

DESERTIFICATION IN NAMIBIA: AN ANALYTICAL OVERVIEW OF THE ISSUE AND NAMIBIA'S RESPONSES

1. General Introduction

Namibia is the driest country in sub-Saharan Africa and is located on the southwestern coast of Africa. Namibia is skirted by the Namib desert on the west and the Kalahari Desert on the east and desiccated by the interplay of the cold Atlantic and the hot Southern African basin.

Namibia, naturally is marked by a highly variable climate, i.e. by high rainfall variability and is severely affected by drought and desertification. Desertification is defined as "land degradation in arid, semi-arid and dry sub-humid areas resulting from various factors, including climatic variations and human activities¹". Land degradation is further defined as "reduction or loss, in arid, semi-arid and dry sub-humid areas, of the biological or economic productivity and complexity of rainfed cropland, irrigated cropland, or range, pasture, forest and woodlands resulting from land uses or from a process or combination of processes, including processes arising from human activities and habitation patterns, such soil erosion caused by wind and/or water; deterioration of the physical, chemical and biological or economic properties of soil; long-term loss of natural vegetation²". Drought is a naturally occurring phenomenon, which might be exacerbated by desertification. Desertification in Namibia is manifested in rangeland and soil degradation and caused by overgrazing, over-cultivation and deforestation, - which result largely from socio-economic factors.

It is important to recognize that the process of desertification, and the loss of productivity of the already scarce resources is a serious impediment to sustainable development in Namibia and threatens the livelihoods of the majority of the Namibian people.

There are a multitude of causes of land degradation/desertification in Namibia these include:

- Poor and non-adaptive management of land, livestock and other natural resources in a highly variable environment i.e. practices of many natural resources that are not specifically adopted to the climate and environmental conditions of Namibia
- Constraint livestock migration thus placing high grazing pressure on the land
- Inappropriate irrigation and other crop cultivation practices
- Absentee farm management leading to poorly management systems
- Inappropriate fencing in dry areas and inappropriate provision of artificial water points
- Non adaptive management in highly variable environment

The background (underlying) causes of desertification in Namibia include:

- An increasing human population
- National and international perverse policies and economics

¹ See UNCCD convention text, <http://www.unccd.int/>

² UNCED, 1992.

- Shift to increased settlement due to development strategies and patterns of service provision (schools, clinics and roads etc.)
- Lack of effective implementation of good policies and legislation (e.g. drought policy)
- Social and socio-economic factors, especially increased poverty

The resulting effects (or manifestations) of desertification in Namibia in affected areas include:

- Loss of productivity of crops fields and natural vegetation
- Increased poverty
- Loss of productivity
- Deforestation
- Bush encroachment
- Loss of biodiversity and environmental sustainability
- Decrease of palatable grasses
- Loss of ground cover
- Increased erosion
- Reduced opportunity for employment, and also reduced incomes

The question one has to consider regarding desertification in Namibia is as follows: what will the consequences of desertification be for the individual Namibian and for the Nation? As Namibia's population increases, natural resources will have to be shared between more and more people. All of us will have a smaller share. The amount of resources to be shared will be even smaller if we also experience desertification or land degradation and loss of productivity. Rehabilitation of such areas if at all possible might be very expensive.

There are a number of approaches that one can take in addressing or combating desertification. The need for developing a critical mass of human resources is one of the most important ones. Namibia needs people capable of addressing environmental problems such as desertification, at a variety of levels now and in the future.

The next is that we need to gain a better understanding of the processes to support decision making. We need to understand all the inter-related factors and conditions. These involve, among others, national, regional and local policies and planning, the consequences of their implementation, economics, education, training awareness, land use practices and population dynamics.

There is a very pressing need for integrated planning for sustainable resource management and use among the various ministries, especially the natural resource line ministries. This should include planning for appropriate use of marginal agricultural lands for game farming, conservation, tourism or for other less water demanding alternatives, taking into account sources of income. Desertification is a cross-cutting issue and deserves a cross-sectoral inter-ministerial approach involving especially MET, MAWRD, MLRR and MRLGH.

