medicine or tourism, all species are of ecological importance. Natural ecosystems provide essential life sustaining services and genetic material - an invaluable resource that is regularly required to enhance domestic crop and livestock resistance to pests and diseases, tolerance to drought and the formation of new medicines. Thus, high species diversity provides insurance against outbreaks of disease or environmental change (e.g. pestilence, droughts and floods). It also provides 'intellectual property' to develop new uses and the commercial use of wild species is rapidly expanding as a result of bio-prospecting. In rural Namibia losses in biodiversity exacerbate an already declining economy.

THE CAUSES OF DESERTIFICATION AND BIODIVERSITY LOSS

Climatic and geographic limitations combined with inappropriate land management, are the main drivers of desertification. Habitat destruction (including that caused by desertification processes) is the most important direct cause of biodiversity loss. The many underlying or root causes of both these environmental issues have considerable overlap and may be listed as follows:-

- i. **Human population pressure**, which results in increasing demand for natural resources (land, wood, water, minerals).
- ii. **Poverty and over-dependence on natural resources.** In the absence of education, technical aid, credit or employment, poor subsistence communities have no choice but to depend on natural resources for their livelihoods. This leads to increasing rates of soil erosion, deforestation and overexploitation of wild plants and animals.
- iii. ***In situ* land management issues.** As a result of population expansion and the erection of fences, traditional agricultural methods are either no longer viable (as in the case of nomadic pastoralism) or have become increasingly unsustainable (as in the case of slash and burn cultivation.). Consequently, the following practices which have become prevalent in Namibia in the last 60 years are considered driving forces with respect to desertification:-
 - Injudicious stocking rates & overgrazing
 - A reduction in the numbers of game (browsers)¹
 - Deforestation
 - Human induced changes to the natural fire regime.
 - Poorly planned/managed irrigation programmes
 - Production of cash crops that do not enhance food security, demand the use of polluting pesticides and fertilisers and force traditional farmers and herders onto marginal land that is vulnerable to degradation
 - Overabstraction of ground water resulting in declining water tables

Some of these land management issues demand further discussion as follows.

Overgrazing. The following factors are likely to encourage freehold farmers to over utilise their land and cause desertification: Uncertainty about *land reform* leading to short-term profit maximisation; low profitability leading to overstocking; and drought relief subsidies which encourage farmers not to destock when the veld condition declines (Dewdney 1996)

Deforestation. Wood is the primary energy source for at least 60% of Namibia's population. In Caprivi 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). However, most deforestation results from land clearing for agriculture. 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.

Human induced changes to the fire regime. High intensity fires play a major role in maintaining open savannas. When cattle farming was introduced natural fires were suppressed and this is believed to be a major cause of bush encroachment in central Namibia (MET, 2004). On the other hand, excessive human induced fires in Caprivi have begun to result in large losses of organic matter and soil nutrients. This exposed soil is particularly susceptible to erosion (Mendelsohn and Roberts 1997).

Poorly planned/managed irrigation programmes. are notorious for causing both desertification and a loss in biodiversity for the following reasons:-

- Local biodiversity is severely threatened when large areas of land are cleared for irrigation projects;

¹ Together with high numbers of grazing cattle, reduced numbers of browsers is considered to be an important cause of bush encroachment (MET 2004)

- Soil salinisation is a common problem associated with poorly managed irrigation. This results in huge losses to soil productivity and demands massive recovery costs if rehabilitation efforts are attempted. An estimated 20% of the world's total irrigated land has been permanently damaged by salinisation, costing farmers roughly US\$ 11 billion each year in reduced harvests (WWI 2001).
 - Irrigation return-flow waters are characteristically contaminated with agro-chemicals and fertiliser runoff. This threatens aquatic biodiversity, downstream fisheries and human health.
 - Irrigation schemes in water poor countries can be responsible for water overabstraction, particularly if they receive large subsidies from government. In these cases the water used costs the farmer much less than it is actually worth which easily leads to wastage and overabstraction.
 - Namibian soils (particularly in the arid and semi-arid areas of the country) are naturally highly saline and therefore susceptible to salinisation. These soils are not suitable for irrigation, particularly with crops that are salt sensitive and they need to be 'flushed' of their salts (a water intensive activity) before irrigation can begin. This first return flow, which contains a high concentration of salts, can be highly polluting – both to adjacent areas of land and to the rivers into which the water is flushed (R.Roeis, MAWRD, *pers comm.*)
- iv. **Poorly planned drought relief programmes.** Inappropriate drought aid (particularly the expansion of poorly planned permanent water points and fodder subsidies) can exacerbate desertification.
- v. **Wealth & inequitable access to land.** Pre-independence imbalances in land distribution can be considered a root cause of land degradation. In post- independent Namibia businessmen or well paid employees who invest in farmland and large herds of cattle, but make little productive use of these investments, control significant areas in both in communal and freehold areas (NPC, 2002) Much of the land occupied by such people in communal areas (as much as 25% in the north central parts of Namibia) has been illegally fenced off - to the detriment of the surrounding land and communities
- vi. **Lack of secure tenure over natural resources** Land tenure influences the terms and conditions under which people use the land they live on and the natural resources (wood, plants and animals) it provides. Without secure tenure there is little incentive for communal farmers to conserve rangelands, prevent soil erosion and limit stock numbers. Although rural communities have been afforded limited user rights over some natural resources through the establishment of conservancies and water-point committees, communities still do not have property rights over land itself. The absence of appropriate tenure over land in the communal areas is believed to be a major cause of the lack of effective systems of local resource management (Dewdney 1994; Jones, 2004; NPC, 2002).
- vii. **Poorly planned resettlement programmes.** Harring and Odendaal (2002) found that the environmental impacts of resettlement had not been taken into account by the governments resettlement programme, nor had the capability of the land been matched to appropriate land uses. Most resettlement farms were not large enough to sustain the number of people settled on them, and no attention had been given to developing institutions for decision-making, and participants were unclear about their land tenure. In 2003 another study revealed that 20% of resettled farms displayed extremely poor veld condition due to overgrazing or poor grazing management (B. Kruger *pers. comm.*)
- viii. **The absence of adequate Land Use Planning (LUP)** *Ad hoc*, sectoral approaches to land use are inefficient and ultimately result in the corrosion of natural capital – including land degradation and biodiversity loss. The current system of LUP in Namibia is complex and often inefficient. Improper economic incentives e.g. livestock/fodder subsidies, and improper economic disincentives, e.g. taxes to wildlife-based tourism, reflect lack of effective land use planning. In addition, none of the current sectoral regional planning exercises carried out by different ministries are statutory or can be legally enforced. These include the “Regional Development Plans” commissioned by MLRGH in 1994, “Regional Development Plans” commissioned by the NPC, and “Integrated Land Use Plans” commissioned by MLRR in 2000 (for Caprivi Region) and in 2001 (for the four north-central regions).
- Namibia's National development plans (NDP1 and NDP2) did not take into account spatial development in terms of present or future land use options to meet the objective of sustainable development. These strategic documents accepted that this would be done by the different sectors during the preparation of their sectoral plans. This has resulted in conflicting goals and lost opportunities with respect to capitalising on Namibia's comparative advantages.

- ix. **Inappropriate pricing mechanisms** including the provision of loans, grants or subsidies that encourage unsustainable, environmentally unfriendly practices (for example: subsidies for water, stock feed, pesticides, fertilisers etc.)
- x. **The science and information gap.** A large number of gaps exist in both information and action with respect to land degradation and biodiversity conservation in Namibia. A lack of trained manpower, inadequate financial resources and poor coordination and planning, restrict progress in improving land use management in Namibia.

In addition to the shared causes of desertification and biodiversity loss summarised above, the following factors are also responsible for a loss in biodiversity:-

- xi. **Pollution** Pesticide residue in particular can be responsible for threatening many aquatic species and the food chains they are part of. NPC (2002) highlights the threat of Persistent Organic Pollutants (POPs) entering the environment and the threats they pose regarding Namibia's meat and fish trade.
- xii. **The introduction of alien invasive organisms** that disrupt ecosystems and threaten the survival of indigenous species.
- xiii. **Water transfer and storage schemes** and the regulation of perennial river flow by dams and weirs. Dams in particular have many impacts and can be responsible for causing a loss of valuable land and the displacement of people and the spread of water borne diseases like Bilharzia
- xiv. **The unsustainable harvesting of wild plants and animals** and wildlife products. In addition to the poaching of rhino and elephant, illegal trade in many of Namibia's succulent plant species, insects, reptiles, birds, and unusual small mammals is believed to be considerable (Barnard, 1998)
- xv. **Cross boundary conservation challenges.** In southern Africa the extensive wildlife herds that migrate seasonally between northern Botswana, north-eastern Namibia, north-western Zimbabwe and parts of Zambia and Angola must be considered as valuable shared resources – together with certain ecosystems (particularly those associated with rivers and wetlands).
- xvi. **Limitations of Namibia's protected areas network.** Namibia's national parks and reserves were not designed for biodiversity conservation. As a result, current protected areas incorporate only nine of the 14 vegetation types described for Namibia, and, although 30% of the Namib Desert area falls within protected land, less than 9%, 8% and 2% of the Woodland, Savannah and Karoo biomes respectively are currently protected (Barnard *et al* 1998). It is these biomes that have been most severely affected by desertification (MET, 2004)

SECTION 2. POLICY REVIEW

2.1 ENVIRONMENTAL POLICIES

The first policies presented in this review are those focused on *environmental issues* and *sustainable development*. All additional policies reviewed (Section 2.2 – 2.8) have implications for natural resource management and, in order to help combat desertification and meet sustainable development challenges should, to one degree or another, dovetail with the key environmental policies mentioned below.

The Namibian Constitution

Since 1990, the Namibian government has adopted a number of policies that promote environmental health and sustainable development. Most of these have their roots in Article 91(c) and Article 95(1), of the Namibian Constitution.

The Green Plan, NDP 2 and Vision 2030

Namibia's Green Plan (1992) identified and analysed the main environmental challenges facing Namibia and specified actions required to address them. Based on the foundation laid by this Plan, an effort was made to incorporate environmental and sustainable development issues and options into the country's second National Development Plan (NDP 2). In addition, Namibia's VISION for 2030 aims to help guide the country's five-year development plans from NDP 3 through to NDP 7 and, at the same time, provide direction to government ministries, the private sector, NGOs and local authorities.

The Environmental Assessment Policy for Sustainable Development & Environmental Conservation (1994)

In the absence of legislation, this policy currently governs environmental impact assessments (EIA's) in Namibia. It provides for the promotion of sustainable development and economic growth while protecting the environment in the long term. This it advocates through the promotion of EIA's as a planning tool for listed policies, programmes and projects. These include any government policy, programme or project on the use of natural resources

The Draft Environmental Management and Assessment Bill

The process of drafting the EMA was locally driven and highly consultative. By December 1998, a sixth and "final" draft of the EMA had been negotiated with the key stakeholders, but by April 2005 the EMA had still not been submitted to Parliament.

The Bill ensures that proponents and decision makers can be held accountable to the public, who in turn, have ample opportunity to inform themselves and to exercise their citizen's rights

The 13 Principles of Environmental Management set out in Part 2 of the EMA are applicable to government institutions and private persons. They are as follows:

- Renewable resources shall be utilised on a sustainable basis for the benefit of current and future generations of Namibians;
- Community involvement in natural resource management and sharing in the benefits arising there from shall be promoted and facilitated;
- Public participation in decision making affecting the environment shall be promoted;
- Fair and equitable access to natural resources shall be promoted;
- Equitable access to sufficient water of acceptable quality and adequate sanitation shall be promoted and the water needs of ecological systems shall be fulfilled to ensure the sustainability of such systems;
- The precautionary principle and the principle of preventative action shall be applied;
- There shall be prior environmental assessment of projects and proposals which may significantly affect the environment or use of natural resources;
- Sustainable development shall be promoted in land use planning;
- Namibia's movable and immovable cultural and natural heritage including its biodiversity shall be protected and respected for the benefit of current and future generations;
- Generators of waste and polluting substances shall adopt the best practicable environmental option to reduce such generation at source;
- The polluter pays principle shall be applied;
- Reduction, re-use and recycling shall be promoted; and
- There shall be no importation of waste into Namibia.

Namibia's 10-year Strategic Plan of Action for Sustainable Development through Biodiversity Conservation

This plan of action comprises an overall goal and 15 basic principles, a comprehensive Strategy outlining a number of priority strategic aims and, for each aim, a set of proposed activities, all organised under 10 broad themes. The following five themes relate directly to land (ecosystem) management:

#1 Conserving biodiversity in priority areas; #3 Monitoring, predicting and coping with environmental change and threats; #4 Sustainable land management; #5 Sustainable wetland management; #6 Sustainable coastal and marine ecosystem management

Access to Genetic Resources and Associated Traditional Knowledge Bill -- 3rd Draft, October 2003

The stated *aims* of this Bill are:

- To ensure the *conservation, evaluation and sustainable use of genetic resources* and associated *traditional knowledge and technologies* in order to maintain and improve their diversity as a means of sustaining the life support systems;
- To recognize, protect and support the inalienable *rights of local communities* over their genetic resources and associated traditional knowledge and technologies;
- To provide an appropriate *system of access to genetic resources and associated traditional knowledge and technologies* ;
- To promote *appropriate mechanisms for a fair and equitable sharing of benefits* arising from the use of genetic resources and associated traditional knowledge and technologies;
- To ensure the *effective participation of concerned communities*, with a particular focus on women, in making decisions as regards the distribution of benefits which may derive from the use of their genetic resources and associated traditional knowledge and technologies;
- To promote and encourage the building of *national and grassroots scientific and technological capacity* relevant to the conservation and sustainable use of genetic resources;
- To provide *appropriate institutional mechanisms* for the effective implementation and enforcement of the rights of local communities and the conditions of access to genetic resources and associated traditional knowledge and technologies;
- To promote the *conservation, evaluation and sustainable utilisation of plant genetic resources* including those of horticultural, silvicultural and medicinal value with a particular focus on the major role women play;
- To ensure that *plant genetic resources* are utilised in an effective and equitable manner in order to *strengthen the food security of the nation*.

