#### Towards A Concerted National Desertification Programme

Capacity Development for combatting Desertification and improving the Use & Management of Natural Resources in Namibia

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#### **Abbreviations**

CMC Community Management Committee

DEA Directorate of Environmental Affairs

DERUN Desert Ecological Research Unit of Namibia

DRFN Desert Research Foundation of Namibia

IMLT Institute for Management and Leadership TrainingMAWRD Ministry of Agriculture, Water and Rural Development

MEC Minitry of Education and Culture

MET Ministry of Environment and Tourism

MLRGH Ministry of Local and Regional Government and Housing

MLRR Ministry of Lands, Resettlement and Rehabilitation

MWCT Ministry of Wildlife, Conservation and Tourism

NAU Namibian Agricultural Union
NDT Namibian Development Trust

NEPRU Namibian Economic Policy Research Unit

NNFU Namibian National Farmers Union
NPC National Planning Commission

PS Permanent Secretary

SIDA Swedish International Development Authority

SARDEP Sustainable Animal and Range Development Programme

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#### **Towards a Concerted National Desertification Action Programme**

## Capacity Development for preventing Desertification and improving Use & Management of Natural Resources in Namibia

#### 1. Background and Rationale

#### 1.1 Introduction

The links between ways of living, development patterns, poverty and the environment in industrialized and developing countries are evident. The sustainable use and development of natural resources - integrating and balancing economic, social, political and ecological aspects - is the central objective of multi-sectoral environment and development strategies at all levels.

Far from achieving this objective, all countries face problems of unsustainable development processes.

Today, the complex set of environmental issues are firmly established on the the international agenda. The issues in question range from climatic factors, such as depletion of the ozone layer, the "greenhouse effect" and global warming, to human-induced environmental degradation and desertification, to the maintenance of biological diversity.

Many people doubt that a Global Convention such as the "UN Convention to Combat Desertification" is the appropriate instrument for tackling an environmental problem as complex and controversial as desertification. However, the Convention incorporates certain commitments, binding all signatories. The question is, which elements would best be treated in which phase of the process, at what level, and in what manner. It is generally agreed that many commitments - particularly those of a socio-economic and institutional nature - are best dealt with at national and community level.

Thus, designing and implementing a national strategy and programme to prevent desertification is the task lying ahead.

## 1.2 What do we mean by Institutional Development in Environment focussing on Desertification?

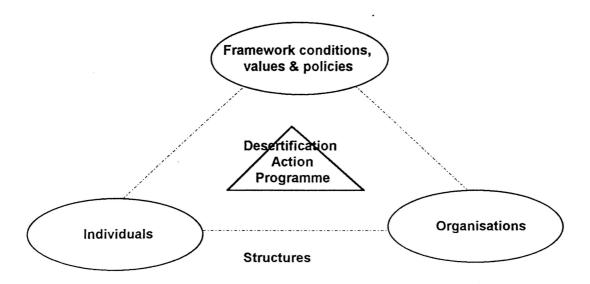
The term "institution" refers firstly to organisations, i.e formally structured bodies with recognised roles to achieve predetermined objectives. The spectrum of environmentally relevant organisations stretches in Namibia from state and parastatal organisations such as NPC, ministries (eg. MET, MAWRD, MLRR, MRLGH), unions (NAU, NNFU), university (UNAM), trusts (eg. NDT), private companies and their fora (BNFE) as well as associations (NCCI), non-governmental organisations (eg. DRFN, IRDNC) and action groups at national level. Downstream government organisations (eg. regional councils, reg. commissioner) and specialised non-governmental organisations play a vital role at regional level. At local level there are political and administrative self-managed bodies, governmental extension services, communal management committees, traditional authorities ("chiefs", headmen) and community-based non-governmental organisations.

Environmental institutions also comprise framework conditions such as socioeconomic norms and values (e.g. environmental legislation, standards), political frameworks (e.g. procedures adopted to define, apply and monitor the observance of regulations), environmental programmes, patterns of behaviour and communication, which shape the social interaction of individuals making up organisations, and directly or indirectly influencing the rules which govern the use and management patterns of natural resources.

Individuals mould the form and the substance of these institutions through their behaviour and demands, while the institutions in their turn affect the patterns of the individuals' lives and the options open to them.

Institutional structures are the links, the lines of communications, which facilitate the complex interaction of the three "variables" in the described system: individual, organisation, and social norms. They reveal the relations between the variables and their interaction.

Figure 1: "Variables" in the process of institutional development in desertification control and improving natural resource management



Institutional development in the field of desertification should be seen as a cross-sectoral, multi-media process, which results in institutional structures that improve synergy and communication between the variables in the system. The capacity-building approach should be understood as a methodical procedure to develop problem-solving capabilities and to improve knowledge, skills, norms and structures among the institutional actors involved.

#### 1.3 What is Desertification?

"Desertification is land degradation in arid, semi-arid and dry subhumid areas, resulting mainly from adverse human impact." In general, it is perceived as a loss of productivity of the affected land mainly caused by mismanagement. The productive potential of the land and its ability to support land users (people, animal, vegetation) is severely reduced.

<sup>&</sup>lt;sup>1</sup> UNEP's definition of desertification does not exclude the exacerbation of the desertification process by a number of related climatic constraints, but highlights the human-induced process elements caused by peoples' efforts to adjust to a harsh environment.

#### 2. Current Status of Namibia's Major Environmental Issues

## 2.1 General Environmental Framework Conditions and Issues Contributing to the Complex Process of Desertification

#### 2.1.1 The variable environment: vulnerability of arid and semi-arid systems

Namibia covers a vast territory of 824.292 square km; more than 80 % of its fragile and variable environment is and and semi-and. Two major deserts flank the central part, a 1.000 to 2.000 m high plateau with Windhoek as capital: the Namib in the west along the atlantic coast (80 to 130 km wide), and the Kalahari in the east.

Namibia experiences a dry, warm climate with an erratic rainfall pattern. Maximum rain falls in summer - this varies from less than 20 mm in the Namib desert to around 600 mm per annum in the north-eastern zone. Periodic droughts and, conversely, occasional flooding, are considered to be a normal part of the climatic extremes and contribute to a unique hydrological cycle in Namibia.

The arid and semi-arid systems of Namibia are highly vulnerable. Environmental, mainly human-induced problems within the agricultural areas are, e.g. overgrazing, overstocking, water constraints, bush encroachment, deforestation and soil erosion. Thus, a naturally low carrying capacity and inappropriate natural resource management patterns lead to desertification, particularly in the populated northern communal areas.

The fragile resource basis in Namibia, low, varying rainfalls, and the specific geography of the country are ecological factors restricting the use of natural resources and the application of various natural resource management systems.

All of this has an impact on the distribution of the population.

#### 2.1.2 Population - distribution and growth

Namibia has only 1.5 million inhabitants but a high annual population growth rate of about 3.5%. Population density is low with 1.7 inhabitants per sqkm but has to be seen in relation to the naturally low carrying capacity and current inappropriate natural resource management patterns. The majority of people are black (approximately 88%); 5% are white, and 7% are mixed or of other races.

The agricultural sector remains divided into a commercial sector responsible for commercial livestock production, and a communal sector which produces subsistence goods and provides income for the majority of Namibia's people.

Geographically, nearly 60% of the population live in the northern districts of Caprivi, Kavango, and Ovambo; roughly 15% live in the southern and central communal areas, and more than 10% are urban dwellers in Windhoek. Demographically, about 45% of the Namibians are under 15 years of age.

It is feared that the population growth rate exceeds people's capacities for required adjustments to the fragile environment.

#### 2.1.3 Poverty

Namibia experiences extreme income disparities and widespread absolute poverty. As stated in a World Bank country study from 1992, "the wealthiest 5 percent of Namibians control more than 70 percent of GDP, while the poorest 55 percent control only 3 percent". Concerning absolute poverty it is roughly estimated, "that at least two-thirds of the population are absolutely poor and that as many as three-quarters of all blacks are poor." The quantity and quality of social services and their accessibility reflect significant ethnic-based differences.

#### 2.1.4 Constitution, 'Green Plan', economics, and legislation

#### • Environmental clauses in the Constitution

The National Constitution of the Republic of Namibia demands

that the "ecosystems, essential ecological processes and biological diversity of Namibia" shall be maintained and that "living natural resources are utilised on a sustainable basis for the benefit of all Namibians, both present and future". (Article 95 Promotion of the Welfare of the People).

Article 91(c) refers to the functions of the Ombudsman, e.g. his duty

"to investigate complaints concerning the over-utilization of living natural resources, the irrational exploitation of non-renewable resources, the degradation and destruction of ecosystems and failure to protect the beauty and character of Namibia".

These two constitutional articles were the first steps in establishing a framework for environmental protection and management. The current process of environmental degradation and desertification has to be addressed accordingly.

#### Namibia's Green Plan: main elements and guiding principles

Namibia's Green Plan highlights a number of social, environmental and cross-sectoral issues that require priority attention as part of Namibia's Environmental Action Plan.

Some of the most important action areas are:

- helping to ensure that Namibia has clean air, water and land;
- supporting the sustainable use of natural resources;
- · guarding against the threat of desertification;
- encouraging environmentally responsible decision-making at all levels through information and democratisation

The identified programme areas in the Green Plan still have to be interpreted by the actors involved.

With regard to the underlying guiding principles of action it seems to be undisputed that, for instance,

- 1. poverty, population growth, natural resource management patterns and environmental degradation catalyzing desertification are closely interwoven;
- the successful prevention of desertification always needs the active, broad-based participation of a wide range of institutions (governmental as well as nongovernmental) and a large number of people at many levels of action from different sectors;
- the desertification strategy must be an integral part of the overall national development strategy and has to be cross-sectoral, inter-institutional and coherent in its approach;
- 4. preventing desertification is a long-term, social process of learning-by-doing as well as an ongoing adaptive response to changing conditions within the overall system.

#### Economics

The economy is built on renewable resources. Important sectors such as agriculture, fishing and tourism directly depend on this renewable natural resource base. The three sectors mentioned alone account for one quarter of the national income or one half of Namibia's foreign exchange earnings. All economic activities compete for Namiba's scarcest natural resource, i.e. water. The costs related to land degradation and the implications for the national economy have to be analysed, in order to improve the cost-benefit ratio of desertification-related actions and to provide more reliable data for the political decision-making process.

Economic growth will depend on a sustained use and management of natural resources.

#### Legislation

The existing environmental legislation in Namibia is partly outdated or inconsistent. Functional and enforcement duties are sometimes carried out by the same Ministry, eg. MAWRD has the conflicting tasks of promoting production as well as controling the use of harmful pesticides.

Namibian legislation does not allow an individual to approach the courts in order to protect the environmental interests of the broader community.

It is recommended to facilitate the formulation, updating and enforcement of the environmental legal framework in line with environmental policies and Namibia's vision of a civic society.

With the assistance of funding and expertise of Norway, a joint three-year programme between DEA and the Office of the Attorney-General is proposed, to review and to update environmental legislation.

#### Furthermore

framework conditions such as historical, socio-cultural norms and values, and the international economic order and trade policy affect strategies to combat desertification; their implications on natural resource management patterns have to be reflected upon.

#### 2.2 Fields and Issues of Environmental Action

In order to possibly interrupt the mainly human-induced vicious cycle of environmental degradation and desertification, all the following environmental issues, which are closely interrelated, need to be tackled in an integrative manner at all levels of society.

#### 2.2.1 Environmental Policies

In May 1991, the Ministry of Environment and Tourism (then MWCT) was mandated by Cabinet decision with the primary national responsibility for the preservation and conservation of the Namibian environment.