2. Economic Cost and Benefits of Combating Desertification

Economic costs of desertification are real. Land degradation affects living standards, food supply, workload, and income of farmers. In turn it undermines the output and growth of the whole economy.

These economic losses are not easy to measure as it is difficult to separate losses due to long-term degradation from the inevitable short-term cyclical changes in the output that fluctuates with rainfall. In the subsistence farming sector many of the resources that the land provides are not sold commercially, they are thus difficult to price.

In communal areas, where the majority of Namibians depend on the land, the impacts of desertification affect the subsistence and cash income they get from livestock, the time and effort needed for obtaining fuelwood and fencing, and achieving family food security. Costs faced by communal farmers from lost output and increased expenditure can be estimated at around N\$100 million per year (Quan *et. al.*, 1994). The particular impact on those with least cash, livestock, transport, and power in the growing competition for natural resources is increasing every year. In commercial areas, the nature and impacts of desertification is very different from that in communal areas – with bush encroachment affecting grazing areas and hence stock numbers, off-take and sales – though the total financial costs per year are of a similar order of magnitude: lost beef output worth over N\$100 million per year.

Just as desertification affects the economy, the reverse is also true. A vast array of economic policies and practices affect how people manage resources, and hence the extent of over-use and degradation. The farmers and fuel-collectors are at the end of a long chain of cause, incentive, constraint and effect. Decision-makers defining international trade rules, meat prices, drought-relief strategies, land tenure systems, water supply, marketing and transport infrastructure all affect the sustainability of resource use.

3. Namibia's Programme to Combat Desertification

Namibia signed and ratified the United Nations Convention to Combat Desertification in 1994 and 1997 respectively. In 1994, the Ministries of Environment and Tourism and Agriculture, Water and Rural Development started a national initiative, Namibia's Programme to Combat Desertification (NAPCOD), to address the concerns raised above. NAPCOD was incepted through a consultative process with various stakeholders, including a number of pilot communities that were affected by desertification and were interested in participating in the design of the national programme. Stakeholders from various government departments, the non-governmental, research, training, academic institutions, community-based organizations participated in the design of the national programme.

Following the design workshop, **Phase I** (1994-1996) of the national partnership programme^a was implemented. Various key collaborators took on coordinating functions of aspects of NAPCOD. During this phase 13 rural communities were:

- Consulted about desertification
- Contributed to the compilation of the national issues and
- Participated in the national workshop on desertification

Phase II (1996-1999), changed its approach a little, building on the lessons learnt from the previous phase. During a planning workshop held at Midgard all stakeholders were involved in the shaping of the new phase. Essentially this phase was dedicated to:

- Test community approaches
- Review national policies
- Raise awareness from the local to national levels on desertification

The key objectives of **Phase III** (2000-2004) of NAPCOD were derived from an analysis of the previous experiences. Five key components were addressed:

1. Policy ‘frame conditions’ are analysed and improved to promote sustainable resource management practices
2. International relations
3. The development of a national level monitoring system of desertification, and the development of local level monitoring to support local resource manager to track their resource base
4. Strengthen the capacity of selected Service Organizations (SO’s) and Community Based Organizations (CBO’s) to support sustainable natural resource management practices and
5. Empowerment, training, capacity building and diversification of livelihoods amongst selected rural communities.

To implement Phase III, the DEA put the last three measures out on tender and awarded the process to a consortium of DRFN and NEPRU. The DEA retained responsibility for awareness raising, for international communications and for overall coordination and policy harmonization and review.

NAPCOD involves gathering and disseminating information, carrying out appropriate and participatory research and conducting education and training.