This Bill represents national legislation reflecting CBD (Convention on Biological Diversity) principles and provisions on ABS (Access and Benefit-sharing) issues.

Nature Conservation Ordinance of 1975, and Nature Conservation Amendment Act (1996)

Matters pertaining to nature conservation, parks and wildlife management are still being regulated by – and the national environmental permitting system is still based on - *the Nature Conservation Ordinance of 1975*.

One of the most important amendments to the Nature Conservation Ordinance was the *Nature Conservation Amendment Act of 1996* that legally established the principle of exclusive use rights to wildlife in communal areas and introduced the term ‘conservancy’ as a group of persons residing on communal land and having exclusive use and management rights for game animals. The passing of this Act is widely regarded as one of Namibia’s most progressive legislative achievements since independence.

Draft Wildlife Management Bill (2002)

Updated Parks and Wildlife legislation, superseding and repealing the pre-independence *Nature Conservation Ordinance of 1975* is expected to be tabled in parliament soon. The following principles and guidelines, extracted and/summarised from the Draft Wildlife Management Bill (June, 2002 version), have particular relevance to desertification and biodiversity conservation

- ***Principles of conservation.*** Which state that: Biological diversity must be maintained; Essential ecological processes and life support systems must be maintained, and where necessary, rehabilitated; Sustainable use of wild populations should be promoted; Access to benefits from

wildlife production and utilization should be equitable and Authority over wildlife should be devolved to the lowest level possible.

- *Co-operative management of protected areas*
- *Management plans*
- *Land tenure in protected areas.*Section 28 “Land tenure and protected areas” appears in some drafts of the Bill but not others (despite the fact that both versions we scrutinised are dated June 2002).

The Waste Management and Pollution Control Bill

As soon as this important law has been passed by parliament, it will provide a co-ordinating framework for waste management in Namibia. This legislation will pave the way for the establishment of the proposed *Pollution Control and Waste Management Agency*, which will oversee efforts to prevent and regulate the discharge of contaminants into the air, water and land. Strict enforcement will guarantee that “Polluter Pays” principles are put in place - thus ensuring that businesses, companies and manufacturers, including tourism enterprises, hold the ultimate responsibility for cleaning up their own polluting wastes.

2.2 LAND POLICY

Recommendations for land policy

Issues pertaining to land use, land use planning, resettlement and tenure (over all resources) are central to combating desertification and a loss in biodiversity. Therefore, interfaces occur between land policies and those pertaining to agriculture, tourism, mining, urban and rural development.

Dewdney identified the following issues that contribute to desertification:

- ◆ The absence of an integrated land policy. This placed a constraint on planning which inadvertently encouraged the overuse of natural resources.
- ◆ Uncertainty by freehold farmers with respect to land reforms which would lead them to take a short-term view regarding resource utilisation.
- ◆ Failure to address all potential land uses in the land reform process. This downplays the importance of non-agricultural land use such as wildlife tourism, which in areas vulnerable to desertification, could be more sustainable than agriculture.
- ◆ Poor planning and design of resettlement programme.

Ultimately, land-use and resettlement policies and programmes should concentrate on supporting serious farmers² and impoverished communal farmers that have no choice but to live off the land. These policies should provide incentives to persuade absentee farmers and wealthy people who illegally fence off large areas of communal land (Section 1.3 in main document) to make their land available for other users and other purposes.

Dewdney’s report includes recommendations largely pertaining to the development of an environmentally sound and equitable strategy for resettlement as well as securing land tenure for communities, establishing resource use rights and fees & placing a moratorium on illegal fencing off of communal land.

National Land Policy (NLP) 1998

The NLP has no internal contradictions and is largely consistent with the National Agricultural Policy, Dewdney’s recommendations and the aims of combating desertification. It reflects a strategic decision in favour of ‘communalising’ communal areas (rather than ‘commercialising’ communal areas), removing fences (or at least preventing any new ones), purchasing neighbouring commercial farms (as much as

² “Serious” farmers are those who make productive use of their land to generate revenue that contributes to large proportions of their incomes. Such farmers are to be found in both communal and freehold areas. Their crop harvests and part of their livestock herd are consumed locally and/or exported

possible), and moving large communal farmers to commercial areas – to sustain the greatest number of people in communal areas and to minimise land degradation.

However, it is important to note that:-

- Several important terms including, ‘economic unit’, ‘economically viable size’, ‘under-utilised’ land, are not adequately defined in this Policy.
- Despite suggesting a moratorium on any new fencing it remains to be seen what progress has since been made on this issue.
- Although the NLP recognises that the MLRR has primary responsibility for administering the policy, and that cross-sectoral collaboration will be sought with MAWRD, MRLGH and MTI, it makes no mention of consultation with the MET, the ministry responsible for environmental affairs, Environmental Impact Assessment, wildlife conservation and waste management.
- Capacity-building to develop community institutions capable of allocating land rights and managing natural resources sustainably is happening with the Conservancies and, to a lesser extent, with other local-level community institutions (water point committees, grazing committees, etc). However, it remains to be seen how the Regional Land Boards have fared.
- There is no indication in the policy whether *the natural resource user fee* (targeted at grazing land) is to be progressive (so as to encourage re-distribution of income) and it seems that the fee is to be collected, managed and spent by the Regional Councils (rather than at the community level, as recommended by Dewdney). If this does occur there is a risk that most of the proceeds from levying the fee will be spent within the Regional Councils and not directly invested back into those local natural resources (e.g. grazing land) on which the fees are levied
- Dewdney’s recommendation not to target commercial land that is ‘under-utilised’ for sound environmental reasons is not taken up by NLP. Using ‘under-developed’ commercial land for re-settlement purposes is one of the provisions of the Agricultural (Commercial) Land Reform Act, which is re-iterated in the NLP. However, no definition for ‘under-utilised’ is given in the Act or the NLP.

National Resettlement Policy (NRP) 2000

- Although the NRP advocates social development programmes, this does not appear to include environmental education or capacity building programmes aimed specifically at sustainable development.
- The NRP appears to recognise that some land in the southern parts of the country may have to be left ‘under-utilised’, at least for the time being, for sound environmental reasons. However, neither this policy nor the NLP attempt to make an explicit distinction between different reasons for which land may be ‘under-utilised’ nor do they acknowledge (as it is in the National Drought Policy & Strategy) that low rainfall in many parts of Namibia is a normal phenomenon.
- The NRP objective “... to give target groups an opportunity... to produce their own food with a view towards self-sufficiency” requires comment. If ‘self-sufficiency’ is meant to be ‘food self-sufficiency’ –then this contradicts the 1995 National Agricultural Policy (NAP) where ‘household food security’ (rather than ‘food self-sufficiency’) is advocated as an objective. On the other hand, NDP1 states that ‘food self-sufficiency’ is a national objective. It is possible, however, that ‘self-sufficiency’ here is meant as something broader, i.e. self-reliance or the capacity to be self-supporting. Whichever way, this should be made clear.
- The NRP objective “... to alleviate human and livestock pressure in communal areas” is explicitly environmental. Taken together with the three key elements of a resettlement programme that are stated in the National Land Policy, this objective recognises the important role that a resettlement programme based on ‘communalising’ communal lands can play in reversing or preventing natural resource degradation in communal lands.
- *Relinquishing any agricultural land rights elsewhere* is consistent with the ‘prohibition of dual grazing rights’ provision of the National Land Policy.
- It is not clear how the ‘no more livestock than can be supported by the carrying capacity of receiving land’ criterion will be implemented. In non-equilibrium range systems characterised by highly variable rainfall and grazing resources in space and time, the carrying capacity of given pieces of land changes all the time.

- The criterion for “*settlers to support input cost recovery...*” for the delivery of services is a positive one that is in accordance with the IWDM aims of the Water Policy and Dewdney’s recommendation that direct subsidies for water are removed to encourage more efficient water use. However, this criterion should be formulated more tightly by clearly indicating time frames for the cost recovery of services.

Communal Land Reform Act (CLRA) 2002

- The CLRA appears to be largely consistent with the National Land Policy - although not all NLP provisions are taken up (e.g. it makes no mention about natural resource user fees).
- The Act does not specifically provide for secure group land tenure, nor does it specifically preclude group tenure rights. When read with the section of the National Land Policy that provides for legally constituted bodies and institutions to exercise joint ownership rights as a category of land holder, the Act could be used by conservancies, for example, to try to obtain group tenure.
- Although the communal land fencing issue is addressed, it remains to be seen how this sensitive political issue is/ will be handled in practice.
- Despite stating that committees may be established to investigate a variety of claims relating to land degradation and impacts from prospecting, mining, roadworks and the use of water resources it appears that no regulations have been formulated and passed, subsequent to the passing of the Act.

Regarding, specifically, issues pertaining to *Biodiversity Loss* this Act :-

- Does not appear to prohibit the allocation of communal land that contains sensitive ecosystems or threatened biodiversity.
- Does not ensure that leasehold agreements include an “environmental contract” between the recipients of large tracts of land and the Communal Land Board. This contract should contain management plans for biodiversity conservation, commercial agriculture and conservancies.
- Makes no provision to ensure that the use of chemical pesticides, fertilisers and the mechanical clearing of land, burning and other practices that can cause land degradation or pollution are regulated.
- Does not dovetail with the Environmental Management and Assessment Bill, which is likely to result in jurisdictional overlaps and conflicts during implementation.

With respect to Dewdney’s recommendations regarding Land Policy:

- CLRA takes a strong position against erecting fences on communal land. This also seems to imply a strategic decision in favour of ‘communalising’ communal areas (rather than ‘commercialising’ them) [see Box 2.1 in the main document]
- It seems that both customary rights tenure and leasehold rights tenure can, by implication, be applied for and held by groups as well as individuals, although there do not seem to be any explicit provisions to this effect in the Act (see comment 5 on NLP).
- CLRA is *silent about the possibility of introducing natural resource user fees*, even though the NLP encourages and empowers Regional Land Boards (not Communal Land Boards!) to introduce such fees. Section 29 dealing with grazing rights makes no mention about grazing fees, even though resource user fees were to be specifically targeted at grazing land.

Agricultural (Commercial) Land Reform Act (ACLRA) 1995

- The definition and interpretation of ‘*under-utilised*’ land and ‘*economic unit*’ is not clear from the Act and apparently has not yet been resolved. As discussed in the National Land Policy (NLP) these terms need to be adequately defined.
- The provision (Art. 44 (2)) which refers to the ... *practice of sound methods of good husbandry, and proper care and maintenance of improvements on the farming unit*, is vague and leaves a lot of room for interpretation regarding appropriate land use and management.

National Land Use Planning Policy (NLUPP) 2002

Land use planning is a vital management tool for combating desertification and biodiversity loss. In order to be successful it demands support from integrated, cross sectoral policies and plans that can be legally enforced.

- An integrated land use planning and management system, as proposed by NLUPP, would present, at least in principle, an ideal framework for sustainable land resource use.
- As noted by NLUPP, the key challenge to appropriate land use is the ability to put in place effective institutional linkages between planning on the one hand and implementation and enforcement on the other.
- Many constraints would have to be overcome to make an integrated land use planning and management system work in practice – including inadequate human resources, institutional capacity (e.g. Regional Councils), proven mechanisms to co-ordinate and co-operate among different role players at different levels, and relevant information and knowledge.
- Under the heading of Guidelines for agricultural land use the static ‘carrying capacity’ concept is ill-suited for highly variable non-equilibrium ecological systems such as rangelands in dryland regions. Also, extension services have traditionally suffered from fragmentation along sectoral lines (crops, livestock, forestry, etc); a more effectively integrated extension service remains a real need and great challenge in Namibia.

2.3 AGRICULTURAL POLICY

Recommendations for agricultural policy

Agricultural activities have a direct impact on desertification and biodiversity loss, and it is essential that agricultural policies address the underlying causes (subsidies, lack of land tenure, poverty/wealth etc) of *sedentarism & illegal fencing, injudicious stocking rates & overgrazing, increasing numbers of human induced fires and poorly managed irrigation programmes.*

In Namibia it is essential that agricultural policy acknowledge the country’s topographical limitations as a result of naturally low, highly variable rainfall and poor soils. In addition, the *food self-sufficiency vs. food security* confusion must be addressed as must the production of water thirsty crops that do not enhance food security and demand the use of polluting pesticides and fertilisers (see Section 1.3, point iii main document).

The National Agricultural Policy (NAP) 1995

- The NAP displays a sustainable natural resource management element and shows general awareness regarding the importance of safeguarding the environment.
- Desertification and resource degradation are explicitly mentioned as policy concerns.
- Reference is made to (the development of) a national resource-use strategy, EIA Policy implementation, (a review of) the Soil Conservation Act, and introduction of natural resource user fees. However, it is not clear how and by whom this will be achieved. In addition, specific strategies needed to reduce environmental impacts associated with irrigation in dryland areas (soil salinisation, pesticide run-off and control over the use of potentially polluting fertilisers) are not mentioned. Increasing pollution from these substances could threaten Namibia’s future economic growth, particularly regarding important food exports.
- A policy of this nature requires a closely aligned strategic framework to guide its implementation. While NAP tells us *what to do*, a detailed *Agricultural Sector Strategy* should tell us *how to do it*. Chapter 5 of the NAP (entitled: *A Strategic Framework for Policy Implementation*) appears to provide very scant information regarding what is required. NAP’s Foreword refers to ‘*work on the (Agricultural Sector) Strategy having already begun*’ within MAWRD. However, the MAWRD confirms that no such Strategy has yet been developed³.