Due to the former absence of policies on important environmental issues, a large number have been developed by the Directorate of Environmental Affairs (DEA). Important policy papers are

- Mission Statement and Mandate of the Ministry of Environment and Tourism
- Conservation of biotic diversity and habitat protection (May 1994)
- Land-use planning: towards sustainable development (May 1994)

- Research (on natural resources and environmental management)
- · Communications, extension and environmental education
- Legislation
- Human Resource Management
- Organisation and Administrative structure
- Namibia's Environmental Assessment Policy (April 1994)
- Namibia's Park Management Plan Policy
- Wildlife and other natural resource management, utilisation and tourism in communal areas: benefits to communities and improved resource management (Draft, Feb. 1994)

#### Issues:

Nevertheless, there seems to be

- a lack of guiding policies, and even more,
- a lack of coordination, integration and sound implementation,
- inadequate forms of participation in policy development, and
- insufficient regard to sustainability as an underlying objective in policy development.

Although environmental problems affect people at all levels of society, environmental policy appears to be the concern of central government (MET) only which rarely calls on the knowledge, skills and cooperation of down-stream organisations at regional and communal level.

#### **Action Recommended:**

MET should be seriously concerned about

- how broadly these policies have been discussed among and internalised by the various actors at the different levels (participatory policy development),
- to what extent these policies are based on local knowledge (e.g. via public hearings),
- to what extent they are reflected or integrated in different sectoral plans and in the currrently drafted National Development Plan,
- to what extent these approved policies have been actually implemented.

To meet the included objectives and to adequately fulfill the related tasks, other key governmental / non-governmental organisations and inviduals have to take a role in the sustainable development of the environment. It is the **overall task of MET** to ensure that the various actors involved, e.g. in preventing desertification, meet their environmental responsibilities.

## 2.2.2 Integration of environmental aspects into sector policies, programmes and activities

Sector ministries are often not aware of environmental implications or do not consider environmental concerns in their respective sectoral policies and plans. Thus, environmental aspects are not sufficiently integrated into their sectoral strategies and approaches.

#### **Action Recommended:**

In order to improve this situation, MET should join forces with sectoral ministries and establish programme-based **strategic alliances**.

Furthermore it is recommended, that key sectoral ministries and departments - particularly MAWRD, MRLGH, MLRR, but also Min. of Mines and Energy, Min. of Trade and Industry, and MEC - should be officially approached and supported by MET

- in establishing and institutionalising an environmental nucleus within their respective organisational structure (similar to the Min. of Fisheries); and
- in appointing a staff person or group as liason officer to the Concerted
   Desertification Action Programme and MET / DEA

For this, the national cross-sectoral issue of desertification could function as an entry point.

In general, the integration of environmental and development policies requires continuous cross-sectoral screening and analyses of the ecological, economic, legal and social problem fields, whereby links and overlaps, political deficits, conflicts and potentially compatible aspects concerning desertification should be identified.

In the long run, this would

- strengthen MET's inter-institutional, supporting and coordinating role, and
- facilitate an impoved integration of environmental aspects into sectoral plans,
   policies and programmes

#### 2.2.3 Environmental Planning

#### Issues:

- The new National Development Plan is drafted but the few qualified planners in the various sectoral governmental agencies lack formal mechanisms in sharing information, ideas and experiences.
- Planning approaches are mostly top-down and reactive, without broad participation of the regional and communal level.
- There is a widespread lack of inter- and intra-sectoral integration.
   Misunderstandings, overlaps and conflicts among actors are the logical consequence.
- Mechanisms of integration, such as inviting other line agencies for their comments, are still weak.
- Environmental Impact Assessment (EIA) is more often applied to individual projects and programmes than to development plans, sectoral plans or policies. EIA tends to focus on biophysical impacts; social and economic aspects, equally important, are neglected.
- There is a lack of (environmental) planners.
- · Planning horizons are too short.
- Environmental and social concerns are generally subordinated to economic issues, foreign exchange earnings, and employment generation: development policies, particularly sectoral plans and the budgetary process are often overriding environmental policies; they are rarely coordinated and integrated.

#### **Action Recommended:**

- To create a topic-oriented, cross-sectoral capacity-building pool. Government staff can be seconded or individual specialists can be nominated in order to work on specific issues based on clear terms of reference (e.g. EIA, integrated planning services); this would facilitate a cross-fertilisation of ideas and support a crosssectoral planning network;
- To plan with people not for people, meaning that participatory, decentralised and integrated planning approaches have to be adopted;
- To develop EIA guidelines for sectoral, national, regional and local integrated action planning policies.

#### 2.2.4 Organisational Development

There are two distinct roles which organisations could play in following up the Convention. First, many bodies have important contributions to make towards developing and carrying out elements within the national strategy, based on the respective strengths of each. This requires better coordination among the various parties and greater willingness to collaborate. Second, there will be divided responsibilities according to the national strategy and programme with regard to political commitments, fulfilment of agreed actions, mechanisms for coordinating resources, flow of information. It is necessary to find out what is realistic and effective.

MET / DEA unlike other traditional line ministries (eg. MAWRD) is still very much at the start of their learning career, and it lacks an established political lobby. Structural shortcomings of other environmentally relevant ministries, such as their sectoral orientation and their limited mandate, have made it difficult for them to genuinely work towards a sustainable integration of environment and development.

According to its mandate, MET / DEA should ensure that other actors involved play their mandated roles in an environmentally sound development.

#### General issues and constraints:

Structures and institutions throughout Namibian society seem to be in transition and facing a change of roles. Transforming, consolidating and adjusting are common elements of institutional development. While central government structures are to a large extent in place, regional and communal systems of administration and service delivery are not. Implementational capacities vary from Ministry to Ministry and within different Directorates or Departments of one ministry. In many cases it is an open question who should deliver which service at what quality to people and communities. Which tasks fall particularly to the government's portfolio at local or communal level, which to that of Non-Governmental Organisations (NGO's), and which to the people themselves?

Attitudes and the organisational culture of the pre-independence era still affect the roles of Governmental Organisations and NGOs.

#### - at governmental level:

- inadequacy of existing organisations to respond effectively with a proactive strategy to the challenges of sustainable development;
- sometimes excessive bureaucratic and hierarchical administrative patterns,
   reflecting colonial times;

- insufficient popular participation to reflect the interests of the bottom-up 60% of society;
- unclear roles of newly established administrative structures on regional and local level (e.g. Regional and Local Councils, Regional Commissioner) and of traditional though damaged power structures (Headmen, 'Chiefs') in natural resource use & management cause tensions.

#### Action Recommended:

- · clarify roles and related tasks;
- strengthen the organisational capacity of MET and DEA;
- support other governmental (eg. NPC, ministries, parastatals) and nongovernmental organisations (eg. NBFE, SSD / UNAM, NAU, NFU, DRFN, IRNDC etc) in taking their parts;
- introduce decentralised and integrated systems of information, planning and decision-making in order to facilitate flexible and efficient responses to ongoing changes;
- strengthen team-oriented working structures and vertical communication lines;
- organise training according to need, particularly leadership & communication training.

#### - at non-governmental level:

According to the NPC's list of Development Organisations in Namibia there are, e.g. 38 training or educational organisations and 15 environmental organisations. NGOs, with easy access to government offices, have established good government linkages and taken up a continuous dialogue. Many NGOs have joined forces with line ministries in carrying out development programmes and activities, particularly at communal or grassroot-level, advocating and facilitating the "bottom-up" 60 % of society (e.g. the Desert Research Foundation of Namibia - DRFN, the International Rural Development and Nature Conservation - IRDNC, and the Nyae Nyae Farmers' Cooperative - NNFC, cooperating with MET or DEA). Interaction between NGOs and GOs includes regular participation in workshops and membership in interorganisational steering committees. Environmental NGOs such as DRFN and IRNDC have focussed on information gathering, analysis, research, and partly training. They favour an integrated approach to environmental management, taking into account the communities which actually need, use and manage natural resources. Nevertheless, NGOs still face a variety of organisational constraints:

- insecurity regarding their role;
- lack of skilled and experienced staff; after Independence, many former NGO
  people with leadership and management skills moved into the public service
  because of better salaries and fringe benefits within the Government sector;
- · dependency on one single (charismatic) person;
- little familiarity with participatory appraisal, planning and management techniques as well as effective accounting systems

#### 2.2.5 Natural Resource Management:

#### Land tenure and use-rights in communal areas

The "conservancy" concept on "Benefits to communities from wildlife and other natural resources" favours an approach of

- (a) allowing people on communal land to partake in sustainable wildlife management by sharing responsibility, decision-making and benefits;
- (b) developing a close links between wildlife resource and benefits.

According to this approach, authority over wildlife utilisation is to be devolved to communal farmers as done in the Communal Areas Management Programme for Indigenous Resources (CAMPFIRE) implemented in Zimbabwe. From the legal point of view, the approval of such policy gives communal farmers rights related to wildlife similar to those enjoyed for a long time by commercial farmers. MAWRD's approach in the communal areas SARDEP is in line with DEA's policy initiative. At present, access to and use of natural resources in communal areas seems to be open to anyone; there is no communal property regime by defined groups in defined areas, with rights of inclusion or exclusion.

#### **Action Recommended:**

- A better understanding is needed of the motivational dynamics and cause-effect relationship between property or land tenure rights - decision-making management - and benefits, related to sustainable natural resource use & management practices.
- All actors involved should make use of local knowledge; new techniques should be designed on the basis of or interlinked with local knowledge
- DEA should design and use Desertification cum Natural Resource Management Instruments, e.g. EIA, economic incentives, formulation of limits and standards, reinforcement patterns.

#### 2.2.6 Human Resource Development

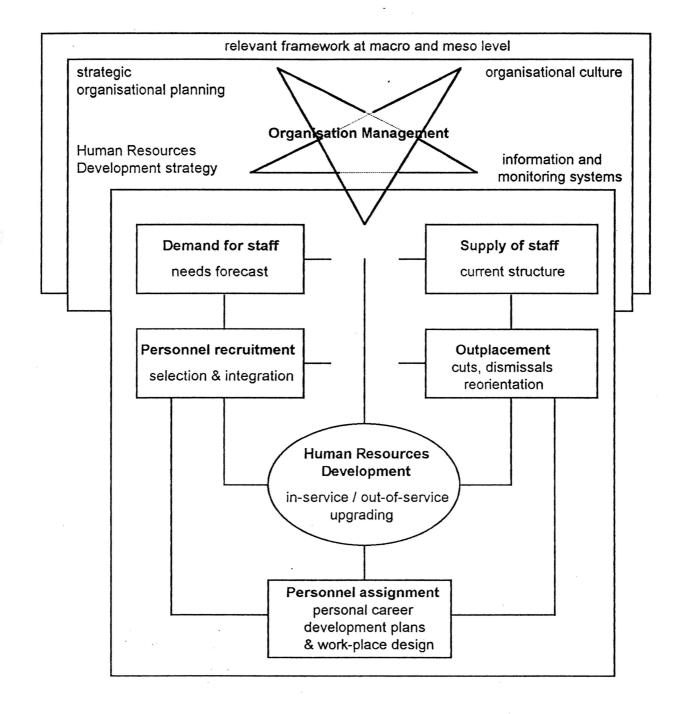
Organisations, their structures and cultures are shaped by people. MET, wishing to manage complex systems and preserve these in the long run, has to assess and develop the knowledge, abilities and skills of individuals.

After Independence, Namibia faced a two-fold challenge: firstly, that of developing institutions from scratch; secondly, that of staffing these from a very limited human resource base of well-educated and experienced Namibians. Currently, there is a general two years freeze (1993 - 1995) on new employment in the public sector. Even though there is a broad consensus on the urgent needs of staff development, training and "reorientation", ongoing programmes lack Namibian staff and face scarce human resource capacities. In order to support MET's efforts in restructuring and developing the human resource base of its Directorates Resource Management and Forestry, as well as of its Division Support Services, the Rössing Foundation has been requested to analyse tasks, clarify roles and job descriptions, carry out a training needs assessment, and identify relevant training facilities outside MET.