NAPCOD is a partnership between the Ministries of Environment & Tourism (MET) and Agriculture Water and Rural Development (MAWRD), with close interactions with the Desert Research Foundation of Namibia (DRFN), an environmental non-governmental organization and the Namibia Economic Policy Research Unit (NEPRU). The programme Steering Committee was formed at the start of the programme in 1994 and is a broad platform with representatives from not only MET, MAWRD and DRFN, but also from the Ministry of Lands, Resettlement and Rehabilitation (MLRR), Ministry of Regional and Local Government and Housing (MRLGH), the National Planning Commission (NPC), the University of Namibia (UNAM), Namibian National Farmers’ Union, Namibia Agriculture Union, Namibia Nature Foundation (NNF), Namibia

Development Trust (NDT) and the Namibian NGO Forum (Nangof). The implementation of the National Steering Committee improved collaboration of professionals from different sectors.

The Programme approach is innovative, not only for Namibia, but also compared to programmes of other countries that ratified the United Nations Convention to Combat Desertification. It is holistic (integrated, inter-disciplinary and inter-sectoral), attempts to deal with the underlying causes of degradation, and is information and process based, as well as community-action oriented. The major objectives are therefore broad:

- Establishment of an efficient and effective programme organization
- Awareness raising and education of identified target groups at all levels of society
- Promoting integrated and inter-sectoral planning
- Establishing an information base on the bio-physical and socio-economic context of degradation processes
- Analyzing and influencing policy factors affecting land degradation, and affecting empowering communities for sustainable resource management.

The objectives through which a broad participation was sought were:

- To involve key players and stakeholders
- To develop integrated planning methods and strategies
- To empower communities to implement sustainable resource management
- To improve the policy framework for sustainable resource management

The German Ministry for Economic Cooperation (BMZ) through the German Agency for Technical Cooperation (GTZ) provided up to Euro 4.9 Million for the period 1994 -2003 (including the no-cost extension until July, 2004) for this ambitious programme. The programme succeeded in generating additional funding from the government, Convention to Combat Desertification Secretariat and FAO via UNDP. NAPCOD also effectively joined forces with other organizations during implementation in order to optimize its impact. Other donor-funded initiatives under NAPCOD include the Finnish-supported Bush Encroachment Research Management and Monitoring Programme (BERMMP), the GEF-supported Desert Margins Programme (DMP), the German-supported SADC DRFN Desertification Interact Programmes (SDDI), etc. At the same time strong cooperation and support links were created with the German-supported projects: Sustainable Animal and Range Development Programme (SARDEP) and the Gobabeb Centre (GTRC).

It was foreseen that in order to provide efficient management to this complex Programme, a National Coordinator should be appointed and this person should be strategically based within the Directorate of Environmental Affairs of MET (DEA). This position, however was not filled within the NAPCOD phase II for a variety of reasons. Instead, the DEA played a larger than expected role and the project coordination and implementation of the Programme was largely delegated to the DRFN. A small informal decision-making group, consisting of the Chairman of the Steering Committee i.e. the Director of the DEA, two Steering Committee members (the NAPCOD coordinator and the GTZ advisor), The Department of Agriculture and the DRFN NAPCOD coordinator

provided guidance. In addition, Steering Committee meetings took place four to five times annually. A Research Coordinator was also foreseen in the programme proposal, and this position was allocated to DRFN but was filled but for a short period of time only. The absence of a National Coordinator and Research Coordinator was an enormous handicap for the implementation of Phase II. Nevertheless due to the efforts of active partners, the programme succeeded in setting up the organizational structure, generating good cooperation links amongst participating bodies, including Government, NGOs, CBOs and the local resource users.

The programme is now in its third phase (covering a period of 4 years) which should have ended on 28 February 2003. The Bundes Ministerium für Wirtschaftliche Zusammenarbeit und Entwicklung, (BMZ German ministry for economic cooperation and development) however agreed to extend this phase for 18 more months on a no-additional-cost basis taking into consideration the delay caused by tendering process at the beginning of this phase. This phase will come to an end during July 2004. The contract of the national coordinator also ended in February 2003 and the position is currently vacant..