³ The 1995 policy is currently under revision and a spokesperson from MAWRD has stated that the new revised Policy will be accompanied by a Strategy document

- While it is generally accepted that there is no potential to intensify veld grazing without increasing land degradation in the country, the National Agricultural Policy proposes the expansion of livestock production onto under utilised'' land north of the Veterinary Cordon Fence.

Consistency with Dewdney's recommendations on Agricultural Policy are summarised as follows:-

Recommendation 1 NAP promotes household food security and is therefore consistent with Dewdney's first recommendation for Agricultural Policy

Recommendation 3 NAP stipulates that subsidies, taxes, and any other form of government intervention that distort the prices of farm inputs and outputs, and discourage private investment and participation will be phased out. On the other hand, subsidies will continue to be used to alleviate poverty and as a means of drought relief, albeit in a cautious, transparent and temporary fashion and only in well-targeted programmes (Para 96). The environmental implications of livestock subsidies (e.g land degradation due to overstocking and overgrazing) are not specifically addressed.

Recommendation 4 NAP mentions an "appropriate drought relief and rehabilitation mechanism" under a long-term drought preparedness planning system. However, it does not spell out what this mechanism is, or how it might differ from past practices.

Recommendation 5 NAP refers to the Communal Land Reform Bill (now passed as law) in arguing for a flexible land tenure system on communal land and for greater security of tenure for farmers. However, it does not mention this important issue in any depth.

Recommendation 6 Regarding the provision of savings alternatives the NAP mentions the removal of legal and regulatory constraints to savings mobilisation to encourage communal farmers to deposit their money in banking institutions. Although there is reference to mobilising rural savings through support of self-help groups, savings and credit cooperatives and private organisations, issues pertaining to the lack of access to banks in the remote communal areas and creating awareness amongst communal farmers are not addressed explicitly.

Recommendation 7 The necessity to raise productivity of existing land (given the scarcity of available productive land) is recognised under section "Land Use and Tenurial Security" (Paras 153 – 162). The role of the private sector in the provision of inputs is also stressed. So is the need for removing/ avoiding distortions in input (and output) markets due to government intervention so as not to discourage private sector investment.

Recommendation 8 NAP promotes agro-industries, investment into such industries and incentives to encourage investment in such industries. However, no detail is given about the kind of investment incentives and how they fit into the NACP (National Agricultural Credit Programme mentioned as being implemented by the Agricultural Bank of Namibia). Since NACP started in 1995/96, NAP could not build on any experience with NACP.

Recommendation 9 Para 106 refers to subsidies for special targeted credit schemes in exceptional cases as well as to loan guarantees where collateral requirements cannot be met, targeted at economically disadvantaged groups. Para 109 mentions rural savings mobilisation through support to self-help groups, savings and credit cooperatives and private organisations. The extent of the problem and the extent to which these mechanisms will address the problem are not clear.

Recommendation 10 Research into the costs and benefits of different stocking/restocking mechanisms is not specifically mentioned under the "Research" section of the NAP.

The Green Scheme Policy (GSP) 2003

The GSP is comprehensive, spelling out its different aspects in considerable detail. The model it proposes looks attractive in principle. From an environmental point of view, due attention is given to EIA requirements and sound water pricing methods. In practice, however, the GSP appears overly ambitious and it is likely that it will be difficult to implement. The potential implications for land degradation and biodiversity loss as a result of the Green Scheme's expansion of irrigation projects are large. Superimposed over this are potential socio-economic and political implications.

The following observations are made by this consultancy regarding the GSP:

- The GSP is largely silent on irrigation project experience in Namibia, for example, the successes and failures of table grape enterprises on the Orange River; problems with soil salinisation, etc). Under

section 3.1 (Institutional framework), a “background of existing projects” is given (p.9), but the information does not shed any light on irrigation experience and lessons learned so far in Namibia.

- GSP appears to assume that Namibia’s potential for irrigated agriculture is enormous, that irrigated agriculture could (if developed judiciously) become a motor behind rural development and address a host of other problems as well, and that in the longer term (through training and capacity building efforts) the country could even turn into an exporter of irrigation know-how and skills within the region (sub-section 7.2.13, p.52). There is no mention/ appreciation of the fact that Namibia is the driest country south of the Sahara and water is extremely scarce, and that all of the country’s interior rivers are ephemeral, with only localised physical irrigation potential existing mainly along the perennial rivers forming the northern and southern borders of Namibia. (Not to mention other constraints like relative lack of irrigation experience and private sector capacity.)
- For a water-scarce country like Namibia, it makes strategic sense to focus on those domestic economic production opportunities that maximise the economic value per unit of water used, while importing ‘virtual water’, wherever possible (through the importation of more water-intensive goods and services, including food items), rather than producing them at home for domestic use and export. The GSP seems to go into the opposite direction.
- GSP appears to equate food security with food self-sufficiency, although the food security goal of NDP2 has moved away from the food self-sufficiency goal of NDP1. Food self-sufficiency would, of course, imply much more massive irrigation investments and excessive water use.
- Apart from institutional arrangements, the economic viability of crop irrigation (or the extent and cost of government subsidisation necessary to make irrigation enterprises financially viable) is not clear and are clearly unattractive, particularly when the transaction costs associated with the proposed complex institutional arrangements (designed to enhance the social benefits of irrigated agriculture) are factored in. There are indications that most irrigation schemes in Namibia (and other water scarce countries throughout the world) have been loss-making economically and very wasteful in water use. Without some hard economic analysis, it is difficult to see how Green Scheme initiatives might fare better.
- The effective functioning of the proposed Green Scheme Co-ordinating Committee (GSCC) clearly is central to the success of the GSP. Yet the role of the GSCC is rather unclear, in that it is given a wide range of (potentially conflicting) responsibilities – advisory, coordinating, promotional, monitoring/ regulatory, etc. It is hard to see how the GSCC could do all these things at the same time and remain focused and effective. It is not inconceivable that the GSCC could end up promoting GS initiatives, at the expense of their crucial appraisal/ monitoring/ watchdog role.

2.4 DROUGHT POLICY

Recommendations for coping with drought

Inappropriate drought aid (particularly the expansion of poorly planned permanent water points) can exacerbate desertification (UCT, 1998). The resultant reduction in land productivity increases farmers’ vulnerability to drought. Therefore drought preparedness plans should involve environmental impact assessments and efforts to combat soil erosion, soil salinisation and bush encroachment (Dewdney, 1996; MET 2004).

Previous drought programmes have been criticised for the following reasons:

- They provided no adequate definition of drought. This meant that drought declarations were largely determined *ad hoc*;
- The Government has borne the responsibility for risk management and has financed and delivered relief programmes during drought. This discouraged farmers from adopting risk-minimising farming practices;
- A number of drought programmes, including the fodder and lick subsidies, have led to unsustainable farming practices which in turn have been a direct cause of land degradation and biodiversity loss;
- ‘Vulnerable group’ food distribution programmes during drought have been inefficient, poorly targeted, and of limited impact in ensuring household food security.

In order to help combat desertification and biodiversity loss in Namibia it is recommended that all the above issues be addressed. In addition all drought preparedness plans should undergo routine EIA's. Ideally the entire programme should be subjected to a strategic Environmental Assessment.

National Drought Policy & Strategy (NDPS) 1997

The NDPS's is supportive of and consistent with the aims of combating desertification and achieving sustainable development. It offers a promising new approach and focus by shifting responsibility for managing drought risk from government to the farmer. It expects farmers to contribute to the National Drought Fund, seeking to depart from earlier practices that have created dependency among farmers on Government handouts. However the successful implementation of this policy demands cross sectoral commitment on issues pertaining to *decentralisation, land user rights, poverty reduction, water pricing and demand management, tax provisions⁴, adequate agricultural research, extension and training, & veterinary services, agricultural finance & marketing* as well as *improved weather information gathering, analysis and dissemination*.

While Dewdney's recommendations to overhaul Namibia's old Drought Aid Scheme are fully reflected in NDPS, it remains to be seen how far the action plans and broader implementation have advanced on the ground, and to what extent recent drought emergency measures in 2002 –2003 were consistent with the NDPS.

2.5 WATER POLICY

Recommendations for water policy

Water policy plays a pivotal role in combating desertification and biodiversity loss for the following reasons:

- Over abstraction of water can result in a lowering of the water table, which threatens riparian vegetation and soil stability.
- Dams, irrigation pumps and other engineered water supply works are capable of altering the amount and location of available water for human uses and for sustaining riverine forests and aquatic ecosystems.
- Irrigation in arid countries like Namibia is linked to soil salinisation and water pollution.

Ultimately, in countries as arid as Namibia, maintaining healthy aquatic ecosystems is essential and, from a sustainable development point of view, all ecosystems should be provided with sufficient clean water to meet their ecological water requirements (Amakali *et al* 2002; WRI, 2001; UNEP 2002).

Dewdney gave 22 recommendations for Water Policy – largely pertaining to adequate water pricing and integrated water demand management . He identified past pricing policy as a key factor in contributing to the unsustainable use of water. Subsidised water prices encourage high consumption and the development of water intensive industries (such as irrigated agriculture) without clear indications of the socio-economic benefits. He emphasised the need for water pricing to reflect the full cost of water provision as well as the opportunity cost, as water conservation efforts appear to have little impact in the absence of appropriate pricing levels. In rural areas Dewdney found that the fact that most communities did not contribute towards water costs created unsustainable expectations and led to wasteful consumption.

Poor planning of the siting of water points has encouraged sedentarism and grazing in areas previously used only seasonally, increasing vulnerability to droughts. Extraction of water upstream on ephemeral rivers reduced availability of water to downstream users and negatively affected downstream ecosystems.

In summary the broad recommendations regarding water policy in Namibia include:-

⁴ It is critical to ensure that the tax system is neutral with respect to the responses that farmers make to changing rainfall; e.g. the tax system should not deter farmers from de-stocking in times of drought;

- **Water conservation** initiatives including the gradual phasing in of water pricing to allow for cost-recovery and *water demand management*, greater water end-use efficiency (in given sectors), wastewater re-use and re-cycling and the use of economic, educational, regulatory, operational and technical instruments.
- The need for all planning agencies to **recognise that water is a scarce resource**,
- **Inter-sectoral co-ordination**, so as to increase the efficiency of water allocation among competing water sectors and uses .
- Consideration of the **high opportunity cost of irrigation**,
- **Abolishing water subsidies** for irrigation projects
- **Planning rural water points** (with respect to the spacing of water points, the type of installations used and seasonal water requirements) & taking into consideration the impacts of water provision on grazing.
- **Ensuring co-ordination of water use and management across riparian countries** to prevent depletion and degradation that may be associated with cross-border effects of the use of water from international water bodies.
- **Improving waste management** to reduce the impacts of : agricultural return flows (which may contain pesticides and fertilisers); leachate from rubbish dumps and poorly designed landfill sites; leakage from buried fuel tanks or containers containing hazardous waste; mining and industrial waste
- **Setting aside water for aquatic ecosystems** ('water for environmental flows') should be incorporated into the policies and legislation of all agencies that use water.

The following documents were reviewed: **National Water Policy White Paper (NWPWP) 2000; Water Resources Management Bill (WRMB) 2001 ; The Water Supply and Sanitation Policy (1993)** and **The Namibia Water Corporation Act (1997)**.

Comments are summarised as follows.

- The principles of the NWPWP and the WRMB are largely consistent with sustainable natural resource management. However, the strategies they suggest are rather sweeping - in some cases resembling principles more than strategies. Thus, there is a need for action plans that operationalise what needs to be done, how, and in what order of priority. Ultimately, there is a need to judge NWPWP against what is being implemented on the ground.
- The 'actual costs' under 'tariff setting' should not only mean short-run costs but also long-run costs (including those of infrastructure expansion), this should be made explicit in the NWPWP and the WRMB.
- Although the draft Water Bill is largely consistent with the water policy white paper, the section entitled "Environmental Water Reserves" in the NWPWP which states that "*The legislation will provide for determining an environmental reserve for freshwater sources before they can be used to supply any other demand than domestic and subsistence livestock watering*" has been changed to "Priority Allocation" in the latest (2001) draft of the Water Bill. Amakali *et al* 2002 state that this contradicts the Legislative and Regulatory Principles of the water policy, although the final draft of the Bill does provide for environmental water needs under the heading of "Allocations for Priority Purposes" under "Power of the Minister to Reserve Water Resources". Paragraph 40 states that: "*The Minister may...reserve part or all of the flow of a watercourse... to meet the domestic uses of the population, through the provision of adequate and safe supplies of water; and reasonably protect aquatic and wetland ecosystems, including their biological diversity and to maintain essential ecosystem functions.*"
- The Water Resources Management Agency and Basin Management Committees are yet to be established and the regulations to guide the activities of these have yet to be compiled.
- The requirement to conduct environmental impact assessments for water projects is adequately taken into account in the draft *Environmental Management and Assessment Bill* yet to be passed, but is not dealt with in any detail in the draft *Water Resource Management Bill*.