A draft document of this ongoing study should be available at the end of August, 1994. The subcontracted consultants face problems related to the limited HRD information base. At present, the study team has a large number of interview sessions with various staff members at different levels. To meet the identified training demands while avoiding the duplication of efforts or the cost-intensive creation of MET-internal training facilities, the team will look into institutional capabilities of existing training institutes.

Systematic human resources development is an important part of MET's overall personell policy and management structure.

#### Integration of planned human resources development into the overall MET system



#### **Action Recommended:**

It is important that MET develop a comprehensive human resource development strategy rather than implement isolated training activities. This strategy includes clear-cut roles and tasks of the different directorates, divisions, and sections of MET at all levels. The proposed Rössing study could provide a sound basis for further action. A first step to be taken is a competency-based needs assessment, considering the demand and supply side for human resource development with regard to the Desertification Action Programme. To meet the urgent needs of staff development, a Human Resource Development Fund should be established.

#### 2.2.7 Environmental Education and Public Relations

The public generally is not aware of the need and the importance of conserving the integrity and diversity of the natural order.

#### **Action Recommeded:**

- communicate Namibia's National Programme on Desertification via mass media and other network outlets to a wide audience;
- elaborate a national bulletin on desertification-related issues to inform the general public;
- develop a cross-curricula in environment, in line with enviro-teach resource materials;
- raise awareness on desertification-related issues amongst a broad spectrum of the population, particularly sensitising policy decision makers, journalists and teachers at all levels.

#### 2.2.7 Communication, Coordination, Integration

Communication in any organisation and among different organisations is crucial in establishing and maintaining lines of understanding, acceptance and cooperation among people. It is a major challenge of the National Programme on Desertification to integrate communication into all aspects of its operation.

#### issues:

- lack of horizontal communication and coordination among the various actors;
- lack of institutionalized formal structures of communication, coordination and integration with regard to planning, implementing, and monitoring of programmes;
- · insufficient cross-fertilisation of ideas.

#### **Action Recommended:**

- institutionalise efficient mechanisms of communication and coordination in line with entrusted tasks;
- install a process-oriented organisational management structure, with regard to the envisaged National Desertification Action Programme, which facilitates an integrated, cross-sectoral approach;
- promote inter-institutional cooperation, conflict management and mediation.

# 3. Current Status and Analysis of Key Environmental Organisations: Structure, Rationalisation Efforts, and Implications

#### 3.1 Ministry of Environment and Tourism (MET)

#### 3.1.1 Historical Background

With Independence in 1990, the Ministry of Environment and Tourism (former MWCT) as well as other ministries inherited many problems reflecting attitudes and structures of the recent colonial era. The problematic situation of the former Directorate of Nature Conservation was generally characterized by a lack of

- initiative and environmental policies;
- ability to communicate with the people and to make use of their collective knowledge in environmental protection and management;
- national mechanisms for identifying environmental problems.

This was caused by the centralisation of power, control and responsibility in the capital at national level, staff appointment patterns which were not performance-based, a centralised administrative structure with hierarchical lines of communication, a lack of strategic planning and modern management techniques.

Before 1990, no governmental organisation was designated as responsible for environmental policy-making and management. With Independence, the Cabinet delegated broad environmental responsibilities to the newly created Ministry of Wildlife, Conservation and Tourism (MWCT). Due to the ongoing process of

rationalisation of the public service, MWCT has been renamed to Ministry of Environment and Tourism (MET).

## 3.1.2 Decentralization policy and potential impacts on the organizational structure of the MET

MET advocates a decentralised, multi-disciplinary approach to environmental management. This involves responsible personnel in six regions with powers, human, financial and technical resources required to fulfill their entrusted tasks efficiently.

Regional officers (Deputy Chiefs) are located within the region and will have administrative and functional control over a staff of personnel specialized in resource management, research, and communication. Due to the decentralisation of functions and decision-making powers to the regional level, current post structures will be abolished in favour of new occupational classes, i.e. Ranger and Warden, with new job assignments. For this to happen, a large number of MET personnel has to be reoriented and trained. A comprehensive Human Resource Development Programme is urgently needed, which requires the strengthening of organisational as well as individual capacities.

#### 3.1.3 MET mandate and approved organisational structure

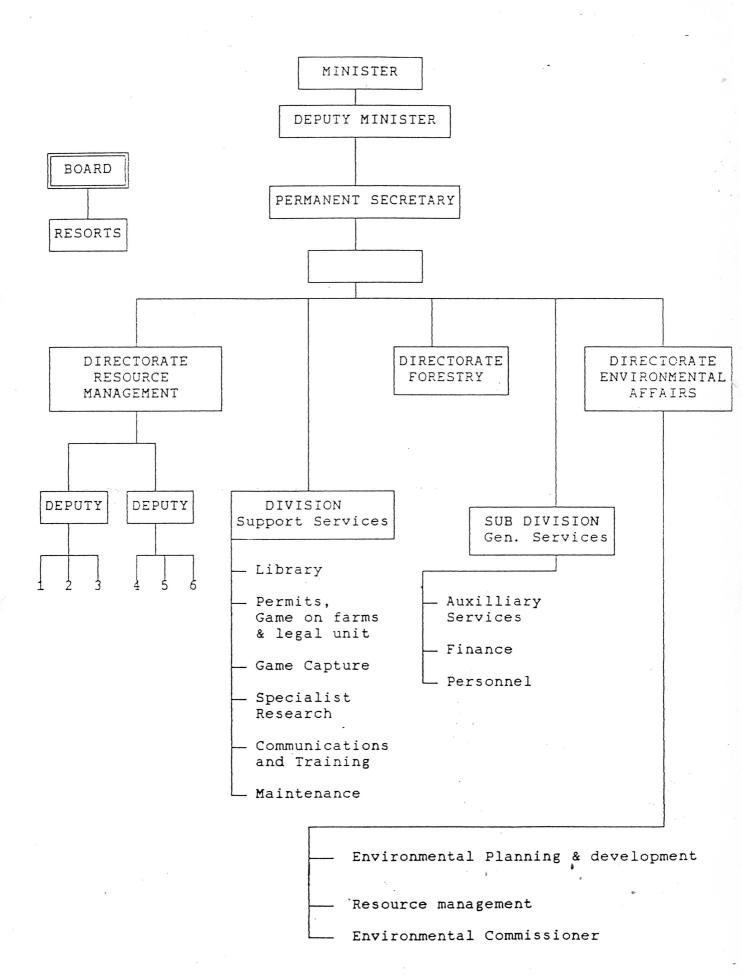
The Ministry of Environment and Tourism is mandated with the primary national responsibility for the preservation and conservation of the Namibian environment. Its various tasks are linked with a number of objectives (see Annex Mandate).

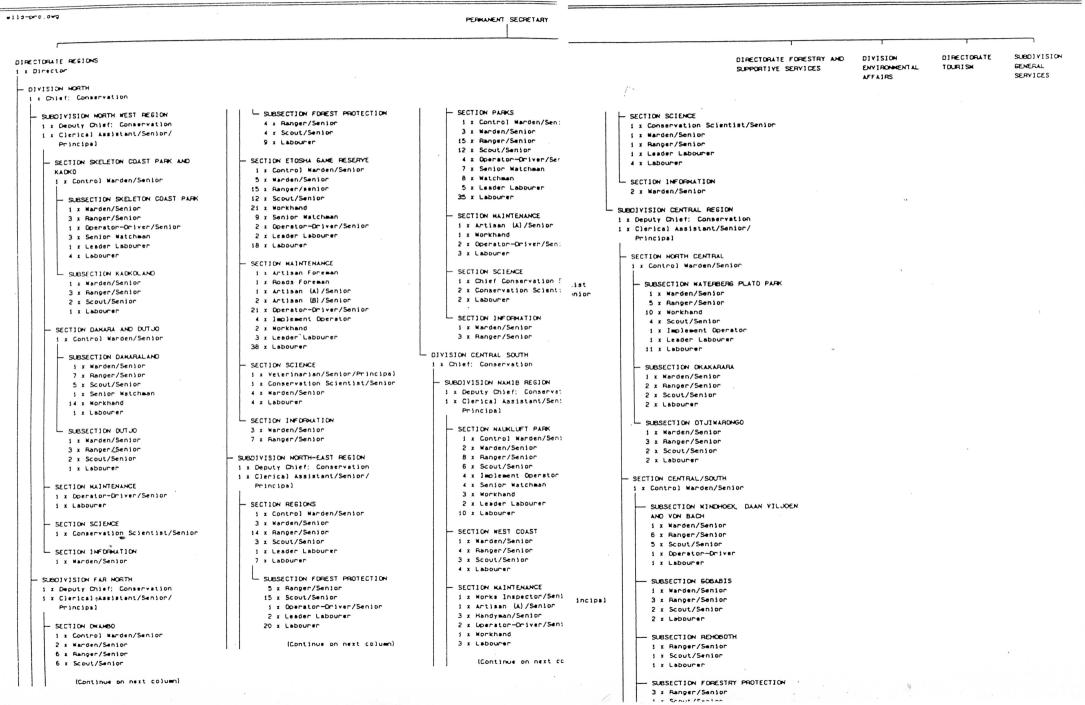
MET's approved organisational structure includes three Directorates and two (Sub-)Divisions at central level:

- 1. Directorate Resource Management / Regions
- 2. Directorate Forestry
- 3. Directorate Environmental Affairs
- 4. Division Support Services
- 5. Subdivision General Services

MET is headed by a Minister, a Deputy Minister, and one Permanent Secretary.

#### Proposed organisational chart of MET





The main objective of MET is "to maintain and rehabilitate essential ecological processes and life support systems, to conserve biological diversity and to ensure that the utilisation of natural renewable resources is sustainable for the benefit of all".

In line with this overall objective, it should fulfill the following functions:

- further the conservation of natural resources and habitat;
- provide a special supportive service to the regions;
- · conserve the environment;
- · render general services.

This requires a regional, multi-disciplinary approach. Consequently, responsibilities as well as powers regarding decision-making and control have to be devolved to the regional level. Based on specific criteria, the country will be divided into six regions: North West, Far North, North East (=Division North), Namib, Central, and South (Division Central South).<sup>2</sup>

Thus, MET services - e.g. in the fields of environmental management, research, education and utilisation - will be delivered through six regional head offices. At present, the establishment and restructuring of the six regional head offices is taking place. With regard to the future post structure, various current occupational classes will be substituted by integrated occupational classes. The new proposed post structure is as follows:

	Chief:	Conservation				
Deputy chief: Conservation						

Control Warden / Senior

Warden / Senior

Ranger / Senior

Scout / Senior

Leader Labourer

Labourer

Thus, an applicant with a three year B.Degree or Diploma can be appointed as a Warden. A Warden must have at least three years experience before his or her promotion to Control Warden becomes possible.

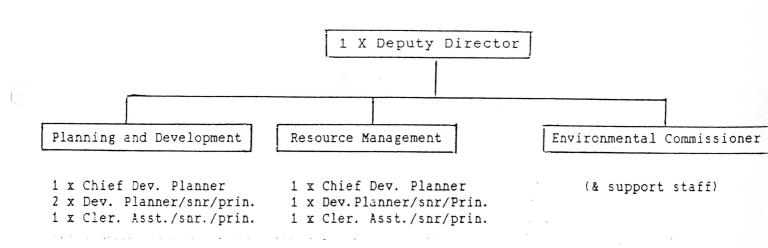
<sup>&</sup>lt;sup>2</sup> see Annex Regional Chart

As part of the rationalisation efforts of the former MWCT, the **Directorate of Forestry** is in the process of being transferred (from MAWRD) to and integrated into the MET.