During Phase III, emphasis has been placed on rural people, the service organizations that support them, the involvement of communities as custodians of natural resources and the dependence of people on this often vulnerable resource base for their livelihoods. The purpose of Phase III could thus be seen as to ensure that *“the renewable natural resources of Namibia are used sustainably by the various user groups.”*

While Phase II set the scene and achieved a degree of government commitment, particularly revolving around the policy analysis, significant progress has been made in Phase III, particularly at the community level.

Phase III was formally evaluated by the BMZ in November 2001 and their recommendations were communicated to the DEA during 2002. Planning for Phase IV was done in April 2002 and took into account the recommendations made by the evaluation team and a project document was prepared and submitted to the donors. Bilateral discussions with the German Government were unfortunately delayed until November 2002 and the formal negotiations have yet to take place. The future of Phase IV is subject to the outcomes of these negotiations which are expected to take place during 2003.

As will be outlined in greater detail Section 6, NAPCOD has, however, xxx raised a number of serious questions. Principally, those related to the effectiveness and scale of the program and the level of government involvement.

4. Funds committed to NAPCOD

At the start of NAPCOD the German Government (BMZ) agreed in principle to support the programme for a period of up to 13 years (1994-2006). The funding provided for the first three phases (1994-2004) amounts to EURO 4.9 Mio. The BMZ contribution

through GTZ includes the costs for one long-term expert, Namibian and external experts, locally contracted and auxiliary personnel, supply of materials and equipment, support for seminars and workshops and a financial contribution for the implementation of activities of up to EURO 2.0 Mio. The financial administration of this financial contract is done through the (NNF).

There has been a concern from the donors that Namibia is not showing financial commitment with regard to NAPCOD and there is generally a lack of identification of the funds from government that are going into combating desertification. The different line ministries might need to look critically at their current activities on the ground and assess the extent to which these activities are directly and indirectly impacting upon minimizing and mitigating desertification. This might be in reality a very big possibility, in that maybe the activities are called something else but in essence they are addressing land degradation. The cost incurred by government in the implementation of these activities could be presented as Namibia's contribution towards addressing land degradation, thus effectively addressing the concern that Namibia has not shown financial commitment regarding the issue of land degradation from the perspective of donors. These inputs from the several line ministries also suffer from a lack of communication to the higher levels of MET and beyond. This issue will be discussed further in section 6.

5. NAPCOD Achievements

NAPCOD has had several achievements over the years some of the most notable ones includes amongst others the following:

- The Forum for integrated Resource Management (FIRM)
This approach has been successfully developed and implemented since 1996 together with the Grootberg Farmers' Union (GFU) in the north-west of Namibia and with a number of extension institutions³. FIRM aims to improve the living conditions of the rural population by promoting the sustainable use of renewable natural resources (Evaluation report, 2002). By cooperating with several sectors, the approach targets the implementation of integrated management practices to ensure that benefits flow sustainably and equitably to the resource users of communal lands. The users have a pool of service organizations at their disposal and they themselves steer the provision of extension services.

The FIRM approach guarantees the implementation of an integrated and sustainable concept for the use of resources. The resources users themselves "own" the process and also steer the development activities and extension services. Two directorates at the Ministry of Agriculture, Water and Rural Development (MAWRD) – The Agricultural Extension and Engineering Service and Agricultural Research and Training- are key partners of the project in the

³ SARDEP (GTZ-MAWRD), NAPCOD (GTZ-MET), DRWS and DEES (MAWRD directorates), CBNRM (USAID-WWF-LIFE-MET, DRFN and NNF the aforementioned are the service providers initially involved in FIRM, the approach is now however also expanding to other service providers

pilot zones. FIRM is integrated at this level, which is vital if the MAWRD extension network is to disseminate the approach in other regions.