Consistency with the Dewdney Report recommendations are summarised as follows:

Recommendation 1. NWPWP does espouse charging for water and cost recovery, but is silent on the speed with which higher charges are to be introduced. The NWPWP makes no distinction between short-run and long-run cost levels. In practice, urban residential consumers seem to be paying rates close to cost

recovery, while industrial and rural consumers are generally subsidised, and in some cases (rural water supply; irrigation) pay very little or nothing for water.

Recommendation 2. NWPWP is silent on whether regional variations in costs should be reflected in regional variations in price.

Recommendation 3. NWPWP argues for progressive stepped tariffs (i.e. rising block tariffs) in urban areas – and also in favour of cross-subsidisation, at least in principle (i.e. finding an appropriate balance between equity and efficiency in tariff setting), even though the term ‘cross-subsidisation’ does not seem to be used.

Recommendation 4. The principle of internalisation of external costs is taken on board, at least in part, by NWPWP in that “tariff setting is to take into account ‘environmental degradation’ (as well as ‘actual costs’ and ‘opportunity costs’). But external costs include positive as well as negative externalities, not just environmental degradation (a negative externality).

Recommendation 5. NWPWP states “*tariff setting will take into account actual costs, environmental degradation and opportunity costs*”. So, the principle of charging water prices equal to estimated opportunity cost (where this is thought to be higher than financial cost, as is likely for some ephemeral rivers and irrigation schemes) appears to be accepted. But it is not clear how and when this might happen in practice.

Recommendation 6. NWPWP espouses a system of water management using a suitable combination of market-based instruments (pricing, tariffs, etc) and regulations (permits for water abstraction, pollution emissions, etc). Where markets do not function properly, such as in many rural areas, access to water resources is (to be) planned and regulated, on the basis of the subsidiary principal (planning and management at the lowest appropriate level -- e.g. water point committees and water associations). There is broad consistency with Dewdney’s recommendation.

Recommendation 7. The Water Bill has not yet been enacted – the functions of the proposed Namibian Water Resources Board are not clear at this point.

Recommendation 8. The principle of full cost recovery (at least short-run costs) for urban consumers seems to be accepted in Namibia (and urban water prices seem to have reached levels close to cost recovery), although this does not appear to be stated explicitly in NWPWP.

Recommendation 9. Institutional arrangements with respect to *primary* responsibility for water demand management (WDM) are not addressed in NWPWP (although the principle of WDM is supported) and given that the Water Bill has not yet been enacted, it is premature to speculate about the role of the proposed Water Resources Board in this respect. While in the recent past WDM principles/ tools have been supported and implemented in practice, notably in the municipality of Windhoek, the push for more WDM appears to have weakened as of late (even in Windhoek Municipality, in the absence of some of the previous prime movers).

Recommendation 10. The principle of paying for water, even in rural areas, is accepted by NWPWP, but the time frame over which full cost recovery will be achieved is unclear – Dewdney’s recommendation of cost recovery within 4-5 years (i.e. by 2001) has not been achieved. The option of maintaining subsidies on the basis of ability-to-pay is anchored in NWPWP.

Recommendation 11. NWPWP is silent on integrating water point location and management within broader local natural resource management. The National Land Policy (NLP) provides for “*tenure rights to include all renewable natural resources on the land, subject to sustainable utilisation and the details of sectoral policy and legislation*”, but does not address integrated natural resource management aspects.

Recommendation 12. NWPWP provides no indication of whether water costs in rural areas may be recovered as part of an integrated natural resource user fee. NLP encourages and empowers Regional Land Boards to introduce a natural resource user fee, specifically targeted at grazing land, but no recommendation/ indication is given of whether the fee should include water costs, be progressive, and/or be based on livestock numbers.

Recommendation 13. The NWPWP is silent on the issue of limits on the proximity of rural water points or other aspects of better planning for location, type and seasonality of water points.

Recommendation 14. Catchment-based management and planning is one of the tenets of NWPWP, likely to be enshrined in forthcoming legislation (Water Bill). Resource allocations to (and capacity of) catchment councils are issues that new Water Bill will address.

Recommendation 15. The NWPWP is not specific on any tighter controls on water extraction by commercial farmers.

Recommendation 16. NWPWP sets out strategies to discourage ‘low-value high-volume water use’, promote ‘imports of virtual water’, and remove ‘subsidies that encourage wasteful use of water resources’, but is not specific on irrigation projects and whether/when they should move to full cost recovery and thereafter opportunity cost water pricing. Irrigation is specifically addressed in the National Agricultural Policy (NAP), Paras 136-141, but while greater cost recovery is encouraged there, no timeframes are given (see section 2.2 and point 17 below).

Recommendation 17. The NAP – rather than NWPWP – does advocate that “*irrigation schemes should not be encouraged, unless they are economically viable, technically feasible and environmentally sound – as determined by cost-benefit analyses and EIAs*” and also states that “*the current uneconomic use of water (in irrigation) is due in part to failure to apply appropriate water tariffs to encourage economic water use*”.

Recommendation 18. NAP does support the use of cost-benefit analyses in assessing the economic viability of irrigation projects, but is not specific on how “socio-economic benefits” should be quantified (or whether special regulations to that effect should be introduced).

Recommendation 19. There are no provisions, neither in NAP nor in NWPWP, on the issue of (avoiding) irrigation projects on ephemeral rivers.

Recommendation 20, 21, 22 (pertaining to Research) are not addressed in NWPWP.

2.6 FORESTRY POLICY

Recommendations regarding Forestry policies

Deforestation of natural forests has important implications for *soil erosion, biodiversity loss and global warming*. Attempts to achieve sustainable management of forests and forest products (timber, fruits, animals, medicinal plants) include improving *wood-use efficiency, controlling the fire regime* (slash and burn practices), encouraging the use of *alternative energy and building materials* in rural areas, providing *tenure over all forest products*, developing *community forest management programmes* and conducting strict *EIA's* for all agricultural projects that require the clearance of natural forest. *Afforestation and reforestation programmes* that favour fast growing exotic species may help solve some of the problems associated with deforestation but they are unable to support indigenous biodiversity and can cause detrimental changes to the soil.

Ideally, Forest Policies should address all of these issues and dovetail with the environmental, agricultural and energy policies discussed in Sections 2.1, 2.3 and 2.7.

Dewdney reports that the main Forestry sector (and policy) issue relating to desertification is that *forest resources are generally unpriced* and that there is *no secure tenure over forest resources*. The combination of these two factors has led to excessive use with demand exceeding supply. In summary Dewdney recommended that :-

- Communities be granted *secure tenure* over forestry resources,
- Forestry conservancies should be developed,
- Conservation priorities should be focussed on rather than the goal of having “a minimum of one tenth of the total land area of the country under forest or tree cover” as stated in the 1993 *National Forestry Policy*
- The goal of self-sufficiency in wood products is abandoned and instead, alternative energy sources and building materials are promoted

The Development Forestry Policy (2001), Forestry Strategic Plan (1996) and the Forestry Act (2001) were reviewed. The new DFP and Forestry Act appear to be environmentally sound – at least partially addressing issues pertaining to *fire control, tenure, the development of community forest management programmes* and acknowledging *the need for EIAs*. They reflect some, but not all of Dewdney’s recommendations specifically:-

- The objective of declaring 1/10th of Namibia state forest and related goal of self-sufficiency in wood products have been abandoned

- Communities are empowered to manage forest resources and are given secure tenure over forest resources - but not explicitly within a holistic NRM framework (comprising all natural resources).
- *The Forestry Act* provides for the declaration of state forest reserves, but *does not develop strict criteria to justify such declaration* – Section 13 (2)(a) merely states that such declaration is for the purposes of managing forest resources of national importance or to preserve the ecosystems and other components of biological diversity. Nor is the need for such criteria recognised under Part VIII, since the listed matters requiring regulations do not include criteria for declaring state reserves.
- The new DFP of 2001 (and the Forestry Strategic Plan of 1996 do place emphasis on *agro-forestry* and the acknowledgment regarding the need for EIA's should act as a deterrent for environmentally damaging projects
- Introduction of *forestry extension* is highlighted in the DFP. Extension services are to include specialised staff (for addressing issues of increasing forestry productivity) as well as general staff (for addressing issues of poverty reduction). But no mention is made of the need for integrating agricultural and forestry extension services.
- *Quotas* for (commercial) users of forest products are given in Part IV, Section 23 (Control of Afforestation and Deforestation) of the Forest Act of 2001, but it is not clear how conservative these quotas are.
- *Social pricing* to ensure efficient utilisation of forest raw material is highlighted by the DFP as a condition for creating favourable conditions to attract investment in small and medium industry (aim #3). Likewise, DFP highlights the aim (aim #4) of innovative land-use strategies that capture *the domestic non-market values for forest benefits*.

2.7 ENERGY POLICY

Recommendations for Energy Policy

Rural biomass energy demand and *deforestation* are the issues that link desertification and biodiversity loss to energy policies. In particular energy policies should make mention of efforts to meet biomass demand through utilising alien invasive trees and wood from bush encroached areas – thus creating a 'win-win' situation through combating indigenous forest depletion at the same time as reducing bush encroachment and threats to biodiversity. Ultimately, biomass energy policies should consider the availability of non-wood fuels and renewable energy sources and should dovetail with plans and policies from the forestry sector and those pertaining directly to environmental sustainability (for example the EMA and the National Biodiversity Strategy and Action Plan.)

White Paper on Energy Policy (WPEP) 1998 and the National Strategy for the Sustainable Use of Biomass Energy Resources (NSSUBER) 2003 were reviewed.

- Overall, the *White Paper* is comprehensive and balanced. It adequately covers linkages relevant to woodfuel depletion and land degradation, at least qualitatively. In this regard the most relevant policy statements are those pertaining to :-
 - The appropriate inter-ministerial mechanism to ensure that rural people's woodfuel needs are integrated into the Directorate of Forestry policies and practice, especially with regard to the management and control of forests, as well as to woodlot and commercial, communal and farm forest strategies.
 - The establishment of an ongoing research strategy, which aims to understand rural household energy use and which provides information for energy policy review.
 - The development and implementation of renewable energy promotion programmes.
- Expanding the electricity grid to as many rural households as possible may help reduce rates of deforestation in Namibia. However, this policy makes no mention about the opportunity costs of the electrification process. For example, hydro schemes are often associated with environmental impacts including those that threaten aquatic biodiversity (Section 1.3, point xiii)
- The *HomePower! Programme* caters mainly for the richer among the rural dwellers and is beyond the reach of the vast majority of the rural poor.

- The NSSUBER strategy document sheds new and valuable light on the linkages between rural energy demand/ use, deforestation, land degradation and biodiversity loss. It is important that any new Energy and Forestry policies pay cognisance and dovetail with this policy.

2.8 INLAND FISHERIES POLICY

Recommendations for Fisheries policy

There is a need to ensure that inland fisheries projects do not threaten essential ecological functions and the biological diversity of Namibia's limited wetland ecosystems. In particular there is a need to pay close cognisance to the damaging environmental impacts that are often associated with fish farming and aquaculture. These include harmful algal blooms) which threaten human and environmental health and which are associated with aquaculture and agricultural runoff containing fertilisers.⁵ Close collaboration between the MFMR and the MET, MTI and MAWRD is needed in order to prevent the pollution of inland waters and the maintenance of these important ecosystems.

The Inland Fisheries Bill (Draft 1999)

- This Bill makes no reference to the threats of agricultural expansion, exploitation of wetlands and the development of dams and water transfer schemes on inland waters. It does not caution against land use activities that impact negatively on fisheries resources as advocated in the *White Paper on the Responsible Management of Inland Fisheries in Namibia* (1997)
- It does not require that EIA's be conducted before inland fisheries developments are allowed to proceed.
- It makes no provision for extensive protection of biodiversity or threatened wetland habitats.
- Whilst aquaculture is promoted in northern Namibia the draft Bill ignores the environmental impacts associated with fish farming (e.g. over-enrichment of water due to a build up of fish faeces, and water pollution from harmful algal blooms) nor how these would be prevented.

2.9 HEALTH POLICY

Recommendations regarding Health Policy

'Traditional' environmental health problems are those associated with a lack of clean water, and inadequate sanitation. However, nowadays these issues (which still plague most developing countries) are accompanied by a plethora of health threats linked to environmental degradation – including the contamination of air, water and food resulting from increasing industrial and agricultural pollution.

Nutritional status and socioeconomic conditions alter disease susceptibility. Poor diet, is associated with poor health. Consequently, *land degradation*, which impacts on food availability and susceptibility to drought, is closely linked to declining human health. *Biodiversity loss*, too, has immense implications for human health . It is the interaction of a diverse number of species functioning together that keeps our world stable. As increasing numbers of species are lost, ecosystems become less complex and, amongst other things, disease outbreaks become more likely. This is because disease-causing microbes are not easily made extinct – they reproduce rapidly and are able to adapt quickly to environmental changes created by humans. In addition, a wide range of natural products are used in traditional medicine (and in modern alternative medicines), and loss of biodiversity means declining availability of medicinal plants and products

⁵ Between 1972 and 1998 economic losses from aquaculture enterprises in northern Europe, North America, Asia and South America totalled more than 300 million US dollars directly as a result of this polluting source (Report from the World Watch Institute, 1999).