The former **Directorate of Tourism** (and Resorts) is in the process of commercialising and becoming a parastatal, headed by a Board. Profit orientation, the flow of finances and the envisaged decision-making & management structure of this parastatal will create an organisational culture quite different from that of the other directorates and divisions within the MET. It will have to be seen whether an integrated approach of all actors towards National Parks is still feasible. Doubts have already been raised within MET because the lines of communication and the flow of funds will differ from those of other ministerial directorates.

The Directorate of Environmental Affairs (DEA) was created in July 1992. It is responsible for environmental planning and development as well as environmental coordination and resource management. The DEA will appoint an environmental commissioner who will then reside in the National Planning Commission. The DEA is headed by a Deputy Director and is structured and staffed in the following way:

#### DIRECTORATE OF ENVIRONMENTAL AFFAIRS



Seconded Staff - 1 x National Biodiversity Coordinator 2 x resource economist

Due to the small staffing pattern (8 posts) and the dynamics and vision of its current Director, the DEA is run more like a flexible institution than a ministerial directorate.

#### Joint programmes and activities carried out or supported by DEA:

- development of a strong, sustainable tourism sector and industry, run mainly by the private sector with government support and incentives provided via the Directorate of Tourism and Resorts in the MET. The DEA particularly supports the integration of resource management and tourism development;
- a community-based natural resource management programme with project activities in East and West Caprivi, Bushmanland, Kuiseb, Damaraland, and Owambo; funded by WWF-US and the Biodiversity Programme, with US-AID committed to providing funds for four years;
- a sustainable animal and rangeland development programme (SARDEP) of the MAWRD, which assists the farming communities in developing and implementing appropriate strategies for improved animal production and rangeland utilisation; SARDEP started in 1992 and is scheduled for 10 years, funded by BMZ / GTZ;
- the Land-Use Planning Committee, established with the Ministry of Lands and Resettlement, aims at promoting and co-ordinating wise land-use practices and planning;
- the DEA has initiated an "Industries Project", aimed at collecting basic information on pollution levels and at redefining responsibilities of concerned ministries;
- the DEA has drafted a national project-oriented Environmental Assessement Policy which recommends the establishment of an Environmental Commissoner (employed by DEA but positionend in the NPC) and an Environmental Board (chaired by MET);
- " after completion of the National Environmental Action Plan (NEAP), the DEA staff intends to introduce a national auditing system and natural resource accounting;
- a desertification awareness programme (including a national workshop) is implemented as a joint venture between DEA and DRFN, with support of BMZ / GTZ.

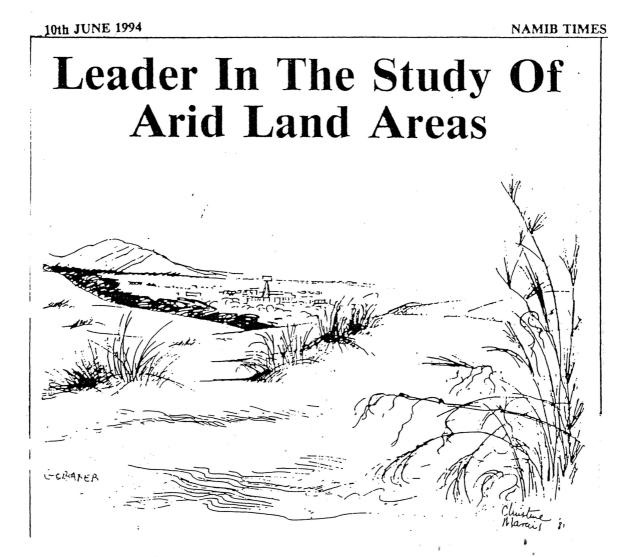
#### 3.1.4 Implications regarding Personnel and Finances

The proposed restructuring of the present establishment with ist 1910 posts will lead to an increase of 116 posts, i.e. all in all 2026 posts (see Annex Comparison of Post Establishment).

The annual expenditure on the present posts is 25.376.537 Namibian dollars; that on proposed posts would be 27.267.821 Namibian dollars, which means an increase of 1.891.284 Namibian dollars per year (see Annex Comparison of Expenditure on Posts).

#### 3.2 The Desert Research Foundation of Namibia (DRFN) at Gobabeb

The article "Leader in the study of arid land areas", published in the Namib Times, 10th June 1994, draws a profile of the DRFN.



## World Renowned Research Station.

#### CONTRIBUTED

GOBABEB: Over the course of the last three decades the Desert Research Foundation of Namibia (DRFN) at Gobabeb has evolved into one of the foremost research and educational institutions dedicated to the study of arid land areas. Located 60km from the Atlantic coast in the Namib Desert, the station lies at the junction of the gravel plains and the sand dune desert, along the edge of the ephemeral Kuiseb river.

Its unique situation in this harsh environment has made it a prime site for diverse types of research on all aspects of desert life and arid land management.

Working in collaboration with scientists and insitutions from all over the world, the DRFN hosts and undertakes numerous longterm studies that are continuously monitored by the research assistant staff. In the spirit of co-operative learning, the DRFN also regularly hosts visiting scientists and students working on a variety of projects and studies.

Although the station is essentially an outpost for field research, it can accommodate small-scale lab work to back up field observations, and enjoys the luxury of several computers as well as the most in-depth library on arid lands in the southern African region.

Research and education have been the main areas of focus for the DRFN throughout the last thirty years. Its reputation in these fields is world-renowned and has helped to firmly establish Namibia within the international scientific community.

Research project results of diverse natures have been published in national as well as international journals and books, while students and scientists who have worked with the DRFN have gone on to become researchers, educators, museum directors, lecturers, conservationists, etc.

The physical facilities such as the library, the computers and the lab space in combination with the personal expertise and knowledge of the DRFN staff and associates, make Gobabeb one of the most valuable training and educational sites/opportunities in Namibia for students, and scientists alike

In the past ten years student groups from over 30 Universities and secondary schools, primarily from the southern African region, have attended courses and seminars at Gobabeb. The DRFN is also actively involved in sponsoring and organizing workshops and conferences on such diverse topics as the Environmental Impact of Off Road Vehicles on the Namib (1992) and how to produce environmental education resource materials (1992).

#### NEW ERA

The nineties have ushered in a new era for the DRFN, both in its internal development and its role as an NGO in Namibia. The challenge of this transformation has not always been an easy one, and the struggle to become financially self-sufficient continues while the need for the type of projects that the DRFN sponsors grows.

Since Namibia's independence in 1990, there has been a drive by the government and NGOs to formulate policies for sustainable, national development The first step in that direction was the inclusion of Article 95 in the Namibian constitution which was intended to ensure that environmental issues do not become a footnote to the development process.

With that in mind, Dr. Seely and various DRFN ventures have been very active in awakening the attention of Namibian policy makers and project designers to the importance of environmental awareness and sustainability, as well as education of the public as a whole.

For a variety of reasons. NGOs like the DRFN play a vital role in Namibia's efforts to avoid environmental degradation to promote environmental awareness. As a well-established and flexible institution, the DRFN has responded rapidly to the need for an interdisciplinary approach to environmental issues. Its profound understanding of the Namibian environment and its institutional structure have encouraged international aid donors to use it as a channel for international aid monies and projects that benefit the Namibian environment.

Long-term data collected by the DRFN on such diverse topics as climate change and the impacts of water extraction, are used as resources throughout the project planning and environmental impact assessment process.

At the same time the DRFN's traditional activities such as research and education continue to enrich the Namibian scientific community and to contribute to the knowledge of arid land management.

The DRFN has recognized environmental management as the challenge that it is and under the guidance of its director Mary Seely, has become involved in some of the most innovative environmental projects in the country. It is with the help of local NGOs such as the DRFN that Namibia will be able to sustain the treasure

that is its natural environment.

#### EXAMPLES OF CURRENT DRFN PROJECTS

Peter Jacobson is working on a PhD. research project which involves a comparison of the major westward flowing ephemeral rivers of Namibia. He is focusing primarily on how different resource uses along the rivers impact the ecology of the river system as a whole. The GTZ funded Deser-

The GTZ funded Desertification program through the Ministry of Environment and Tourism and the Ministry of Agriculture, Water and Rural Development involves a preliminary study of desertification in Namibia.

A project funded by SIDA, Enviroteach is in its third year of producing environmental resource materials for teachers in 25 pilot schools throughout Namibia.

The objectives of the project are to provide Namibian teachers with materials which enable them to teach and raise awareness about the Namibian environment and to encourage a more interactive learning approach. The project is working in conjunction with the Ministry of Education and Culture.

This year's annual field course for third year UNAM biology students took place in April. Ten students visited Gobabeb and spent the week learning field research methods while working on their own projects.

The subject of this year's summer research course was the Kuiseb catchment area. In conjunction with Peter Jacobson's project, ten third year UNAM biology and zoology students spent six weeks investigating the different resource uses along the Kuiseb river. This included looking into water use in the coastal towns of Walvis Bay and Swakopmund.

As for the last thirty years the Foundation is hostinivarious different resear chers at Gobabeb. Among many other short-term visitors, long-term resear chers currently based at this station are working or studies such as the ecology of ticks in the Kuiseb River bed and the formation of gypsum on the grave plains.

Numerous other projects involve Environmental Impact Assessment studies throughout Namibia. EIA: focus on issues such as the impact of boreholes of grazing patterns and environmental degradation and such.

#### 4. Status Remarks on Phase 1 (Orientation Phase)

## 4.1 Main Steps leading to a national strategy and programme to combat desertification in Namibia

The Orientaton Phase started in 12/93 and will end in 11/94. It is funded by BMZ / GTZ with approximately DM 500.000,-. The major objectives are

- 1. to join forces and integrate isolated actions into a coherent national programme, in order to gain synergetic effects;
- 2. to initiate an awareness programme on desertification: its status, causes and effects, key stakeholders and their present and future roles;
- 3. to initiate a national, cross-sectoral planning process leading to a national strategy and action plan to combat desertification at all levels.

For this, Namibia has embarked on a phase-oriented step-by-step approach, supported by BMZ / GTZ.

Important steps of Phase 1 in a process-oriented, national desertification programme:

- raising awareness among all relevant communal, regional and national institutions;
- information gathering;
- setting of priorities;
- networking;
- establishing a Steering Committee;
- implementing a national workshop and action planning session on desertification.

The Directorate of Environmental Affairs in partnership with the Directorate of Agriculture, Water and Rural Development have coordinated the various steps of Phase 1; the Desert Research Foundation of Namibia has been the executing agency. A **Steering Committee** was formed for guidance and to decide on major steps of Phase 1, consisting of the key players involved in natural resource use and management:

Organisation	Contact Person
MET / DEA	Dr. C. J. Brown
Dept. of Agriculture (SARDEP)	Mr. B. Kruger
Dept. of Water Affairs	Mr. H. Koch
MET / Directorate of Forestry	Mr. A. Erkkila
MLRR / Directorate of Lands	Dr. W. Wemer
Min. of Regional & Local Gov. and Housing	Mr. P. Swart
Namibia National Farmers Union	Mr. A. Merero
Namibia Agricultural Union	Mr. v. Hase
Namibia Development Trust	D. Mahua
DRFN	Dr. M. K. Seely
GTZ (observer status)	Dr. J Fitter

Frequency of Steering Committee meetings: every second month from April 1994; up to now, three meetings were held.

DRFN, contracted as executing agency, presented progress and financial information to Committee Members (see Annex: Latest Budget Summary of 28th June 1994 of the Desertification Programme for Namibia). At the end of Phase 1 (11/94), DRFN will present a final progress report (including finances).