- Analysis of policy factors as an underlying cause of desertification in Namibia, followed by effective lobbying and provision of inputs for the drafting of the Drought Policy and lands Bill (Dewdney 1996).
- Research on the bio-physical and socio-economic context of land degradation in various NAPCOD pilot sites by students from the University of Namibia and the Polytechnic in the framework of the yearly Summer Desertification Project; studies on the environmental impact of drought and resettlement policy measures by students from the University of Cape Town in respectively the Gam and Khorixas Districts, and in Oshikoto and Omaheke Regions, resulting in various theses and publications. Study (PhD and MSc, Witwatersrand University & Polytechnic diploma) on biological indicators of land degradation, in particular focusing on invertebrate indicators under varying land use practices and tenure conditions.
- Gobabeb was designated by SADC Council of Ministers as Centre of Excellence under the UNCCD, for training, research and networking.
- Empowering selected communities to manage their natural resources in a more sustainable manner. Two regional facilitators have spearheaded the activities in five pilot sites in the West and two in the North since 1996. Activities undertaken included information collection (participatory rural appraisals and community monitoring of rainfall and other biophysical data) and holding of community meetings to identify priorities and entry points for further actions. Effective follow up requires further involvement from line ministries and/or other projects. Such institutional linkages have not yet been fully established, for most pilot communities, in particular those in the North. Tangible outputs were limited, however.
- NAPCOD has participated actively in several meetings, workshops and conferences at local, national, regional and international level e.g. the involvement in the preparation for the Desertification 2002 which took place in Cape Town and Namibia.
- The Ministry of Environment and Tourism successfully organized and hosted the Africa Regional UNCCD Conference in preparation of the first session of the Committee to Review the Implementation of the Convention (CRIC) in Windhoek from 15 – 19 July, 2002. This Conference brought together national focal points, persons from 42 African countries, representatives of 5 sub-regional institutions, 3 Africa regional institutions as well as important bilateral and international partners to present their national reports on progress in implementing their national programmes to combat desertification.

6. Challenges arising out of the implementation of NAPCOD

a) Government Perspective on the implementation of NAPCOD

Despite its national importance, the programme that is implementing Namibia's efforts to address the underlying causes of desertification and to reverse or minimize land degradation is not being viewed as a truly national programme of strategic importance by Government. This seems especially to be true also of MET.

The following list presents some of the key issues regarding the perspective of for example MET towards NAPCOD as a programme.

Issues that need to be addressed from the point of view of MET

- lack of information flow from NAPCOD to Policy and decision-making levels.
- too prominent role of NGOs in implementation of NAPCOD compared to Government
- insufficient tangible impacts in terms of improved resource management in Namibia
- drought is continued to be seen as an emergency rather than a predictable condition that should be prepared for as part of the way of life
- only pilot areas have enhanced capacity for planning and managing their resources
- the message from NAPCOD pilot areas is not spreading spontaneously to other areas
- practical commitment to sustainable use of natural resources is low outside pilot areas
- major national players do not yet recognise their current roles in combating desertification
- the sustainability of programme after cessation of donor funding not clear
- integrated engagement of key ministries: e.g. MET, MAWRD, MLRR has not been achieved or sustained
- an efficient mechanism for establishing harmonized complimentary policy and implementation by the key ministries has not been identified.
- effectiveness of Steering Committee can be queried

In the following section some of the issues listed above will be discussed further.

The role of NGOs in implementation of NAPCOD

NAPCOD in its current form has been mainly implemented by the NGO consortium DRFN/NEPRU reporting to the Steering committee. Although planning for all three phases involved Government and NGOs, Government has not been very visible in the implementation and can thus not claim full ownership of the programme literally and figuratively. The most prominent, ongoing involvement of Government in NAPCOD has been the DEA chairing the Steering Committee and thus not in the actual implementation

of the programme. In Phase I and II, MET was more involved in decision making concerning implementation at the national level while in Phase III, MET has been involved mainly at local level.

NAPCOD has been hailed as a good example of how Government and NGOs are working together in an integrated manner with the aim and goal to mutually and collectively address a common problem i.e. land degradation. This process seems to have taken place at the community level and grassroots level especially between the CBOs, SOs and extension service officials of Government ministries. This process seems, however, not to have taken place at the national level. At the national level government seems not to be fully supporting and involved in NAPCOD as a national programme.