Due to the close interface between human and environmental health, national health policies and legislation should not focus on primary health care alone but should dovetail with environmental policies and those pertaining to industry, forestry, water affairs, energy and agriculture. Specifically, they should address the growing number of human health issues that arise (either directly or indirectly) as a result of:

- **Pollution.** More than 80,000 different types of chemicals have been manufactured, distributed, used and discarded into the environment over the past 50 years. Many of these contaminants are not biodegradable and are commonly found in the air we breathe, the water we drink and the food we eat. Exposure to these substances is increasingly being recognized as important contributors to an estimated 200 human diseases and disorders. In particular, increases in the incidence of some cancers, asthma, and developmental disorders are now attributed to the build up of agrochemical and industrial pollution exposure, particularly in young children.
In Namibia Health Policy should not ignore the human and environmental health impacts of fighting diseases like malaria by using DDT – a dangerous persistent organic pollutant
- **Irrigation.** Poorly planned irrigation programmes are notorious for causing both biodiversity loss and desertification (soil salinisation) in many parts of the world. Arguably the most insidious impacts of large scale irrigation projects are those associated with return-flow waters that are typically contaminated with agro-chemicals and fertiliser runoff. These contaminated waters threaten aquatic biodiversity, downstream fisheries and, ultimately, human health. Thus, health policy should advocate the use of Integrated Pest Management in an attempt to reduce the concentration of health damaging pesticides that enter the environment. It should also support efforts to ensure that organic fertilisers (that can cause eutrophication of water bodies) are used judiciously and stored safely.
- **Deforestation,** which is a major ‘driver’ of desertification, biodiversity loss and climate change .

Towards Achieving Health & Social Wellbeing for all Namibians -A Policy Framework (1998)

- This policy is silent on the vital link between the environment/ natural resource management and human health. Human health issues would definitely have to be conceptualised more comprehensively to take account of this important link. None of the stated guiding principles in Section 5 of this document is conceived, at least not explicitly, to be linked to the bio-physical environment and natural resource management.
- This policy states (Section 6.2.1) that Primary Health Care services should include "promotion of proper nutrition and adequate supply and utilisation of safe water". While this constitutes a link to the bio-physical environment, this link is not explored further in terms of its implications for inter-sectoral coordination and collaboration.

The Food & Nutrition Policy for Namibia (1995)

- This policy is reasonably broad and recognises cross-sectoral linkages. However, the relationship between food and nutrition, on the one hand, and the state of the bio-physical environment on the other, while recognised under cross-sectoral policy linkages (Section 3), is not adequately reflected in the proposed policy strategies (Section 4).
- Section 4 of this policy still advocates drought relief in the form of livestock feed subsidies - a policy strategy that has since been abolished (see review of the 1997 National Drought Policy & Strategy).

2.10 POVERTY

Recommendations regarding Poverty amelioration strategy and policy

Poverty increases pressure on natural resources because it forces subsistence farmers to use natural resources too intensively. In turn degraded land means increased poverty for those dependent upon subsistence agriculture for survival.

At the time of Dewdney’s study (1996) there was no comprehensive government poverty strategy. Dewdney found that some poverty alleviation measures contributed to land degradation because they

subsidised natural resources use (e.g. the drought aid scheme for livestock and free water provision). He also suggested that some poverty reduction measures may inadvertently cause land degradation. For example, subsidised communal livestock production in order to support rural livelihoods had resulted in overgrazing in some areas.

Ultimately poverty alleviation policies should advocate *secure tenure over resources* and the *promotion of alternative income generating activities* to reduce the dependency of the poor on the vulnerable living natural resource base.

Poverty Reduction Strategy For Namibia (1998) & The National Poverty Reduction Action Programme 2001-2005 (2002)

- Both documents are silent on the environmental/ natural resource management dimension of poverty. Except for some reference to the scarcity of water (under the heading of ‘agriculture’), the PRS entirely ignores environmental issues. Likewise, NPRAP does not touch on aspects of the natural environment and the poverty-environment nexus, except implicitly through recommended actions such as those on agriculture and conservancies and community-based tourism.
- The current revision of PRS/ NPRAP seeks to fill this gap by focusing on the linkages between poverty and environment, as one of three crucial dimensions of poverty (environment, HIV/AIDS, and gender) being strengthened in the revised NPRAP.
- The suggestions by the PRS to adopt certain specified agricultural projects (cotton, aquaculture etc.) are questionable. For example, growing cotton is a most unsuitable crop for Namibia. It demands large amounts of potentially polluting fertilisers and, as pests easily damage it, it requires large quantities of toxic pesticides and fertilisers. These huge amounts of chemicals needed to grow cotton affect human health and biodiversity.⁶

Based on Dewdney’s recommendations for Poverty Amelioration the following comments are made:

Recommendation 1. PRS/ NPRAP (in their current form) do not address the issue of land reform nor do they provide cross-linkages to the land-related policies and Acts/ Bills which do deal with such issues (National Land Policy of April 1998, National Resettlement Policy of June 2000, National Land Use Planning Policy of November 2002, and Communal Land Reform Act of 2002).

Recommendation 2. PRS/ NPRAP are silent regarding Dewdney’s recommendation that “*Poverty alleviation measures which do not harm the environment to be extended and those which do (e.g. drought aid scheme) to be adapted*” but the revised NPRAP is likely to address this issue. The drought aid policy has meanwhile been adapted to be more consistent with environmental objectives (see review of National Drought Policy & Strategy of 1997).

Recommendation 3. The PRS/ NPRAP addresses the recommendation that “*Dependency of the rural poor on primary production to be reduced through the promotion of labour-intensive employment (especially public works) and off-farm processing*”. SME development and labour-based works are central tenets of poverty reduction policies and strategies.

Recommendation 4. The participatory poverty assessments, regional poverty profiles and regional poverty forums envisaged by PRS/ NPRAP – along with the Regional Development Plans, which are part of the National Development Planning framework, and decentralisation policies and legislation - provide for or contribute to - rural and regional development strategies and decentralisation of Government functions. The concept of local economic development (LED) set out in action 50 of NPRAP seems consistent with (though distinct from) the need for regional growth centers. Both entail emphasis on economic activities, for which there are specific local capacities and comparative advantages and through which income and employment can best be generated.

Recommendation 5. The issue regarding *absolute poverty – as apposed to relative poverty* is not addressed by PRS/ NPRAP in their current form (or, for that matter, in any other policy/ legislation), but is possibly taken up in the revised NPRAP currently being completed.

⁶ <http://www.hemp-union.karoo.net/main/info/textiles/book2.htm>

SECTION 3. STAKEHOLDER OVERVIEW

3.1 GOVERNMENT MINISTRIES

Ministry of Environment and Tourism (MET)

Department/ Division	Key responsibilities regarding combating desertification and biodiversity loss	Suggestions for improved contributions
Directorate: Tourism	<ul style="list-style-type: none"> • No direct responsibility, but their presence in parks (Namibia Wildlife Resorts) means they cause impacts. • Set National Tourism Policy, therefore they should promote and ensure adherence to the "low volume, low impact, high quality" tourism vision • Should encourage eco-tourism approach 	<ul style="list-style-type: none"> • DoT needs to be more pro-active at strategic levels (e.g. policy development) – Strategic Environmental Assessments are needed for tourism planning in pressure areas (Sossusvlei, Kwando, Okavango, Hoanib) – should be done in consultation with DEA, DSS and DRM as well as the MAWRD, MLRR and the MFMR • High-level decision makers need to be made aware that tourism is an industry and not just a leisure activity. The minister needs to sell this concept to his/her colleagues, and underline the links between tourism, biodiversity and attractive landscapes • NWR resorts are generally poorly managed and maintained, and are environmentally unsound – privatisation could bring about improvements • NWR could greatly assist in environmental education and awareness creation • DoT should assist conservancies to affect better tourism control in their areas
Directorate: Parks and Wildlife Management	<ul style="list-style-type: none"> • Protected Area Management • Biodiversity Conservation • Enable sustainable Utilisation of Wildlife Resources through permits and conservancies • Law Enforcement • Extension (to farmers and conservancies) 	<ul style="list-style-type: none"> • New legislation urgently required (pending Parks and Wildlife Bill) • Significant improvements needed in PA management • Capacity is inadequate - DPWM could be more open to being assisted by park neighbours, private sector and NGOs • Should consider outsourcing some management functions • Proclamation of key areas is overdue – Sperrgebiet, Walvis Bay lagoon, Bwabwata
Directorate Scientific Services	<ul style="list-style-type: none"> • Survey and monitoring of wildlife and vegetation • Research and planning (protected areas and species, including trans-boundary issues) • Wildlife trade and permit control • CITES Management • Game capture and translocations 	<ul style="list-style-type: none"> • Capacity is inadequate - more use could be made of visiting scientists and collaborators • Specialist fields are neglected (e.g. ornithology, wetlands and botanical)
Directorate Environmental Affairs	<ul style="list-style-type: none"> • Oversee and administer EIAs • State of the Environment Reporting • Environmental Economics (Natural resource valuation and accounting) • Administer and coordinate national activities relating to Biodiversity, Desertification and Climate Change conventions (and represent Namibia internationally) • Waster management & pollution • CBNRM support 	<ul style="list-style-type: none"> • New legislation urgently required (environment and pollution) • Capacity is inadequate – need to work more closely with national and regional institutions who can assist • Some activities could be outsourced, but high-level institutional capacity must be maintained • Given the fact that DEA appears to be struggling to consolidate its environmental economics unit, it might be more sensible for NEPRU to be the designated institution in this regard. • The discarded idea of the DEA joining forces with other GRN institutions and becoming a semi-state "Environment Agency" should be revisited

Ministry of Agriculture, Water and Rural Development (MAWRD)

Department/ Division	Key responsibilities regarding combating desertification and biodiversity loss	Suggestions for improved contributions
Directorate of Veterinary Services	<ul style="list-style-type: none"> • Livestock health • Preventing the spread of alien invasive organisms 	<ul style="list-style-type: none"> • Needs to be closer liaison between MET (DSSS) and DVS, especially regarding the quarantine of imported animals. This is to prevent the spread of parasites and other organisms
Department of Agriculture	<ul style="list-style-type: none"> • Research Extension Management Programme • NORTHERN Regions livestock development project (NOLIDEP) • Sustainable Animal and Range Development Project (SARDEP) • Namibia Agricultural Support Services Programme (NASSP) • Support the transition of extension and research (STEAR) • Northern Research Extension Epidemiology Support Project (NOEESP) • Livestock programme 	<ul style="list-style-type: none"> • Could play a more prominent role in promoting sustainable land management, including combating bush encroachment through encouraging more sustainable farming methods • Could do more to reduce the use of poisons in problem animal and pest control • Could do more to promote farming with "native" livestock and wildlife

Department/Division	Key responsibilities regarding combating desertification and biodiversity loss	Suggestions for improved contributions
Directorate of Research and Training Directorate of Planning	<ul style="list-style-type: none"> National Botanical Institute, incl. Herbarium and National Plant Genetic Resource Centre Bush encroachment project with MET Agro-Ecological Zonation Value-addition to plant products programme Mapping and characterising soils of Namibia Crop-modelling and agro-meteorology 	<ul style="list-style-type: none"> Needs to be closer collaboration between NBRI, DSSS and DEA, so that they strengthen their alliance in combating land degradation and biodiversity loss
Directorate of Rural Water Supply and Agricultural Engineering	<ul style="list-style-type: none"> Rural Water Supply Rural Water Development Bulk water supply (NAMWATER) Irrigation schemes 	<ul style="list-style-type: none"> Water point committees are an important aspect of CBNRM, and DWA and MET need to strengthen their cooperation in this regard. Must be more consistent in the use of EIAs as a planning tool. Many large projects are now subjected to an EIA, but others not Existing rural water supply programmes and major irrigation schemes should undergo environmental audits (lessons learnt); while new schemes should be subjected to Strategic Environmental Assessments in order to reduce project-specific and cumulative impacts.
Directorate of Resources Management	<ul style="list-style-type: none"> Strategic planning for water resources management Geo-Hydrology and Hydrological studies Issuing of permits for major water abstraction Pollution control 	<ul style="list-style-type: none"> DWA and MET need to collaborate more closely in the areas of pollution control, EIA guide and review, wetland management and awareness creation.
Directorate: Forestry	<ul style="list-style-type: none"> Data management and provision (National Remote Sensing Centre - NRSC) Assessment of forestry resources and development of conservation strategies Extension services (a forestation and combating desertification) Domestication of Indigenous trees (FOA project) Combating unwanted fires 	<ul style="list-style-type: none"> The issue of fire management requires serious attention – current practice is unsustainable Inadequate capacity and skills at the NRSC needs to be addressed, as this is an important facility – could be privatised?