The majority of activities carried out by DRFN were geared towards the implementation of the national workshop on July 4 - 7, 1994, at Windhoek. DRFN's working morale and way of executing its assigned tasks, e.g. campaigning, networking, workshop preparation and implementation, was highly appreciated by the Steering Committee and participants in the workshop.

## 4.2 National Workshop and Action Planning Session as milestones in Namibia's National Desertification Programme

The national workshop on preventing desertification in Namibia provided a forum for various people of Namibia, to express and display their views and thoughts (see Annex: Workshop Programme).

After a set of introductory presentations highlighting different aspects of desertification on the first day, five working groups were formed reflecting major desertification-related issues identified:

- 1. cooperation, coordination and institutional aspects,
- 2. policy planning and legislation,
- 3. ecological issues (deforestation, overuse, natural resource management),
- 4. social and economic issues (eg. population, poverty),
- 5. land use.

Cross-sectoral issues identified by the plenary group were:

- · community approaches, participation,
- training, education (Human Resource Development),
- awareness,
- research (monitoring & evaluation),
- population,
- gender.

Each working group was asked to define its selected topic by catchwords, to develop a rough problem analysis, to identify key players, to define major objectives, and to describe actions required for reaching the objectives.

With regard to cooperation, coordination and institutional aspects, the following results were presented:

<u>core problem</u>: lack of co-operation, co-ordination and institutional capacities at all levels needed to empower resource users, managers and providers to sustain natural resources

#### main objectives

- 1. basis, access to and flow of information is improved
- 2. mgmt. capacities are established which support decentralised decision-making
- 3. effective horizontal / vertical co-ordination mechanisms at all levels are functioning
- 4. effective horizontal / vertical communication at all levels is functioning
- 5. appropriate training and education provided at all levels according to needs
- 6. integration of different groups in planning, decision-making, implementation process achieved at all levels
- 7. key organisations act according to clarified roles and functions

selected key players	interests	potentials	conflicts
community org.	empowerment	local knowledge	too many org.
	involvement	encourage co-op.	struggle for survival
	conducive services	between commun.	individual vs commun.
	transparency	outsiders	lack of altern. options

(other key players are: MLRR, NPC, MET/DEA, DRFN)

#### examples for objective-related activities:

- assess and evaluate current state of know-how
- make information available on current status of know-how
- assess need for central resource and documentation center
- · make use of newsletter, mass media
- establish an inter-organisational Steering Committee (represented by the key players)
- establish a programme management unit for the implementation of decisions
- · strengthen existing local capacities and structures

On the basis of the national workshop findings, a core group consisting of Steering Committee members and workshop organisers carried out a two days action planning session. The following **overall objective** with regard to the national desertification programme of Namibia was formulated:

"To combat the process of desertification by promoting the sustainable and equitable use of natural resources suited to Namibia's variable environment for the benefit of all Namibians, both present and future".

The following main objectives were stated:

- 1. key players are identified and their capacities are improved
- mechanisms for information collection, analysis and communication are established, strengthened and functioning
- integrated planning strategies and approaches at all levels developed and introduced on the basis of clearly defined policies
- 4. appropriate inter-disciplinary research programme elaborated and implemented
- 5. appropriate training and education provided according to needs at all levels

- 6. natural resource users and managers empowered to plan and implement sustainable management practices in an integrated and decentralised manner
- 7. framework conditions, incentives and decision-making affecting sustainable resource management identified, monitored and influenced
- 8. organisational management structure established and functional

Considering the ambitious overall objective and the stated national programme objectives it was understood, that a participatory, process-oriented and integrated programme approach is needed. Concerning future foreign donor involvement supporting Namibia's Desertification Programme, it became clear that different donors could support different programme components. The Namibian side would appreciate a continuation of the German support in Phase 2, with a focus on the following activities:

- organisational management structure established and functional (programme objective no. 8);
- · capacity-building focussing on human resource development;
- pilot measures with demonstrative effects.

# 5. Moving towards an integrated capacity-building approach in combatting desertification and improving natural resource management

Guiding questions:

what	kin	d of p	rogran	nme	structure	is neede	ed to	ensure	that	all	actors	invo	lved
participate and take their parts according to their strengths?													
how	to	ensure	e that	the	complex	process	of	desertific	cation	is	tackle	d ir	an
integrative, process-oriented manner?													

## 5.1 Strategic programme elements of institutional development through capacity-building

The complex process of desertification requires a cross-sectoral strategy and a national action programme providing a flexible framework. This requires, e.g.

- development of a collective vision and sectoral policies which integrate environmental aspects;
- · negotiation skills, consensus building;
- flexible planning / replanning and decentralised decision-making systems;
- adequate institutional structures and responsive organisational capacities to manage change;
- action research and Human Resource Development.

The system variables described above, i.e. individuals, organisations, socio-economic norms and structure, may be taken as **four strategic programme components** or entry points of intervention, to prevent desertification in an integrative manner. Thus, the four inter-related focal programme components would be:

- 1. **human resource development** towards improving individual / group problem-solving skills and mastering their tasks;
- 2. **organisational change** towards strengthening of individual organisations so that environmental aspects are integrated in their sectoral policies;
- changes in socio-economic and legal frame conditions towards a favourable framework;
- 4. **improvment of institutional structures** towards better communication, cooperation and coherent coordination of all actors involved.

## 5.2 Important steps and potential fields of action related to the desertification programme

These four inter-related programme components should be addressed in a step-bystep approach, starting with

- Step 1: Initiate a process to formulate a National Concerted Desertification

  Action Programme as an integral part of the National Environment Action

  Plan (National Workshop on preventing Desertification);
  - in order to facilitate an integrated, process-oriented and participatory approach from the very beginning (as one follow-up activity of the national workshop)
- Step 2: Initiate the appointment of a small, inter-organisational task force (mandated by the workshop participants)
  - (a) to document the workshop results, and
  - (b) to prepare a framework policy paper on Combatting Desertification and improved Use and Management Practices of Natural Resources, pointing out main characteristics of the agreed
  - flexible, process-oriented approach,
  - programme overall objective,
  - organisational set-up of the programme-support bodies and their envisaged key roles, with special reference to the mandate, status and composition of the envisaged "Inter-Organisational Steering Committee" (IOSC).
- Step 3: Start the process of developing a National Desertification Programme outline based on the results of both workshops (national desertification workshop and action planning session)
- Step 4: Initiate the first meeting of IOSC chaired by the Permanent Secretary of MET to facilitate necessary decisions on further steps and required actions in the short, medium or long run such as:
- establish a highly qualified Programme Management and Coordination Secretariat (PMS), supporting IOSC and helping actors involved to put IOSC's decisions into practice; initiate the appointment of a National Coordinator (NC) seconded to PMS from DEA;
- establish programme-related Capacity Development Funds for strengthening human and organisational capacities and carrying out pilot activities;
- invite other ministerial line agencies to establish / institutionalise an environmental nucleus within their organisational structure (similar to the Min. of Fisheries); and appoint an identifiable staff person or group as liason officer to the Concerted Desertification Action Programme and MET / DEA;

- create a topic-oriented, supra-sectoral capacity-building pool, to which government staff can be seconded or individual specialists can be nominated to look after specific issues (e.g. EIA, integrated planning services) on the basis of clear terms of reference;
- initiate the establishment of an Environment Commission (NEC) at NPC-level, chaired by the Environmental Commissioner, in order to strengthen the environmental lobby and to secure Namibia's natural resource base;
- initiate the establishment of an Environmental Trust Fund as a flexible financial instrument and vehicle for long-term investment in the integration of environment and development, in order to facilitate for example, a self-sustaining process of preventing desertification (long-term perspective).

Further potential fields of action, to be addressed within the cyclical process of safeguarding a coherent approach, are, for example,

#### (1) Promoting environmental information and monitoring systems

- gathering, analysing and evaluating desertification-relevant information, which could become a part of an environmental information system service (accessible to everyone);
- drawing up national desertification profiles by using local / communal knowledge (action research);
- monitoring particularly the water quantity and quality.

To begin with, several topic-specific studies should be undertaken and applied research programmes should be launched so as to reach a better understanding of

- the complex phenomenon of human-induced desertification and its inter-related driving and blocking forces;
- poor people's economy and its motivational dynamics within the complex cause-effect relationship: Which framework do materially poor people operate in? What are their strategies for survival? Natural resources will never be secured from the desperately poor, or, more important, the poor will be unlikely to contribute to a sustainable conservation of natural resources unless their bellies are filled. They must be given a chance to generate the minimum income they need to ensure their own survival from natural resources. It could be a tremendous contribution to slowing down the desertification process if the poor were assisted in enhancing their often complex and diversified resource budget, opening up their access to

basic services, e.g. in the fields of education and credit, and guaranteeing their right to use the resources they need to survive;

- people's interests in environment and their individual or/and collective problemsolving capacities;
- " urban-rural linkages;
- population growth and distribution as well as its effects on natural resource use and management;
- levels of actual implementation of approved environmental policies and their integration into sectoral policies and development programmes.

## 2. (Re-) Empowering communities as institutions and local focus for natural resource management

Why do people seek to manage the environment?

We cannot simply assume, that everyone, everywhere, has the same reasons for an interest in the environment. Different perspectives and motives lead to different effects, and policy-makers have to understand who is interested in what concerning desertification.

Generally speaking, there are two inter-related reasons for people to combat the desertification process:

- 1. its management improves the conditions of their livelihood;
- 2. its degradation is perceived to be threatening, either to life-sustaining processes (soil erosion) or to peoples' aesthetic values.

Considering the costs involved to manage dryland environments or to combat desertification, one thesis is:

people seek to manage the environment when the short- and long-term benefits of management are perceived to exceed its costs!

In addressing one programme element and tackling one desertification-related issue, other programme elements must not be neglected too much, and interlinks need to be carefully reflected.

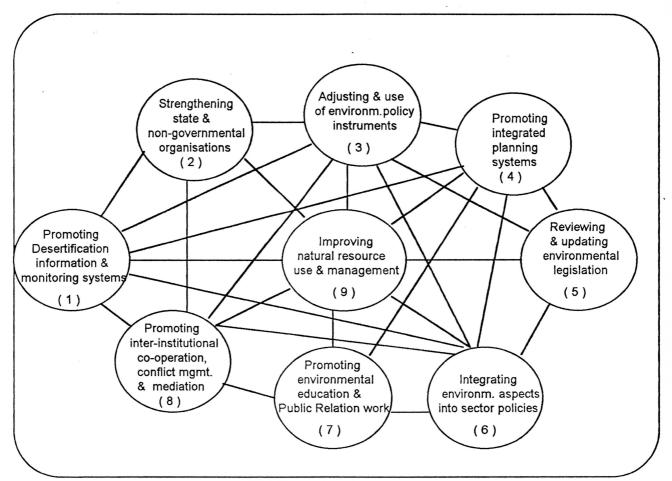


Fig. Potential fields of action within a national desertification programme

The network structure shown above is a much simplified image of reality, which serves to depict the complex nature of an integrated approach towards combatting desertification. The implication is that the implementation of a national desertification programme requires a continuous dialogue among all actors and the adoption of an in-built feed back system to ensure a process of learning together.

#### 5.3 Guiding principles of action and some preconditions

#### 5.3.1 Guiding principles of action

system orientation: concerted environmental efforts of actors from various parts of Namibian society require new, inter-institutional structures facilitating the coordination and cooperation among different types of organisations. For an effective system management, networks should be formed by partners with different backgrounds and varying interests;

process orientation: system management demands a high degree of openess and flexibility by the participating parties. Laying down rules, coordinating approaches, negotiating compromises, reconciling divergent interests, the continuous adaption of desertification-related activities to changing situations and conditions within the system - all this means that participants must be willing to accept social learning processes. Processes of this sort cannot always be planned on a linear basis; process orientation means time and time again gearing activities to what has just happened and to new situations, which mould the cooperation among actors.