In addition to the above the following are also issues that need to be addressed from the perspective of Government.

- Was the planning for the three phases done appropriately and is NAPCOD really addressing the right issues regarding land degradation?
- Are NAPCOD goals determined by Namibia or imposed by donors and other international instruments such as the UNCCD itself?
- Are NAPCOD objectives inline with the MET core mandate?
- Are NAPCOD objectives still appropriate with regard to the current needs

Lack of information flow from NAPCOD to policy and decision-making levels

During the implementation of NAPCOD particularly in the latter part of Phase II and Phase III, it seems that there has not been effective communication between the NGO consortium implementing NAPCOD and the MET. This might be especially true regarding information reaching the high level decision makers in the Ministry i.e. the PS and the Minister. The question that arises is whether it is a lack of information from the NGO or a lack of information about the programme overall or a lack of information flow from the Steering Committee as designed? Of-course it can be argued that there was effective communication during the early phases of NAPCOD.

It could be deduced from the above that through this lack of effective communication of NAPCOD activities to the high-level decision makers in MET, that NAPCOD has probably also not been adequately and effectively communicated to Cabinet and Parliament. The current challenge that NAPCOD is facing may therefore be due to a lack of effective communication?

There is a need to re-evaluate NAPCOD in its entirety. During this re-evaluation, mechanisms for communication from the programme to the high-level MET decision makers, and vice versa, should be a focus.

Integrated engagement of key ministries: e.g. MET, MAWRD, MLRR

There might also be a need to re-engage at the decision-makers level especially between the key ministries i.e. MET, MLRR and MAWRD regarding their mandates in

desertification/land degradation at the national level but also at the community and grassroots levels.

Effectiveness of the NAPCOD National Steering Committee

There is a need to critically re-evaluate the NAPCOD steering committee. Is this instrument really necessary? Is it addressing effectively its mandate? Is it maybe so big that it defeats its purpose?

Sustainability of NAPCOD especially after cessation of donor funding is not clear

What is the future of NAPCOD? Will government be able to allocate the necessary human and financial resources to fully implement NAPCOD especially after donor funding has run out. How sustainable is NAPCOD in its current form? Will government need to recreate their own programme from scratch or is there a way through which a meaningful agreement regarding NAPCOD can be reached?

This is a particular crucial issue in the short term with the German negotiations scheduled for June 2003. Should there be an interest in continuation of the existing funding a request must be put forward by the government at these bilateral negotiations, for desertification of perhaps under the natural resource sector.

Insufficient tangible results

The programme should be reviewed to ensure that more tangible results and benefits can be obtained. There is a need for NAPCOD to facilitated real impacts on the livelihoods of especially our rural communities who are depending directly on the land in terms of what it can produce. This issue is discussed in more detail in the next section.

b) Perspective on NAPCOD identified during the compilation of the Second National Report as well as by the mid-term evaluation of Phase III

The second national report on the implementation of the UN Convention to Combat Desertification highlights the following as some of the challenges facing NAPCOD

- On a country-wide scale, NAPCOD has not significantly changed the way people use natural resources. Over-exploitation and unsustainable use are still widespread, and the proportion of the population living in poverty and vulnerable to the risks of drought has not significantly changed. In fact, good rains over the last three years effectively masked land degradation symptoms. The pilot areas for programmes related to combating desertification are small islands in a much larger area of unsustainable practices, and the message is not spreading spontaneously.
- The level of practical commitment to sustainable use of natural resources is low. The term is used widely but its practical implementation beyond selected pilot areas, remains the exception, not the rule.