Ministry of Lands, Resettlement and Rehabilitation (MLRR)

Department/Division	Key responsibilities regarding combating desertification and biodiversity loss	Suggestions for improved contributions
Directorate: Resettlement and Rehabilitation, and Directorate land Reform	<ul style="list-style-type: none"> Resettlement of landless people on commercial and communal land Flexible land tenure system Capacity building in land management Namibia land information system Land Boards 	<ul style="list-style-type: none"> This ministry should consult more widely, especially with MET, MAWRD and environmental NGOs in the development and implementation of its policies and strategies. The political and socio-economic needs for resettlement must be complimented by sound technical input at all levels. The issue of “under-utilized” land needs to be re-examined. MET should be involved in determining which land is being under-utilized. In some cases, it might be advisable (in the national interest) to under-utilize some areas. There needs to be proper monitoring of the resettlement programme from an environmental perspective More thought should be given to acquiring bush-encroached farms and “restoring the land” as part of rehabilitation prior to resettlement. The proper functioning of the land boards is important, especially for wildlife-based tourism. This, in turn, has implications for biodiversity protection
Directorate of Survey and Mapping	<ul style="list-style-type: none"> Surveyor General Registrar of Deeds 	<ul style="list-style-type: none"> Inadequate capacity is cause for concern, though these are critical national functions which should not be allowed to deteriorate

Ministry of Health and Social Services (MHSS)

Department/Division	Key responsibilities regarding combating desertification and biodiversity loss	Suggestions for improved contributions
	<ul style="list-style-type: none"> No direct responsibility, though the activities of MHSS have an impact on biodiversity, both directly and indirectly. 	<ul style="list-style-type: none"> It is not proposed that MHSS develop specific programmes aimed at combating desertification and biodiversity loss. However, this ministry could greatly assist other GRN efforts by acknowledging (in its policies) the vital link between human health and welfare and environmental health. Issues pertaining to environmental pollution need to be addressed at the policy level too. Needs to promote alternatives to the use of DDT for controlling malaria. The MHSS should be far more active in emphasising, through public campaigns, the links between a healthy environment and healthy people. Clean-up campaigns in and around towns and settlements should be initiated by MHSS, or at least supported by them in cases when they have been initiated by other GRN agencies or NGOs

Ministry of Fisheries and Marine Resources (MFMR)

Department/ Division	Key responsibilities regarding combating desertification and biodiversity loss	Suggestions for improved contributions
Director: Resource Management	<ul style="list-style-type: none"> • Fish stock assessments • Marine biodiversity research • Benguela Current Large Marine Ecosystem Programme (BCLME) • Benguela Environment Fisheries Interaction and Training Programme (BENEFIT) • Integrated Coastal Zone Management 	<ul style="list-style-type: none"> • MFMR and MET should be collaborating far more than is currently the case – especially regarding coastal zone management, marine mammal and sea bird conservation and law enforcement – current levels of sectoralism and mutual suspicion (between MET and MFMR) are unnecessary and counter productive. • Need more input from MFMR on EIAs relating to activities in the marine environment • MFMR should be more involved in the planning of water transfer schemes, especially as regards to the introduction aquatic species into river systems where they did not naturally occur • MFMR should be more involved in development planning that impact upon catchment management and rangeland degradation in general – the health of water bodies, and thus fish stocks, are closely linked to general environmental health. • Aquaculture projects must be preceded by an EIA • National aquarium is underutilized as an environmental education resource – MFMR should be more innovative in the way it uses this excellent facility.

Ministry of Mines and Energy (MME)

Department/ Division	Key responsibilities regarding combating desertification and biodiversity loss	Suggestions for improved contributions
Directorates of Mining, Petroleum and Geological Survey	<ul style="list-style-type: none"> • Promoting the sustainable use of biomass fuels by the rural poor through a combination of strategies • Helping to monitor and assess the status and use of biomass resources (working with other ministries). • Taking responsibility to ensure that new energy developments and mining activities are not conducted without reliable EIA's and environmental management plans – one's that ensure the rehabilitation of destroyed habitats, (where possible) once mining activities have ceased. 	<ul style="list-style-type: none"> • MME needs to do more to promote the use of renewable energy. Its RE programmes need to be more prominent. • MME needs to be more sensitive to the needs of MET in protecting the environment. Whilst it is recognised that mineral exploration and exploitation in protected areas is not prevented by law, MME should exercise more discretion before awarding licenses for exploration and mining in parks. Ideally, MME and MET should agree on which areas in parks can be zoned as "no-go" mining areas.

Ministry of Trade and Industry (MTI)

Key responsibilities regarding combating desertification and biodiversity loss	Suggestions for improved contributions
<ul style="list-style-type: none"> • Help prevent the introduction of alien invasive organisms. Because the MTI's mandate is to promote trade, this Ministry is responsible for helping to ensure that alien invasive organisms that can threaten local biodiversity are not introduced into Namibia. • Control pollution. Because of the MTI's mandate to promote industry and manufacturing, it has a responsibility to help ensure that EIA's are conducted and that industrial pollution is limited and controlled. • Ensure intellectual property rights and controlled bio prospecting. • Re-evaluate financial incentives (e.g. taxes, pricing, subsidies) in order to discourage unsustainable land and natural resource use. 	<ul style="list-style-type: none"> • Through the Foreign Investment Act (which implies the use of EIA where appropriate), the MTI could be far more helpful to MET than is currently the case. To the contrary, MTI has in the past allowed a number of projects to become established in the country without them first undergoing EIAs. This contradictory practice should not continue. • MTI should consult with MET, MLRR and MAWRD with the view to promoting large scale as well as SME projects that aim to improve land quality (e.g. addressing bush encroachment through product development). This is an area where GRN incentives (e.g. tax breaks and loans) could stimulate job creation programmes that also benefit the environment. • MTI needs to improve its grasp of the tourism industry, so that it can help MET convince other agencies of the GRN that tourism is in fact an industry and not just a leisure activity.

Ministry of Regional and Local Government and Housing (MRLGH)

Key responsibilities regarding combating desertification and biodiversity loss	Suggestions for improved contributions
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Key responsibilities regarding combating desertification and biodiversity loss	Suggestions for improved contributions
<ul style="list-style-type: none"> Regional Councils Integrated Coastal Zone Management 	<ul style="list-style-type: none"> Very little technical expertise regarding biodiversity and land management – this should either be improved internally or the ministry should work more closely with other agencies and NGOs MRLGH could assist ALAN and the Namibian Planning Advisory Board to be more environmentally conscious, especially when it comes to the planning of urban expansions.

Ministry of Higher Education, Training and Employment Creation

Department/ Division	Key responsibilities regarding combating desertification and biodiversity loss	Suggestions for improved contributions
Directorate: Research, Science and Technology	<ul style="list-style-type: none"> National qualification assessment Colleges of Education Teachers Resource Centres Vocational training centres Biosafety registrar and technology 	<ul style="list-style-type: none"> Should be more involved in promoting environmental awareness nationally

Institution	Department	Key responsibilities regarding combating desertification and biodiversity loss	Suggestions for improved contributions
Polytechnic of Namibia	School of Natural Resources and Tourism	<ul style="list-style-type: none"> Certificate course in Nature Conservation Diploma in Natural Resources Management BTech in Conservation Management 	<ul style="list-style-type: none"> Curriculum requires regular updating to reflect latest trends Students need to be encouraged to read beyond prescribed literature
	Department of Land Management	<ul style="list-style-type: none"> Training course for Land Use Planners (directly trained for MLRR positions, technical not professional level) 	<ul style="list-style-type: none"> Needs to be more emphasis on the importance on NRM for livelihoods and national economy A module on EIA should be introduced This faculty should provide assistance to other faculties (e.g. engineering) regarding modules on environmental issues
University of Namibia (UNAM) (including Neudamm and Northern Campus)	Faculty of Science	<ul style="list-style-type: none"> UNAM/Humboldt University Biodiversity MSc course Biotechnology research Biosafety Hentjesbay research centre 	<ul style="list-style-type: none"> Needs to be more emphasis on the importance on NRM for livelihoods and national economy EIA should be introduced in as many courses as possible This faculty should provide assistance to other faculties (e.g. engineering) regarding modules on environmental issues
	Faculty of Agriculture & Natural Resources Management	<ul style="list-style-type: none"> Fisheries Natural Resources Management 	<ul style="list-style-type: none"> Needs to be more emphasis on the importance on NRM for livelihoods and national economy EIA should be introduced in as many courses as possible This faculty should provide assistance to other faculties (e.g. engineering) regarding modules on environmental issues
	Faculty of Humanities & Social Sciences	<ul style="list-style-type: none"> Geography course Spatial analysis Alien Invasive species projects Tourism activities 	<ul style="list-style-type: none"> Needs to be more emphasis on the importance on NRM for livelihoods and national economy EIA should be introduced in as many courses as possible This faculty should provide assistance to other faculties (e.g. engineering) regarding modules on environmental issues
	Multi-disciplinary Research Centre	<ul style="list-style-type: none"> Support the CBNRM initiatives Marine Research programme Terrestrial Ecosystems programme 	<ul style="list-style-type: none"> Need more research into the costs of biodiversity loss and land degradation, and this should be fed into the courses offered at UNAM. In this regard, the MDRC needs to work closer with the DEA, NEPRU and the MAWRD
	Faculty of Law	<ul style="list-style-type: none"> Environmental Law teaching Research 	<ul style="list-style-type: none"> More emphasis should be given to this course. UNAM should encourage its law students to examine environmental issues more closely from a legal perspective Need more research into aspects of environmental law

Ministry of Basic Education, Sport and Culture

Department/ Division	Key responsibilities regarding combating desertification and biodiversity loss	Suggestions for improved contributions
	<ul style="list-style-type: none"> Cultural & life-long learning Formal education Heritage & Cultural Programmes Museums Namibian library and information services National archives 	<ul style="list-style-type: none"> Could be more involved in promoting environmental awareness nationally – should reinstate natural economy as an IGCSE subject Inadequate capacity of scientific staff at the National Museum is cause for concern – should perhaps increase collaboration with overseas institutions to fill the gaps.

National Planning Commission

Department/ Division	Key responsibilities regarding combating desertification and biodiversity loss	Suggestions for improved contributions
	<ul style="list-style-type: none"> Formation of National development Plans National Statistics Office Development Cooperation Development Planning Information System Centre General Services 	<ul style="list-style-type: none"> As the facilitator for national development planning, the NPC is a crucial partner in the combating of desertification and biodiversity loss. There are dramatic improvements in the planning process (e.g. NDP11 and Vision 2030), but re-enforcement of the sustainable development agenda is lacking – NPC need to address this At the programme and project levels, NPC must insist on the use of planning tools such as EIAs when proposals are being presented for financing, either using GRN or donor funds.

3.2 NON-GOVERNMENT ORGANISATIONS

Desert Research Foundation of Namibia (DRFN)

The DRFN collaborates with government, commercial, non-governmental and community-based organisations involved in the management and use of natural resources, concentrating on the agriculture, energy and water sectors. Within the broader field of natural resource management, DRFN has a special interest in arid and semi-arid environments and processes of desertification, including issues and impacts relating to plant and animal biodiversity. Since Independence, DRFN has spearheaded a number of major pertinent initiatives. In particular it has played a central role meeting Namibia's obligations under the UNCCD through its active role in NAPCOD.

Key responsibilities regarding combating desertification and biodiversity loss	Suggestions for improved contributions
<ul style="list-style-type: none"> Research, training, capacity building (student training) incl. support to CBNRM Netwise; Enviroteach & other EE projects; Napcod; Summer Desertification Programme, ELAK, EEAN, Desert Margins projects 	<ul style="list-style-type: none"> GRN needs to involve NGOs such as DRFN much more often. The DRFN could become a key partner in monitoring the state of the environment in many sectors, especially rangeland management and water The DRFN needs to maintain its position in environmental education, and its multi-pronged approach to this issue GRN should support DRFN through contracts, grants and encouraging donors to support this important institution. The DRFN should work more closely with NEPRU, NNF, UNAM, Polytechnic, LAC and others to create an "environmental think tank" forum that can improve the quality of debate and analysis on environmental issues in the country

WWF-Living in a Finite Environment (LIFE) Project

The WWF-LIFE project has provided crucial support to Namibia's Conservancy and CBNRM Programmes. The purpose of the WWF-LIFE Project has been to enable communities to derive increased benefits from the sustainable use of natural resources.

Key responsibilities regarding combating desertification and biodiversity loss	Suggestions for improved contributions
<ul style="list-style-type: none"> Support to the CBNRM programme through training, small grants, research, feasibility studies, EIAs, product development Support to MET – logistical, research, strategic 	<ul style="list-style-type: none"> WWF is set to continue its role in supporting CBNRM. The programme is well defined and project outputs and outcomes are specified. There is some scope for flexibility, but just following the project focus for the next phase of LIFE is adequate.

Namibia Nature Foundation (NNF)

The NNF promotes sustainable development, the conservation of biological diversity and natural ecosystems, and the wise and ethical use of natural resources for the benefit of all Namibians. The NNF has managed and/or supported a large number of projects on community-based natural resource management, protection of endangered species, the national biodiversity programme, reviewing environmental policies, and combating desertification.

Key responsibilities regarding combating desertification and biodiversity loss	Suggestions for improved contributions

Key responsibilities regarding combating desertification and biodiversity loss	Suggestions for improved contributions
<ul style="list-style-type: none"> Conserve environment, protect biological diversity and foster the sustainable and ethical use of natural resources Promote and support CBNRM and other programmes, works collaboratively with the IRDNC, WWF/LIFE and other field-based NGOs and CBOs 	<ul style="list-style-type: none"> The NNF has become increasingly involved in NRM activities as well as in studies relating to the environment. The NNF is currently the only local environmental NGO that could assist the MET in managing some of the State parks, and the MET should consider this option since the NNFs mission statement and objectives are fundamentally the same as those of the MET. NNF could also be contracted by the MET to undertake certain research and monitoring functions. GRN should continue to recognise the value of NNF and support it through contracts, grants and encouraging donor support. NNF should work more closely with DRFN, LAC, UNAM, NEPRU, Polytechnic and others to create an "environmental think tank" forum that can improve the quality of debate and analysis on environmental issues in the country

CRIAA SA-DC

One of CRIAA SA-DC's main areas of focus relates to the sustainable harvesting and value adding of natural products. This NGO has in-depth expertise in resource assessments, natural resource management, cultivation, collection, harvesting, and storage of natural resources and the processing of natural products, marketing, small enterprise development, and trade. More generally, CRIAA SA-DC has helped to develop in-depth expertise on issues relating to biodiversity (and agro-biodiversity), traditional knowledge associated with biodiversity, benefit sharing from the use of such knowledge, bio-prospecting, and bio-trade.