Namibia's Programme on Desertification should be designed as a **flexible step-by-step approach**, facilitating a **process of learning together**. In a coherent, participatory and sustainable programme, synergy effects can be achieved.

#### 5.3.2 Preconditions

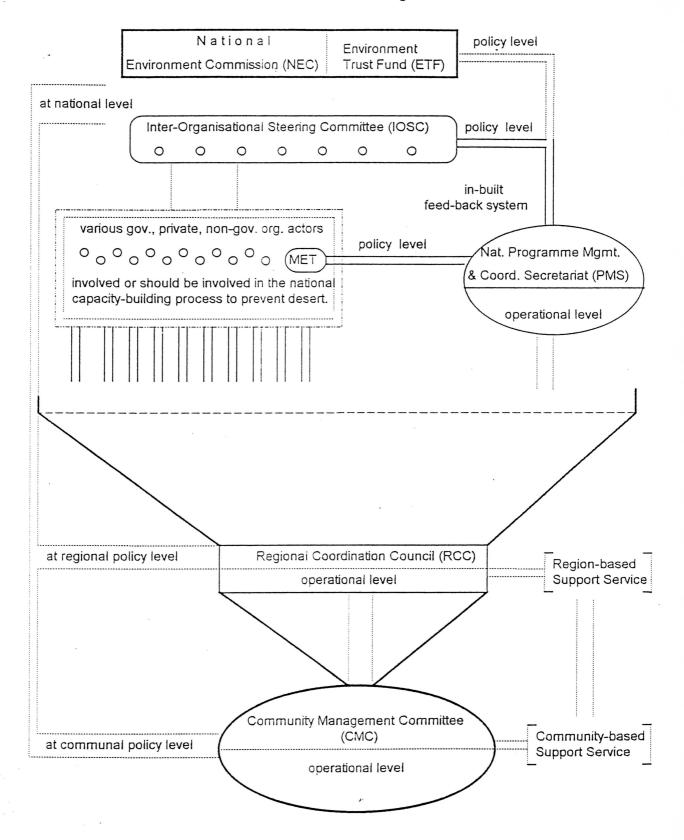
- Country capacity building: the implementation of improved natural resource managment systems need sufficient planning and steering capacity at national level;
- clear perception of ways and means for improved natural resource management such as land tenure rights, decentralized planning- and implementation structures, user options to organize themselves;
- political commitment for creating enabling framework conditions;
- long-term commitment of partners involved;
- participatory planning methods must be process-oriented in their approaches.

## 5.4 Programme Steering and Monitoring: programme-support bodies - positioning and roles

New forms of attitudes to planning, steering and monitoring & evaluation will be required for cross-sectoral and inter-institutional development - this results from the complex nature of desertification and the large number of heterogenous institutional actors involved whose desertification-related activities must be economically coordinated. A coherent intervention strategy allows the development of synergic effects, and costly duplications are avoided.

## 5.4.1 An organisational structure related to Namibia's National Desertification Programme

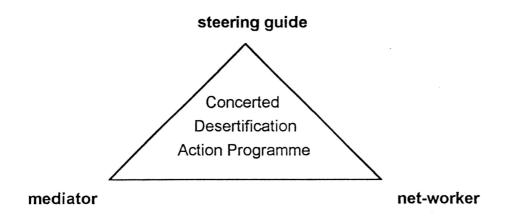
### An organisational structure related to Namibia's National Desertification Action Programme



#### 5.4.2 Key roles of programme-support bodies

a) The Inter-Organisational Steering Committee (IOSC) as process-oriented policy & decision-making authority

The main roles of IOSC should be



The Inter-Organisational Steering Committee

- determines the direction and speed of institutional development;
- facilitates cross-sectoral and multi-media co-operation and the inter-institutional dialogue;
- makes participation of all relevant (environmental / desertification-related)
   governmental and non-governmental actors possible;
- provides the interface between the commissioning body or bodies and the many actors involved;
- guarantees access to information and the flow of information;
- performs process- and results-oriented monitoring as well as impact analyses for the individual programme steps and results.

The status and mandate of IOSC should be determined in detail as required by a given situation. It should have a clearly determined authority to make programme-related decisions and to act accordingly.

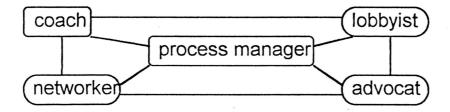
Composition of IOSC: it should be made up of the representatives from the various organisations involved or to be involved in desertification (see paragraph on variety of institutional actors), chaired, possibly, by the Permanent Secretary of MET / DEA.

Meeting frequency: four (4) times per annum, or as per needs.

#### b) The Programme Management & Coordination Secretariat (PMS)

The Programme Management & Coordination Secretariat (PMS) should be designed as a process-oriented Programme Consultancy Service.

The key roles of PMS should be



IOSC should have the support of a small, highly qualified Programme Management & Coordination Secretariat (PMS).

As a customer-oriented service unit on a permanent basis PMS should

- help the various actors to put IOSC's decisions into practice;
- act as a clearinghouse, giving access to the experience of muliple actors;
- lobby;
- coach organisations and people involved in planning, implementing, and monitoring the Concerted Desertification Action Programme;
- organise and manage the day-to-day work involved in the capacity-building process;

- collect, document, evaluate and disseminate information;
   collaborate in the development of cross-sectoral programme, of steps and strategies for action;
- help to plan and implement a few selected integrated pilot activities;
- conduct pilot measures for demonstration purposes;
- contract out an accompanying Concerted Desertification Action Research Project;
- develop effective coordination and steering mechanisms, and monitor the various stages of the programme;
- develop appropriate means of communication and participatory methods allowing all participants to become actively involved at every stage of the institutional development process;
- develop a group-specific capacity-upgrading programme in conjunction with the
  participants, combining scientific findings with practical experience gained in the
  planning, organisation, implementation and evaluation of ongoing capacity
  development processes;
- assume responsibility for programme budgeting and administration.

#### Staffing requirements

These tasks demand a high level of process management skills and independence. The interdisciplinary service team should include key skills in environmental management, integrated action planning, natural resource management, institutional development, economics, group dynamics, networking, workshop organisation, information processing, and PR work.

Number of staff and recruitment: PMS should start as a core team of 3 to 5 persons. The team might be headed by a National Coordinator seconded from MET / DEA. The other team members could be partly seconded by MET / DEA or other key ministries, partly recruited from the market. Everyone should be selected on the basis of job descriptions and according to their level of performance and experience.

## c) Other Programme-Support Bodies in the process to combat Desertification

#### may include

- · task forces set up for a limited period with clearly defined terms of reference
- topic-oriented, cross-sectoral capacity-building pools, bringing together subject matter specialists from different ministries
- subject-specific networks as discussion fora, bringing together experienced opinion leaders, policy- and decision-makers from various ministries, private-sector associations, privat industries, and non-governmental organisations
- green round tables
- awareness raising meetings and workshops
- a newsletter as a medium for the dissemination of currently valid desertificationrelated information and activities

All programme-support bodies create contacts for the participating parties and improve the coordination of their strategies and actions. They open doors for more coherent action and strategic alliances, i.e. for coordinated desertification activities and synergy gains.

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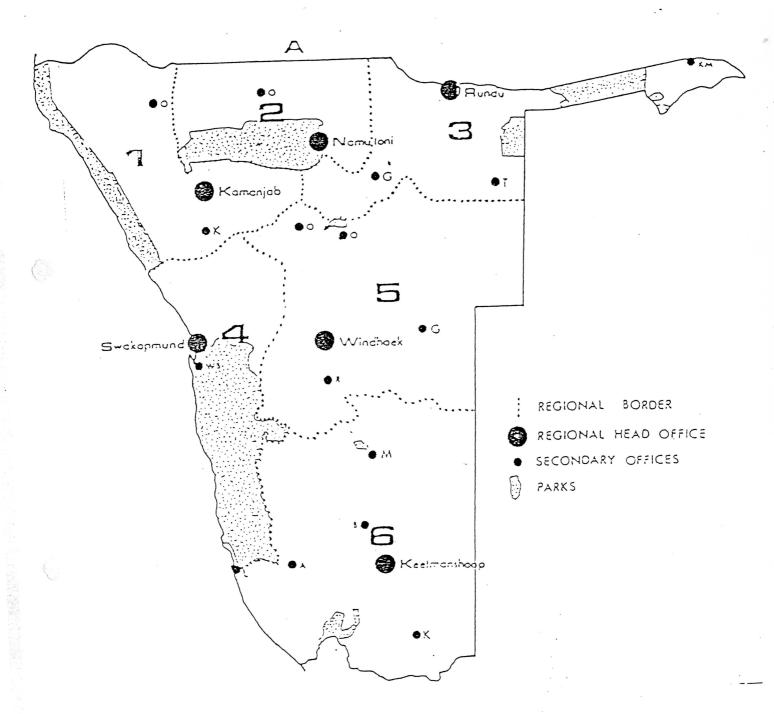
#### MANDATE

#### Annex 1

To achieve the above mission, the Ministry needs a clearly defined mandate, which should be translated into a set of policies containing guiding principles. These policies should, in turn, be implemented by means of carefully constructed environmental plans. In May 1991 the necessary mandate was given to the Ministry of Environment and Tourism when the Namibian Cabinet decreed that this Ministry should have responsibility of the Namibian environment.

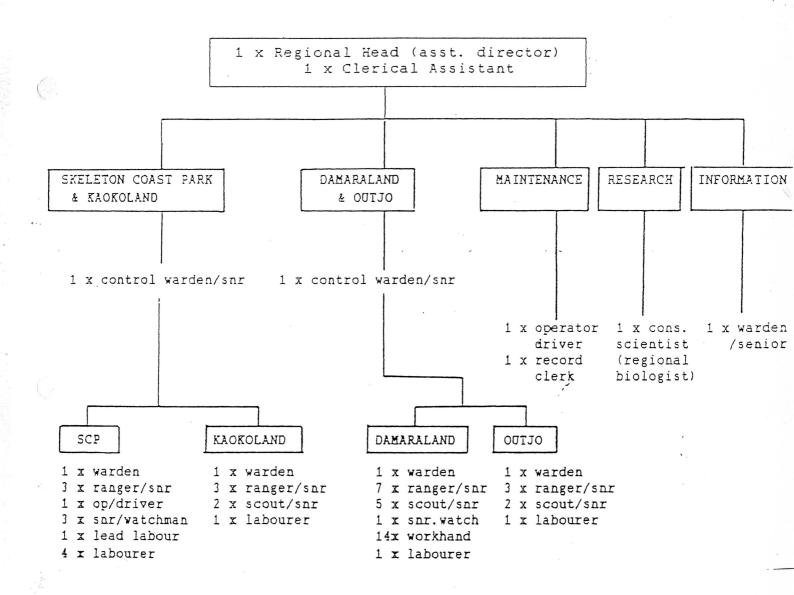
The mandate necessary for this Ministry to assume the above environmental responsibility and to execute its tasks adequately include the following objectives:

- to conserve the natural environment in Namibia
- to protect biological diversity and life support systems, in partnership with other ministries, organisations and individuals
- to expand, develop, manage and control the country's conservation areas
- to manage and co-ordinate natural resources and to encourage the development of appropriate wildlife- and forestry-based industries
- to foster the sustainable use of all living resources, in partnership with other ministries, organisations and individuals
- to conserve wilderness, and to protect the character and beauty of Namibia
- to initiate and/or participate in all land-use planning with regard to natural resources and the preparation, implementation and management of community-based conservation and development programmes
- to initiate and/or participate in the development of the natural resource-base and methods of utilisation so that people obtain the maximum sustainable benefits
- to apply appropriate environmental, social and economic assessment procedures to development proposals, plans and projects
- to develop, co-ordinate and promote tourism on a sustainable basis, both within proclaimed conservation areas and in the country as a whole, in partnership with other organisations
- to control standards on environmental pollution
- to conduct and promote environmental education, extension and awareness programmes, in partnership with other ministries and organisations
- to conduct and promote research, monitoring and evaluations, and the co-ordination of these activities, in support of the above objectives, as well as the communication of results at local, national and international levels
- to develop, apply and evaluate environmental policies; plans and legislation so as to allow this Ministry to achieve the above objectives
- to create and maintain an environment where every employee is able to reach his or her maximum potential in a climate favouring innovation and excellence.