- Many of the major national players, such as the ministries responsible for agriculture, water and forestry, do not yet recognize that their activities towards sustainable use of natural resources are essentially aimed at combating desertification. For example, many of the ongoing activities of the Directorate of Agriculture and Rural Development in MAWRD are directly linked to the principle of sustainable rangeland management and sustainable utilization of this resource, yet are not considered as contributing to “combating desertification” nor widely promoting the good practices.
- The challenge of replication to national level remains and will ultimately be the function of the government extension officers working throughout the country. The reality is that Government is tasked with addressing issues related to land degradation at a national scale, yet it is always easier to test and make things work at pilot level and difficult to replicate results nationally. Strengthening the link between the pilot programmes and those service organizations tasked with national implementation of sustainable development policies is the focus of several current rural development programmes, including NAPCOD. NAPCOD is not yet a truly national project, with particularly the community-based activities limited to those communities in a few pilot areas.
- At the moment, it is convenient for government ministries to support anti-desertification measures as the programme is funded by donors and implemented mainly by NGOs. The commitment by government to support and continue to implement NAPCOD once external funding ends is not clear. The commitment by government to mainstream the concepts associated with combating desertification, e.g. policy harmonization, integration into sectoral plans, capacity building amongst its extension and other field staff, is limited. NAPCOD has a challenge to make government aware of the obligations it has taken on by ratifying the UNCCD but also on behalf of its people who live in an arid, variable environment. It must also help to mainstream the concept of combating desertification into national plans and particularly into the national budget.
- As an incentive for sustainable resource management, people need exclusive rights over rangeland and grazing resources. The lack of a sense of “ownership” regarding rangeland resources is a serious constraint to the implementation of sustainable rangeland practices such as rotational grazing, resting and clearing of bush encroached areas. Until such legislation is in place, community-level institutions such as FIRM contribute to enhancing “communal” management of rather than “free access” to natural resources.
- A window of opportunity exists for NAPCOD to help widen the scope of current legislation on conservancies. The aim would be to grant communities similar user-and management rights for rangeland resources as is the case with wildlife, water and forestry resources. Consideration should also be given to areas not incorporated into conservancies – these are perhaps more important as they often involve the poorer members of society.

- NAPCOD needs to focus on producing tangible impacts as vital priority, or it will suffer loss of credibility. Some achievements have been the establishment of the integrated planning, monitoring, evaluation and adjustment approach of FIRM that continues to expand in NAPCOD and related projects. Livestock and rangeland surveys are included in routine monitoring by environmental shepherds⁴ in conservancies and elsewhere, and communities working with NAPCOD have gained knowledge on how to monitor their natural resources (such as grazing, livestock, wildlife or rainfall) and assess changes.
- NAPCOD needs to have useful outputs that can be distributed. The series of brochures compiled to create awareness of NAPCOD activities should be finalized and disseminated widely.
- There is also a need for role clarification regarding the mandates of all the stakeholders i.e. the government, NGO and private-sector partners in order to attain true national effort to deal with these ongoing issues as highlighted above.

7. The best case scenario regarding the responsibilities of the various stakeholders regarding combating desertification

Ministries:

Could plan together in an integrated manner, at national and local level, and take the environmental realities of Namibia into account when making policies or planning development. Ministries could support farmers' efforts towards opportunistic range management through various appropriate incentives. Extension services of the relevant ministries, with firm support from their high-ranking officials, could disseminate and help apply the lessons learnt from NAPCOD throughout the communal areas where they operate.

Non Governmental Organisations

NGOs could make sure that their development plans and actions are sustainable, by encouraging a long-term view on the use of Namibia's renewable natural resources, especially water and grazing. They could help inform all Namibians about the dry and variable climate that we share and what we can reasonably expect from our finite natural resources. They could work closely with farmers and their service providers to identify the indicators of land degradation and loss of productivity so that farmers themselves can make the correct decisions to reverse desertification.

Community Based Organisations and Farmers Association

This is a very important sector⁵ and needs to play an active role in terms of combating desertification. This sector ideally receives training, exposure and capacity building

⁴ Environmental Shepherds is a concept coined by the Grootberg conservancy it refers to community members who performs a similar function as game guards, the difference is that the Environmental Shepherds also collect environmental data for monitoring purposes.