Key responsibilities regarding combating desertification and biodiversity loss	Suggestions for improved contributions
<ul style="list-style-type: none"> Support the use of indigenous products in rural communities 	<ul style="list-style-type: none"> CRIAA must maintain its role in providing innovative opportunities for natural resource use. Namibia needs cutting edge responses to environmental challenges, and CREIAA has shown its ability to respond. Inadequate capacity is cause for concern – more funds are needed to support a viable staff structure GRN should make more use of CREIAA in conducting research relating to natural resource use, especially as part of its CBNRM programme Any kind of "environmental think tank" would benefit greatly from the presence of CREIAA

Integrated Rural Development and Nature Conservation (IRDNC)

IRDNC works with communities in Namibia in close partnership with the Namibian Government and other NGOs. The IRDNC Trust strives to improve the lives of rural people through capacity building and by diversifying their livelihoods to include wildlife and other valuable natural resources. IRDNC's program co-ordinators manage teams of facilitators who promote community capacity-building, natural resource management, enterprise development, media contact and communication, environmental awareness and administration within target communities/ conservancies. IRDNC is currently working with more than 30 established and emerging Conservancies in the Kunene and Caprivi Regions.

Key responsibilities regarding combating desertification and biodiversity loss	Suggestions for improved contributions
<ul style="list-style-type: none"> Improve the lives of rural people through the diversification of the socio-economy incl. wildlife and other natural resources Conservancies management 	<ul style="list-style-type: none"> IRDNC has emerged as a key NGO in helping with the establishment of conservancies and in assisting conservancies to properly manage their areas. GRN needs to forge a closer partnership with IRDNC, since the latter is field based and has a mission (and agenda) that is very consistent with that of government. IRDNC could expand its training capacity so that conservancies receive better capacity building support than is the case now – GRN should actively promote the role of IRDNC in this regard

Rural People's Institute for Social Empowerment (RISE)

RISE was formed in 1987 to assist rural communities in organising themselves. RISE targets communal farmers, non-farming rural women, and unemployed youth. Through its involvement with conservancies, RISE has played a significant role in fostering improved practices in land management and sustainable use of biodiversity, at least within the Conservancies.

Key responsibilities regarding combating desertification and biodiversity loss	Suggestions for improved contributions
<ul style="list-style-type: none"> Support to community-based natural resources management development 	<ul style="list-style-type: none"> RISE already plays an important role in educating communities regarding environmental issues – this needs to be maintained and intensified

Namibia Economic Policy Research Unit (NEPRU)

NEPRU undertakes applied socio-economic, policy related research on behalf of the Government as well as other local and international institutions. NEPRU has been involved in socio-economic research relating to desertification and has partnered DRFN in Namibia's Programme to Combat Desertification (NAPCOD).

Key responsibilities regarding combating desertification and biodiversity loss	Suggestions for improved contributions
<ul style="list-style-type: none"> Economic policy research Research on socio-economic issues incl. natural resources economics Partner in NAPCOD 	<ul style="list-style-type: none"> NEPRU is a key partner because of its position as a credible economic analysis institution. High level decision makers are more likely to be convinced by economic arguments than those based on environmental principles. Given the fact that DEA appears to be struggling to consolidate its environmental economics unit, it might be more sensible for NEPRU to be the designated institution in this regard. GRN should recognise the value of NEPRU and support it through contracts, grants and encouraging donor support. NEPRU should work more closely with DRFN, LAC, NNF, UNAM, Polytechnic and others to create an "environmental think tank" forum that can improve the quality of debate and analysis on environmental issues in the country

Namibia Association of CBNRM Support Organisations (NACSO)

The purpose of NACSO is to provide quality services to communal area communities who seek to manage and utilize their natural resources in an equitable and sustainable manner. The under-pinning philosophy of forming NACSO is to harness the wide range of skills available in the government, NGO, and academic sectors into a synergetic nation-wide supportive CBNRM movement.

Key responsibilities regarding combating desertification and biodiversity loss	Suggestions for improved contributions
<ul style="list-style-type: none"> Support the CBNRM programme of the country 	<ul style="list-style-type: none"> As an umbrella organisation, NACSO is an important partner and could play an even greater role in developing environmental awareness and local capacity NACSO could help MET to raise the profile of nature-based tourism (and thus conservation) at high decision making levels

Namibia Community-Based Tourism Association (NACOBTA)

NACOBTA is a membership organisation comprised of small and medium sized community tourism enterprises. NACOBTA provides business advice, marketing services, booking services, and various forms of training to its members. It also assists with the establishment of new enterprises and facilitates the negotiation of strategic partnerships between communities and private tourism operators.

Key responsibilities regarding combating desertification and biodiversity loss	Suggestions for improved contributions
<ul style="list-style-type: none"> Support to community-based tourism enterprise development Development of natural resource based products 	<ul style="list-style-type: none"> NACOBTA already plays an important role in educating its members regarding environmental issues – this needs to be maintained and intensified An area of some concern within the CB tourism arena, is the management of the camps by the communities. Teething problems are to be expected, but more could be done to train community members in the finer skills of management. Perhaps NACOBTA could persuade established operators to mentor a certain number of community members who could then impart their knowledge to others. Though this issue has no direct bearing on desertification and biodiversity, there is an indirect link.

Joint Consultative Committee (JCC)

The JCC renders an effective promotion and support service to SME promoting organisations and private sector initiatives in order to enhance equitable economic growth in Namibia. By supporting entrepreneurship, facilitating SME development, helping existing SMEs to become more effective and efficient, and reducing poverty, JCC and its members have a role to play in reducing land degradation and biodiversity loss. Conversely, JCC and its members have a stake in the conservation and more sustainable of natural resources on which SMEs depend.

Other NGO's

Gobabeb Training & Research Institute (GTRC) (MET/DRFN)	<ul style="list-style-type: none"> • Research training • Degree work supervision • In-service training 	<ul style="list-style-type: none"> • GRN needs to pay more attention to the role of the GTRC. This facility has enjoyed only moderate government commitment, in spite of the obvious opportunities it offers, both in terms of training and research
Namibian Agronomic Board	<ul style="list-style-type: none"> • Biodiversity product trade • Biosafety & biotechnology 	<ul style="list-style-type: none"> • The board should be more proactive in ensuring that new initiatives (e.g. the Green Scheme) are carefully planned regarding environmental impacts. • The Board could be more involved in combating the spread of alien invasive organisms in Namibia
Namibia Meat Board	<ul style="list-style-type: none"> • Biodiversity product trade • Biosafety & biotechnology 	<ul style="list-style-type: none"> • This board is understandably focussed on livestock production, and pays too little attention to environmental issues. • The Board could help to educate farmers on more sustainable land management
National Agricultural Union (NAU)	<ul style="list-style-type: none"> • Extension work with local farmers • Natural resources/biodiversity management 	<ul style="list-style-type: none"> • NAU should be more active in addressing land degradation issues with its members
City of Windhoek (potentially other municipalities)	<ul style="list-style-type: none"> • Environment and waste management • Local Agenda 21 • Informal Settlement upgrading • Cleaner technology • Healthy Cities programme 	<ul style="list-style-type: none"> • The Windhoek Municipality needs to be more consistent in the implementation of its own policies, particularly regarding the maintenance of green spaces and natural river systems throughout the city • Municipalities must guard against the lure of quick income and/or succumbing to political pressure in hosting poorly planned development projects – until these have been properly assessed for their environmental impacts • More campaigns are needed to promote indigenous gardens, water saving, waste minimization and recycling. Municipalities are in a good position to assist GRN with this type of environmental education.
Agribank	<ul style="list-style-type: none"> • Agricultural issues and loans; expansion into resources uses such as aquaculture development; biotechnology; biosafety 	<ul style="list-style-type: none"> • The Bank must assist GRN in promoting the concept of sustainable development and the use of appropriate planning tools (e.g. EIA)
Namibian NGO Forum (Nangof)	<ul style="list-style-type: none"> • Umbrella body for Namibian NGOs, e.g. natural resources and land reform sectors 	<ul style="list-style-type: none"> • Inadequate capacity within NANGOF is cause for concern, as Namibia needs a strong civil society, including for the combating of desertification and biodiversity loss. GRN should assist NANGOF to remain viable, even if it is sometimes disapproving of NGOs, especially those with an interest in the environment.
The Rössing Foundation	<ul style="list-style-type: none"> • Support to community-based natural resources management development • Crafts development 	<ul style="list-style-type: none"> • The foundation appears to be reducing its conservation profile, but could still play a role in promoting environmental awareness through its ongoing programmes.
Legal Assistance Centre	<ul style="list-style-type: none"> • Legal training on laws relating to land and environmental issues for farmers, small-scale enterprises and NGOs • Provide education materials to support training • Extending advice, mediation, litigation services on land and environment to rural communities 	<ul style="list-style-type: none"> • The LAC needs to continue its past work in supporting environmental legislation review and general advocacy. This is especially relevant given the extension of <i>locus standi</i> in the Environmental Management Bill. • GRN should recognise the value of the LAC and support it through contracts, grants and encouraging donor support. • The LAC should work more closely with DRFN, NEPRU, NNF, UNAM, Polytechnic and others to create an "environmental think tank" forum that can improve the quality of debate and analysis on environmental issues in the country
Working group on Indigenous Minorities in Southern Africa (WIMSA)	<ul style="list-style-type: none"> • Networking and lobbying • Support the san community • Educational and cultural issues 	<ul style="list-style-type: none"> • WIMSA must maintain its role as a key partner in development planning, especially in the CBNRM programme • WIMSA should be involved more in EIA processes, especially where the SAN are involved • GRN should recognise the value of organisations such as WIMSA, and facilitate a more conducive working relationship that which currently exists
The Namibian, Republicain, New Era, NBC and other media	<ul style="list-style-type: none"> • Environmental journalism 	<ul style="list-style-type: none"> • The volume and quality of environmental stories published in the local media has improved in recent years, and this trend should continue • GRN must encourage the media, supply it with (uncensored) information regularly and involve the media more in its activities.
Southern African Institute for Environmental Assessments (SAIEA)	<ul style="list-style-type: none"> • EIA guide and review • EIA training • Research and development in EIA • Policy and legislative reform 	<ul style="list-style-type: none"> • SAIEA can assist GRN with ensuring that SEAs and EIAs are conducted to international standards. It has the resources to apply the required quality control that will enable GRN (and other proponents) to get value for money in EIA processes • SAIEA could also provide a post-implementation monitoring service that is currently almost non-existent in Namibia • GRN could engage SAIEA more in terms of EIA training
Namibia Animal Rehabilitation,	<ul style="list-style-type: none"> • Rehabilitation of injured or found animals • Information to farmers regarding the use of 	<ul style="list-style-type: none"> • NAREC plays an important role in environmental education, and this needs to be maintained

Research and Education Centre	poison	<ul style="list-style-type: none"> GRN should use NARREC more in its efforts to educate farmers about the control of problem animals
Africat Foundation/ Cheetah Conservation Fund/ Save the Rhino Trust	<ul style="list-style-type: none"> Endangered species (Cheetah, Rhino) conservation Environmental Education 	<ul style="list-style-type: none"> Although single-species conservation NGOs sometimes have a narrow focus, those in Namibia have begun to broaden their activities to include habitat protection and environmental education – this is encouraged GRN needs to recognise the value of these NGOs and appreciate the fact that they are very willing to work with government. A stronger partnership between the GRN and these NGOs would yield very positive results without draining government resources

3.3 LOCAL, REGIONAL AND TRADITIONAL AUTHORITIES

Association of Regional Councils (ARC)

The Association of Regional Councils in Namibia aims to:

- Protect, safeguard and enhance the image of the Regional Councils.
- Act on behalf of its members in matters affecting the common interests of the Regional Councils.
- Liase between Central Government, the Association of Local Authorities and the Regional Councils in Namibia in all matters of common interest.
- Strengthen and back up the activities of the National Council.
- Promote the status and further strengthen the Regional Councils.
- Promote and encourage the principals of continental and international cooperation and comparative studies of Regional governments for the mutual benefit of its members and the Republic of Namibia at large.
- Strive for and promote democratic values in mass participation of the broad masses of the population and tolerance of our various cultural and traditional heritages.

ARC is well positioned to assist RCs, individually and collectively; in exercising their rights and meeting their responsibilities regarding issues of natural resource use management (in particular land and biodiversity use and management) within the Regions.

Association of Local Authorities in Namibia (ALAN)

ALAN plays an advocacy role on behalf of local authorities in order to address socio-economic problems facing its membership. This NGO, (*inter alia*):

- Builds capacity and awareness among its members, in order to, effectively address roles and responsibilities;
- Plays a key role in the decentralization and democratisation process in Namibia;
- Builds a strong support base for its members through provision of services that will add value to the membership.

ALAN is well positioned to assist local authorities in exercising their rights and meeting their responsibilities regarding issues of natural resource use management (in particular land and biodiversity use and management).

Local Authorities

Local Authorities (LAs) are classified into municipalities, towns, and villages – according to administrative, infrastructural and resource capacity. Communal land outside villages, towns and municipalities is administered by MRLGH.

LA's have the exclusive right and responsibility for the delivery of basic services (water, sanitation, electricity, waste collection, etc) within their geographic areas of jurisdiction. The MRLGH performs a regulatory role regarding service provision by LAs. As the government's decentralisation policy is implemented on the ground and institutional capacities at LA (and RC) level develop, more and more functions and services will effectively be devolved to LAs (and RCs).

Regional Councils

Each of Namibia's 13 Regions has its own Regional Council (RC). RCs, in cooperation with the NPC, prepare four-year Regional Development Plans (RDPs). Each Region's RC involves NGOs, the private

sector and other non-state actors (NSAs) in the planning, implementation and monitoring of RDP-based regional development priorities, through its respective Regional Development Coordinating Committee (RDCC), a standing committee on which the Region's NSAs as well as central line ministries are represented.