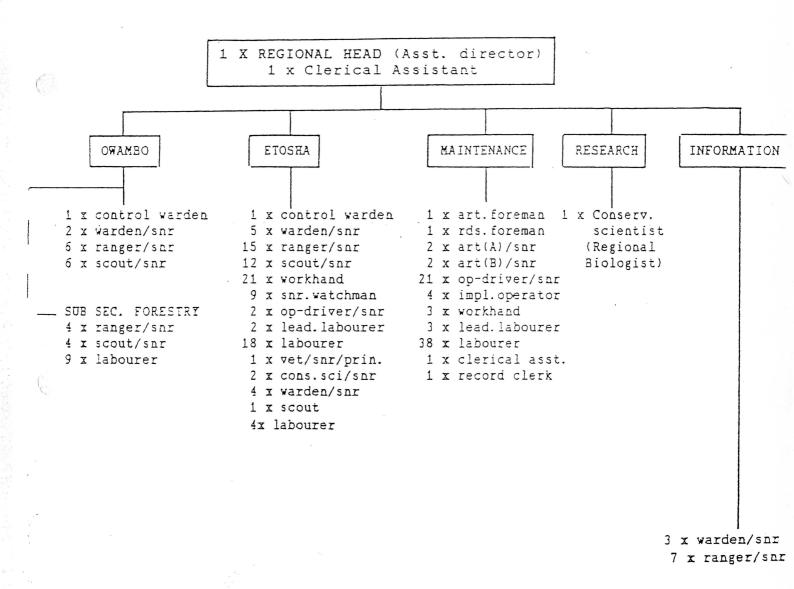


#### SUB DIVISION NORTH WEST

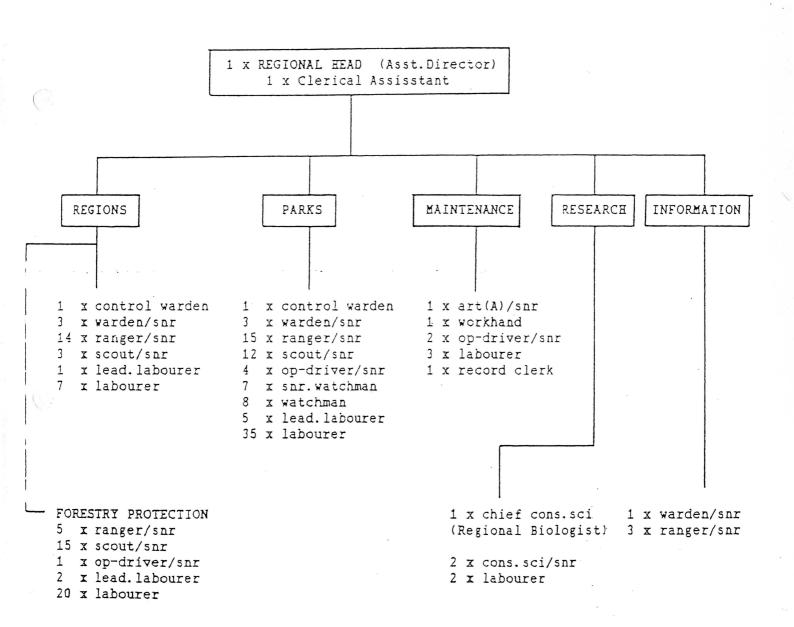
#### AREA 1



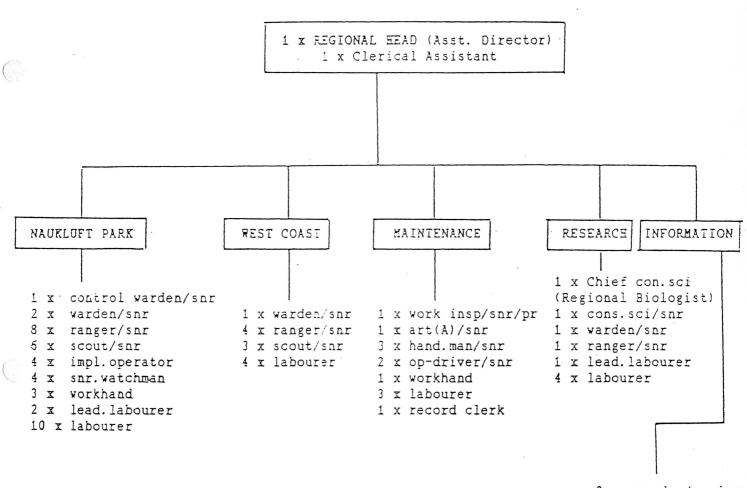
# SUB DIVISION FAR NORTH AREA 2



## SUB DIVISION NORTH EAST AREA 3

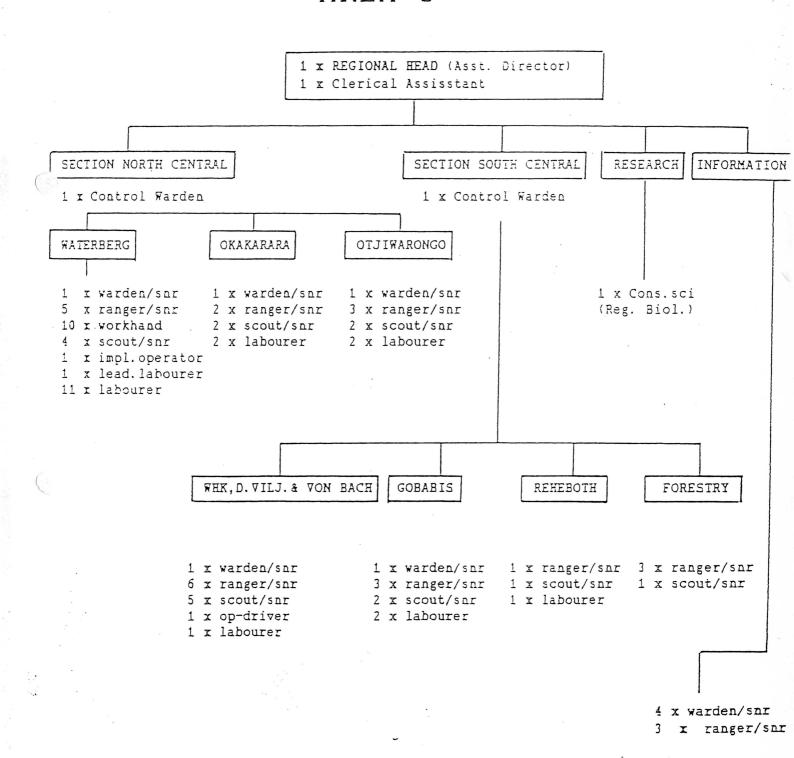


# SUB DIVISION NAMIB REGION AREA 4



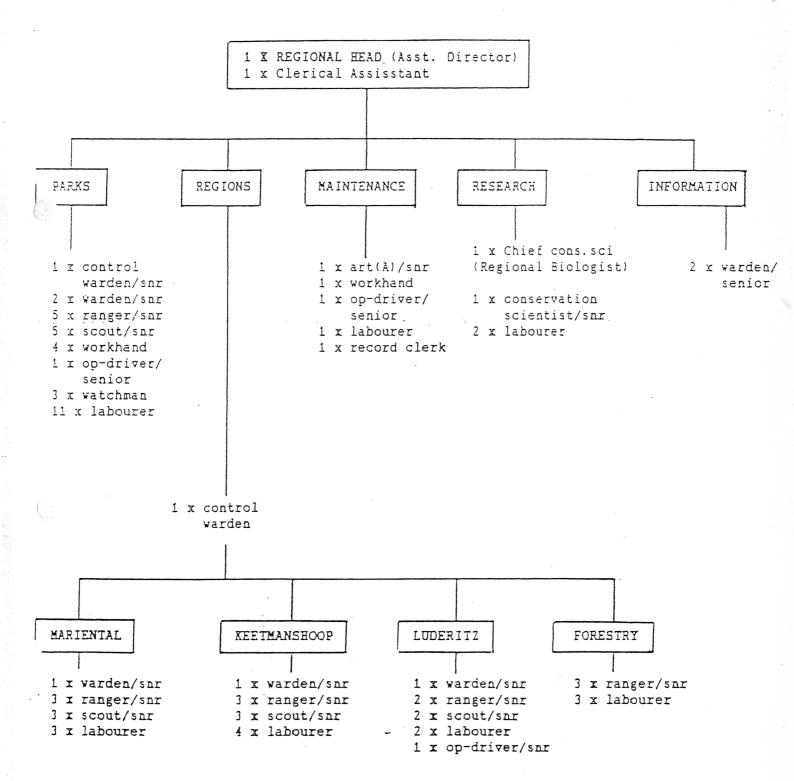
2 x warden/senior

# SUB DIVISION CENTRAL REGION AREA 5



#### SUB DIVISION SOUTH

#### AREA 6



Annex 3

COMPARISON OF POST ESTABLISHMENT: MINISTRY OF WILDLIFE, CONSERVATION AND TOURISM

POST DESIGNATION	SALARY SCALE	SCALE AVERAGE	EXISTING POSTS	RECOMMENDED POSTS	CURRENT EXPENDITURE NS	EXPENDITURE RECOMMENDED POSTS NS
Permanent Secretary	109 977	109 977	. 1	1	109 977	J 109 977
Deputy Permanent Secretary	101 091	104 091	1	. 1	104 091	104 091
Director	86 433	86 433	3	3	259 299	259 299
Deputy Director	73 455	73 455	4	2	293 820	146 910
Veterinarian/Senior/Principal	53 142 - 73 455	63 298	2	2	126 596	126 596
Chief: Conservation Research	73 455	73 455	1	0	73 4555	0
Chief Conservation Researcher	63 420 - 69 441	66 430	4	0	265 720	0
Conservation Researcher/Senior/Principal	31 536 - 58 281	44 908	22	0	987 976	0
Economist/Senior/Principal	31 536 - 58 281	44 908	1	0	44 908	0
Statistician/Senior	35 833 - 53 142	44 513	0	l	0	4.1 513
Chief Liaison Officer	58 281 - 63 420	60 851	1	0	60 850	0
Assistant-/Media Officer/Senior/Principal	22 989 - 58 281	40 635	1	1	40 635	40 635
Chief Forester	63 420 - 69 441	66 430	3	. 6	199 290	398 580
Forester/Senior/Principal	31 536 - 58 281	44 908	9	15	404 172	673 620
Forestry Technician/Senior/Principal	27 045 - 48 003	37 524	8	25	300 192	938 100
Forest Ranger/Senior/Principal	10 095 - 22 989	16 542	12	41	198 504	678 222
Veterinary Technician/Senior/Principal	27 045 - 48 003	37 524	1	. 0	37 524	C
Chief: Conservation	73 455	73 455	ı	2	73 455	146 910
Deputy Chief: Conservation	58 281 - 63 420	60 851	. 3	7	182 550	425 950
Control Warden/Senior	41 679 - 53 142	47 411	0	14	0	663 747
Warden/Senior	27 045 - 41 679	34 362	0	58	0	1 992 996
Chief Conservation Officer	44 577 - 53 142	48 859	10	0	488 590	
Conservation Officer/Senior/Principal	27 045 - 48 003	37 524	28	0	1 050 672	C
Chief: Forestry	73 455	73 -155	0	2	0	220 365
Chief Conservation Research Technician	41 577 - 53 142	-18 859	2	0	97 718	
Conservation Research Technician/Senior/Principal	27 045 - 48 003	37 524	11	0	412 764	
Deputy Chief: Conservation Science	58 281 - 63 420	60 851	0	2	0	121 702
Chief Conservation Scientist	53 142 - 58 281	55 712	0	4	0	222 848
Conservation Scientist/Senior	31 536 - 48 003	39 770	()	18	0	715 860
Chief: Development Planning	73 455	73 455	0	1	0	73 455
Chic Development Planner	63 420 - 69 441	66 430	0	2	0	132 860
Development Planner/Senior/Principal	35 883 - 63 420	49 651	0	. 3	. 0	148 953