⁵ This group serves as the liaison between communities and policy makers as well as civil society

(integrated planning, monitoring, application, documentation etc) which they in turn must provide to the communities which they serve at the grass roots level. They should replicate the experience that they have obtained through participating in pilot areas, by ploughing their experience back into rural communities. Ideally through activities of this group, attitude and behaviour change can be induced in rural communities through improved livelihood. Farmers associations should help to raise awareness amongst their members that livelihood security can not be sustainably achieved through conventional farming but that there is also scope for livelihood diversification through appropriate management strategies.

Private Sector

Ideally this group, especially commercial farmers, can also contribute significantly by informing and educating other sectors through sharing of their experience i.e. translation of what they do, how they do it and why they are doing this. The communal farming sector should also ideally be doing this in order to foster a healthy dialogue and mutual exchange between these sectors.

The Media

The media could inform itself about the Namibian environment and not treat drought and natural climate variations as unusual events requiring emergency actions. Instead, they could provide the information which would help all Namibians prepare for dry periods that happen on a regular basis. This sector can also play a role in scholar education on land degradation and sustainability issues. It can also promote good land management through the exposure of good and bad land use practices.

8. The worst case scenario regarding the responsibilities of the various stakeholders regarding combating desertification

Namibia, as an arid country and the driest country in sub-Saharan Africa, with a relatively small, natural resource-based economy, has some difficult development decisions to make. Wise development planning is most critically needed in dry nations, in which many people live at the edge of survival. If these decisions are not made and the best case scenarios above are not followed it will mean that we will have a nation oblivious to the fact of environmental challenges, poverty and bankruptcy caused by deteriorating land conditions due to large scale land degradation.

Deforestation and loss of other resources gradually will lead to deforestation in areas of dense settlement, including degradation or loss of critical habitats such as wetland habitats which had formed an important lifeline for local people. The poverty and hardship which result will be worsened by periods of drought, un-seasonal rain or flooding, fire and other episodic events. Eventually, once self-reliant people are forced to flee the land, seeking refuge with already overburdened relatives, or depending on food aid in resettlement camps or at the margins of cities. A spiral of poverty, dependency and environmental degradation has become grimly established.

Rather than being a cause for despair, the above makes it even more challenging and essential for us to make wise development decisions, with the greatest long-term vision and the least short-term self-interest.

9. Recommendations:

Next steps:

- MET & MAWRD to facilitate analysis of outcomes and achievements of NAPCOD in combating desertification, lessons learnt
- Develop strategy to apply and implement these lessons and subsequent strategies on a national scale
- In terms of mainstreaming NAPCOD can be used to influence the structural framework conditions for sustainable and effective desertification control. By co-designing new and revising existing sector policies and development plans, NAPCOD can help achieve a greater level of harmonization.
- Sensitise and gain support and commitment from other Government and non-Government institutions to address desertification nationwide. NAPCOD's information policy and its effort to raise awareness of the desertification problem's past history have obviously not sufficed to generate sufficient concern amongst the sector ministries to mobilize their intensive participation in the national action programme. To improve cooperation, the project-executing agency, MET-DEA, will have to conduct intensive information campaign outlining the scale of desertification and its impacts on key areas of the economy. This can be done through specialist information materials.
- More donors should be approached to support the national action programme. It would be expedient to establish ongoing donor coordination so as to facilitate the mobilization of additional resources and thus boost the national programme's efficiency on a wider scale.
- The complexities and challenges associated with the effective implementation of the various multilateral environmental agreements threaten to overwhelm the administrative structures and capacities of the government and other stakeholders. The objectives of the three Rio conventions are closely linked to issues of sustainable development and environmental quality. The complexity of the interactions of climate, land degradation and biological diversity with sustainable livelihoods, particularly in Namibia a country affected by drought, and desertification needs to be simplified through a well coordinated synergistic approach at all levels. The National Capacity Self-Assessment process is providing a unique opportunity to inform this process effectively.
- Try to seek synergies with the ongoing activities, i.e. rural development framework, national poverty reduction strategy, National Biodiversity Strategy and Action Plan, National Adaptation Programme Activities (Climate change) and other relevant programmes.

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