The Regional Council's Act of 1992, the Decentralisation Policy of 1996, and the Decentralisation Enabling Act collectively provide a policy and legislative framework for progressive decentralisation i.e. the transfer of political, administrative, legislative, and financial management and planning authority from the centre of government to regional (and local) authorities. However, in practice, lack of institutional capacity and the absence of an independent financial base severely limit the degree to which RCs are capable of exercising their powers and functions.

RCs' responsibilities for socio-economic development planning and for the administration of settlement areas (i.e. areas outside the municipalities, towns and villages) give them a (potential) role to play also regarding land and biodiversity use and management, which are inextricably linked to poverty and development, in their respective Regions. However, capacity and financial constraints faced by most RCs make it difficult to play this role effectively under present circumstances. As RC capacity is built over time, the scope for substantial contributions by regional government structures to improved land management and more sustainable biodiversity use in their respective Regions is likely to increase.

Traditional Authorities (TAs)

The Traditional Authorities Act of 1995 and its Amendment of 1997 provide for the establishment of TAs, the designation and recognition of traditional leaders and councils of traditional leaders. The Council of Traditional Leaders Act of 1997 institutes Council of Traditional Leaders dealing with matters of relevance to TAs.

The defined role of traditional authorities is to supervise and to ensure observance of customary laws by members of the community and to promote peace and welfare in the communities. Although, the role of TAs is seen as subordinate to the role of the RCs and LAs, they have been given a significant formal say in the allocation and enforcement of land rights in communal lands – in particular regarding customary land rights (including grazing rights) but also with respect to rights of leasehold, both of which are regulated by the Communal Land Reform Act of 2002.

The TAs significant influence on the allocation and enforcement of customary and leasehold rights in communal the TAs means that they have an important role to play in ensuring sound land management and sustainable biodiversity use in communal areas.

3.4 OTHER STAKEHOLDERS

Private Commercial and Communal-Area Conservancies

A Conservancy consists of a group of commercial farms or areas of communal land on which neighbouring land owners or members have pooled resources for the purpose of conserving and using wildlife sustainably. Members practice normal farming activities and operations in combination with wildlife use on a sustainable basis. The main objective is to promote greater sustainable natural resource use through co-operation and improved management. In return for responsible management of wildlife, government gives Conservancies the rights over its consumptive and non-consumptive use.

Wildlife numbers have increased in the communal areas where Conservancies have been established, and Community-Based Natural Resource Management (CBNRM) has started generate significant incomes for rural communities.

Namibia National Farmers Union (NNFU)

NNFU is a national federation of regional Farmers' Unions. It was established in June 1992 and serves as a mouthpiece for Communal Land Farmers. Environmental protection and sustainable use of natural resources is one of NNFU's major concerns and by promoting ecologically sustainable agriculture among its members, the NNFU plays a role in addressing problems of land and natural resource degradation in agriculture and domestic animal husbandry. It is well positioned to exert significant influence among its

wide membership (communal farmers) regarding the adoption of improved practices in land use and management and, (indirectly) agro-biodiversity use and management.

3.5 INSTITUTIONAL CAPACITY FOR COMBATTING DESERTIFICATION & BIODIVERSITY LOSS

In order to ensure that policies, programmes and projects, aimed at reducing desertification and biodiversity loss in Namibia are successful in meeting their goals there is the need for multistakeholder consultation, decentralisation, adequacy of the knowledge base, human resources and budgetary/investment programme. This section provides a brief overview of these prerequisites.

Multistakeholder consultation

Since independence there has been a noticeable shift in Namibia from an oppressed colonial style of administration to a far more democratic approach – one that regularly attempts to involve multistakeholder consultation and broad participation in various national debates. Ultimately, however, public sector stakeholders have made slow progress in making the transition from sectoral planning to more holistic planning and decision-making. In general, there is a need to improve communication between most sectors of society, between and within government departments and between government and civil society.

Decentralisation

The decentralisation and devolution of government decision-making and administrative functions and processes is widely accepted as a prerequisite for democracy and more effective and equitable local development. Despite some positive signs, decentralisation is occurring slowly in Namibia, and the relevant line ministries still tend to take decisions on local-level issues, at a central level. Key constraints to decentralisation include inadequate human and material capacity in the Regional Council offices and insufficient financial resources.

Human resources

Since independence there have been many efforts to improve institutional capacity, human resource capabilities and attitudes towards gender issues.

Despite these achievements, education, training, capacity building, environmental awareness, and gender awareness need to be further intensified at all levels of society in order to fully redress Namibia's past inequalities and to improve public sector capacity. In summary, Namibia still suffers from:-

- Comparatively low levels of education and strong social, gender and regional disparities in educational levels and outputs.
- Insufficient public awareness regarding environmental issues.
- Low public sector capacity.
- Gaps in the knowledge base

Despite efforts to keep politicians and the public informed of the links between environmental issues and socio-economic development in Namibia, most sustainable development issues (including those pertaining to desertification and biodiversity loss) do not yet feature significantly on the political agenda. Several politicians still have negative perceptions regarding environmentalism, believing that it equates directly to preservation at the cost of social and economic development.

The adequacy of the budgetary/investment programme

Important income earning sectors (e.g wildlife and tourism) and sustainable development planning and co-ordination are still regarded as relatively low priority - as evidenced by the modest annual budget allocated to the MET. This situation is unlikely to improve unless the budget deficit is addressed. As a consequence, GRN funding for programmes (e.g. CBNRM, NAPCOD, the National Biodiversity Programme, Climate Change programmes and legislative reform) directly associated with desertification and biodiversity issues is inadequate are mostly donor funded.

SECTION 4. CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

Since Dewdney's 1996 policy analysis, there have been many positive changes to the policy environment that influences biodiversity conservation and the combating of desertification.

Most notably:-

- ◆ Several environmental policies, that reflect global thinking regarding sustainable natural resource management and utilisation (guided largely by the principles enshrined within the UNCCD, UNCBD and other MEA's), have been formulated.
- ◆ Favourable sustainable development statements appear in many other sectoral policies, including:- the National Agricultural Policy 1995; the National Drought Policy and Strategy, 1997; the National Land Policy 1998; the National Water Policy 2000, The Energy Policy White Paper 1998, the National Poverty Reduction Strategy, the Forestry Act 2000, the Communal Land Reform Bill 2002, as well as the Second National Development Plan and the Natural Resources sector paper for Vision 2030 (NPC 2001 (a)).
- ◆ A number of the changes recommended by Dewdney in 1996 have been addressed (Refer to the 'Comments' throughout Section 2 in main document).

Regarding actual implementation 'on the ground', the more notable achievements include:

- ◆ The removal of most subsidies to freehold farmers;
- ◆ Achieving more appropriate water pricing for water supply (particularly in urban areas);
- ◆ Handing the user rights over local forest resources to groups of communal area residents; and
- ◆ The establishment of a successful community-based natural resource management programme.

Despite these moves forward, there are still policy gaps and many constraints to achieving the goals of the UNCBD and UNCCD. These constraints are summarised as follows:-

- ◆ Almost all sectors need to develop a clearer commitment to the conservation and sustainable use of biological diversity. Ultimately there is a need to acknowledge the close interface that exists between national prosperity and human health on the one hand and environmental health on the other.
- ◆ In the light of intensified debate regarding land redistribution, institutional and management aspects of resettled land still need to be addressed.
- ◆ Many issues pertaining to subsidies, pricing and incentives still need to be addressed.
 - Much needs to be done to reflect the opportunity and environmental costs of water use by all water users
 - Water, pesticide and fertiliser subsidies for irrigation and price controls for livestock and crop growing continue to promote the adoption of land uses in areas where they are neither economically or ecologically viable.
- ◆ Despite the progress that has been made in providing rural Namibians with rights over resources such as wildlife and forests, many issues pertaining to *land and resource tenure* still need to be addressed. Jones 2004 reports that:-
 - It has proven extremely time-consuming (and often expensive) for communities to form conservancies and meet the many conditions required for gaining rights over wildlife.
 - Incentive for sound natural resource management is severely undermined if *responsibility* for management is given, but *authority* to make decisions is denied. Namibian land legislation does not go far enough in providing groups of communal area residents with the ability to exclude others from using their land.

These points highlight the fact that since Independence in 1990 there has been considerable inconsistency between policy and practice in Namibia. The inadequate implementation of policy that prevails is largely rooted in the country's social, economic and political past, which laid a foundation for the development of conflicting philosophies regarding *how Namibia's natural resources should be used and how development planning should be conducted*. As a result, the political will to implement Namibia's favourable policy

initiatives is currently low – largely because so many of the sustainable development statements enshrined within the policy framework have inadequate ownership.

RECOMMENDATIONS

Recommendation 1. Improve awareness regarding the vital link between poverty, human health and the environment and enhance the capacity needed to combat desertification and biodiversity loss

Programmes and projects to address land degradation are most successful when effective participation of stakeholders (including women) occurs at all stages. The environment is still an extremely low priority on personal and political agendas in Namibia. Until this changes there is little hope for active public participation in decision making, improving the state of the environment and preventing an increase in the many interlinked environmental, economic and human health impacts that are related to desertification and biodiversity loss. Consequently, there is an urgent need to *improve awareness of the link between poverty, human health and environment* amongst Namibia's highest-level decision makers.

Capacity building at the community and national levels is necessary for successful implementation of on-the-ground efforts to control and prevent land degradation and biodiversity loss. Institutional structures must be strengthened, to allow for the full integration of environmental and developmental issues at all levels of education.

Recommendation 2. Promote intersectoral synergy and the development of sound partnerships

In order to move natural resource management towards more sustainable goals, intersectoral synergy and the development of partnerships between GRN agencies and between GRN agencies the private sector and NGO's must be fully developed regarding

- Policy and strategy development
- Policy and strategy implementation
- The provision of services to land managers

This is a huge challenge, but one that may be met through concerted political will to *adopt models aimed at co-operative governance* and the establishment of strong institutions for environmental management. Policies and their implementation will be made more effective if decision makers and service providers to rural communities make a concerted effort to look for synergies or 'co-benefits'.

Regarding Namibia's desertification/biodiversity challenge, improved multistakeholder consultation that aims to achieve harmonisation of objectives, policies and coordination of actions is most necessary regarding:-

- *Natural resource management and land-use* (which fall under the joint auspices of the MET, MLRR, MRLGH, MAWRD, and communities that are dependent on natural resources for their livelihoods and the NGO's that support them).
- *Pollution control*, (which falls under the combined jurisdiction of almost all sectors but particularly the MET, MAWRD, MHSS, MME, MRLGH and MTI); and
- *Rural development and poverty alleviation*, (which falls under all government agencies, not just the MAWRD, several supporting NGOs and needs to be effectively coordinated nation-wide by NPC.). Ultimately there is the need to integrate sustainable land management practices into all National Development Plans and all policies pertaining to poverty reduction, drought preparedness, and economic development. By expanding and adapting the FIRM approach (see section 1.5 under the NAPCOD programme) an appropriate way of promoting integrated implementation at community level will be achieved.

Recommendation 3. The development of an appropriate enabling environment, including policies, regulations and economic incentives to support sustainable land management

In order for effective local, national and international efforts to control and prevent land degradation and biodiversity loss there needs to be a policy shift away from top down and often bureaucratic command and system control to incentive-based systems – ones that support diversified uses of land that are able to withstand Namibia's climatic uncertainty and variability and make it easier to enforce regulations.

Brown (2003) reports that, although such an approach is currently counter-intuitive to most GRN based officials, it will ultimately cost the state less and reduce the need for conservation agencies to spend large amounts of time on processing application forms, issuing permits and carrying out inspections. More time can be spent on strategic planning and on working with landholders to solve technical problems related to developing multi-species production systems in dryland (*ibid*).

Ultimately, it is important to remove:-

- subsidies and price controls that artificially support inappropriate land uses.
- bureaucratic barriers to the adoption of wildlife and tourism as land uses

Several economic instruments can be used to help finance the shift towards more sustainable practices and/or discourage environmentally unfriendly activities that threaten human health and limit long-term economic prosperity. These include:

- Introducing tax reforms and environmental taxes by taxing environmentally unfriendly or pollution generating imports and inappropriate land use practices;
- Providing loans, grants or subsidies that will encourage sustainable, environmentally friendly practices (for example: the use of solar and other renewable energy resources; drip-irrigation equipment that reduce the threat of soil salination, Integrated Pest Management practices instead of highly polluting pesticides);
- Setting prices of key resources such as water that reflect the cost of provision, opportunity costs and environmental costs
- Implementing strict “user pays” and “polluter pays” policies; and
- Providing bonds and deposit refund systems for sound forest management, land reclamation and rehabilitation of land that has suffered degradation.

Recommendation 4. Provide security of land tenure to residents of communal land and resettlement schemes

Policy regarding residents on communal land needs to shift away from limited devolution of authority and tenure to full devolution of authority, rights and responsibility over resources to land holders. Although the Communal Land Reform Act of 2002 has put in place the necessary policy mechanisms for this to happen, the effective implementation of this policy is still limited by a lack of human resources/ institutional capacity and a lack of political will (to transcend well-established power structures). There is also the issue of democratising local community structures to make sure that devolution benefits all local people, not only those wielding power. Jones (2004) states that this policy shift should ensure: -

- The provision of security of land tenure to residents of communal land and resettlement schemes,
- The provision of exclusion rights over land to groups of communal area residents
- The provision of full devolution of authority over *all* natural resources to communal area residents
- A milieu that enables land holders to realise the benefits from use of resources such as wildlife and forest products