Annex 3 2
COMPARISON OF POST ESTABLISHMENT: MINISTRY OF WILDLIFE, CONSERVATION AND TOURISM

POST DESIGNATION	SALARY SCALE	SCALE AVERAGE	EXISTING POSTS	RECOMMENDED POSTS	CURRENT EXPENDITURE NS	EXPENDITURE RECOMMENDED POSTS N\$
Chief Works Inspector	53 142 - 63 420	58 281	. 1	1	58 281	, 58 281
Works Inspector/Senior/Principal	31 536 - 53 142	42 339	4	4	169 356	169 356
Artist/Senior/Principal	31 536 - 53 142	42 339	2	1	84 679	42 339
Senior Personnel Administrator	58 281 - 69 441	63 861	ı	0	63 861	. 0
Personnel Administrator	44 577 - 58 281	51 429	4	0	205 716	0
Assistant Personnel Administrator/Senior	27 0.15 - 11 679	3-1 362	1	0	34 362	0
Senior Personnel Officer/Principal	41 679 - 63 420	52 5.19	1	l	52 549	52 549
Personnel Officer .	31 536 - 41 679	36 607	3	3	109 821	109 821
Senior Accountant/Principal	41 679 - 63 420	52 5.19	ı	1	52 549	52 549
Accountant	31 536 - 41 679	36 607	4	5	146 428	183 035
Assistant Accountant/Senior	13 239 - 26 031	19 635	11	11	215 985	215 985
Personal Assistant	63 420 - 69 441	66 431	1	1	66 431	66 431
Chief Control Officer/Senior	58 281 - 69 441	63 861	2	3	127 722	191 583
Control Officer/Senior	35 883 - 58 281	47 082	2	1	94 164	47 082
Assistant Personnel Officer/Senior	13 239 - 26 031	19 635	()	9	. 0	176 715
Chief Clerk	27 045 - 37 332	32 188	3	5	96 564	160 940
Clerk/Senior	11 598 - 26 031	18 814	6	6	112 884	112 88-
Chief: Resorts	73.455	73 455	. 1	1	73 455	73 45:
Deputy Chief Resorts	58 281 - 69 441	63 861	3	3	191 583	191 58
Control Resorts Officer	44 577 - 58 281	51 429	7	7	360 003	360 00
Chief Resorts Officer/Senior	27 045 - 44 577	35 811	18	18	644 598	644 59
Resorts Officer/Senior/Principal	11 598 - 26 031	18 814	53	53	997 142	997 14
Pilot/Senior/Principal	44 577 - 69 441	57 009	2	. 2	114 018	114 01
Artisan Foreman	35 883 - 41 679	38 781	1	1	38 781	38 78
Artisan (A)/Senior	22 989 - 37 332	30 160	7	11	211 120	331 76
Artisan (B)/Senior	20 961 - 32 985	26 973	. 6	4	161 838	107 89
Chief Ranger/Senior	22 989 - 41 679	32 334	37	0	1 196 358	' (
Chief States Officer	19 209 - 32 985	26 097	3	3	78 291	78 29
Stores Officer/Senior	11 598 - 19 209	15 403	2	2	30 806	30 800
Control Tourism Officer/Senior	34 434 - 53 142	-13 788	5	5	218 940	218 940
Chi ourism Officer	22 989 - 32 985	27 985	5	8	139 925	223 880
Tourism Officer/Senior/Principal	10 095 - 22 989	16 5.12	. 5	5	82 710	82 710

Annex 3

COMPARISON OF POST ESTABLISHMENT: MINISTRY OF WILDLIFE, CONSERVATION AND TOURISM

POST DESIGNATION	SALARY SCALE	SCALE AVERAGE	EXISTING POSTS	RECOMMENDED POSTS	CURRENT EXPENDITURE N\$	EXPENDITURE RECOMMENDED POSTS N\$
Chief: Accom. Establishment Institutions Inspector	35 883 - 41 679	38 781	1	0	38 781	λ 0
Control Inspector: Accommodation Establishments	35 883 - 41 679	38 781	0	2	0	77 562
Inspector: Accommodation Establishments	22 989 - 29 073	26 031	1	4	26 031	78 093
Chief Inspector: Accommodation Establishments	31 536 - 37 332	34 434	1	2	34 434	68 868
Chief Restaurateur	31 536 - 37 332	34 434	1	1	34 434	34 434
Ranger/Senior/Principal	10 095 - 22 989	16 5.12	139	134	2 299 338	2 216 628
Restaurateur	22 989 - 29 073	26 031	9	9	234 279	234 279
Data Typist/Senior	11 079 - 19 209	15 153	4	5	60 612	75 765
Senior Typist	19 209 - 26 031	22 620	1	1	22 620	22 620
Assistant Typist/Typist	11 097 - 22 989	17 043	2	2	34 086	34 086
Private Secretary/Senior	22 989 - 37 332	30 160	7	7	211 120	211 120
Clerical Assistant/Senior/Principal	11 097 - 26 031	18 564	24	25	445 536	464 100
Chief Registry Clerk	14 949 - 22 989	18 969	()	1	0	18 969
Registry Clerk/Senior	10 095 - 14 949	12 522	3	. 2	37 566	25 044
Record Clerk/Senior	10 095 - 14 949	12 522	5	4	62 610	50 088
Switchboard Operator/Senior	8 634 - 19 209	13 922	0	1	0	13 922
Chief Resorts Assistant	14 949 - 22 989	18 969	7	7	132 783	132 783
Resorts Assistant/Senior	10 095 - 14 949	12 522	60	60	751 320	751 320
Senior Road Foreman	22 989 - 29 073	26 031	1	l	26 031	26 031
Roads Foreman	17 733 - 22 989	20 361	3	1	61 083	20 361
Chief Caretaker	14 949 - 19 209	17 079	1	1	17 079	17 079
Caretaker	8 634 - 14 949	11 791	5	5	58 955	58 955
Control Handyman	19 209 - 26 031	22 620	1	0	22 620	0
Chief Handyman	14 949 - 19 209	17 079	1	0	17 079	0
Handyman/Senior	8 634 - 14 949	11 791	14	3	165 074	35 373
Driver/Senior	10 095 - 16 995	13 545	2	3	27 090	40 635
Ministerial Driver/Senior	11 598 - 19 209	15 403	2	. 3	30 806	46 209
Operator <sup>1</sup> Driver/Senior	10 095 - 16 995	13 545	55	. 64	744 975	866 880
Cook/Senior	7 716 - 11 598	9 657	15	15	144 855	144 855
Messenger	7 257 - 8 634	7 945	10	9.	79 450	71 505
For Jaurd	8 634 - 14 949	11 791	2	24	20 232	242 784
Chief Sales Assistant	8 634 - 14 949	11 791	17	17	163 455	163 455

3

Annex 3 COMPARISON OF POST ESTABLISHMENT: MINISTRY OF WILDLIFE, CONSERVATION AND TOURISM

POST DESIGNATION	SALARY SCALE	SCALE AVERAGE	EXISTING POSTS	RECOMMENDED POSTS	CURRENT EXPENDITURE N\$	EXPENDITURE RECOMMENDED POSTS NS
Sales Assistant	7 257 - 8 634	7 945	. 98	98	778 610	778 610
Implement Operator	7 257 - 8 634	7 945	29	22	230 405	174 790
Senior Equipment Attendant	7 257 - 8 634	7 945	9	9	71 505	71 505
Equipment Attendant	5 880 - 7 716	6 798	20	18	135 960	122 364
Senior Workhand	7 257 - 8 634	7 945	20	. 17	158 900	135 065
Workhand	5 880 - 7 716	6 798	117	103	795 366	700 194
Senior Watchman	7 257 - 8 634	7 945	41	49	325 745	389 305
Watchman	5 880 - 7 716	6 798	29	27	197 142	183 546
Institution Worker	4 695 - 6 339	5 517	3	3	16 551	16 551
Leader Cleaner	5 880 - 7 716	6 798	31	31	210 738	210 738
Cleaner/Senior	4 695 - 6 339	5 5 1 7	275	274	1 517 175	1 511 658
Scout/Senior	7 716 - 11 598	9 657	0	83	0	801 531
Leader Labourer	5 880 - 7 716	. 6 798	47	49	319 506	333 102
Labourer	4 695 - 6 339	5 517	466	458	2 570 922	2 526 786
TOTAL			1 910	2026	25 376 537	27 267 821

Increase:

Expenditure: Posts:

N\$1 891 284

116

mz\BUR1

#### DESERTIFICATION PROGRAMME FOR NAMIBIA

#### BUDGET SUMMARY 28 JUNE 1994

BUDGET	EXPENDED	VARIANCE
24 000-	39 115-87	(15 115 - 87)
67 000-	250-00	66 750-00
53 000-	2 412-70	50 587-30
136 000-	42 867-51	93 132-49
95 100-	9 000-00	86 100-00
35 000-		35 000-00
14 420-	1 530-80	12 889-20
26 200-		26 200-00
138 800-	29 950-68	108 849-32
	24 000- 67 000- 53 000- 136 000- 95 100- 35 000- 14 420- 26 200-	24 000- 39 115-87 67 000- 250-00 53 000- 2 412-70 136 000- 42 867-51 95 100- 9 000-00 35 000- 14 420- 1 530-80

#### DESERTIFICATION PROGRAMME FOR NAMIBIA

#### BUDGET SUMMARY 28 JUNE 1994

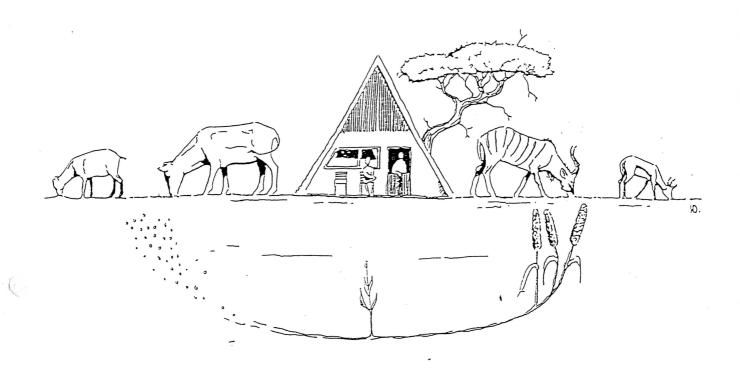
	BUDGET	EXPENDED		
April	22 250-	18 473-99		
May	80 200-	27 276-28		
June	65 620-	49 426-61		

Annex 5



#### REPUBLIC OF NAMIBIA

## NAMIBIA'S NATIONAL POLICY TO COMBAT DESERTIFICATION



Ministry of Environment and Tourism Private Bag 13306 Windhoek, Namibia

July 1994

#### Namibia's Policy to Combat Desertification

Prepared by: C J Brown

Directorate of Environmental Affairs Ministry of Environment and Tourism

#### In consultation with:

Ministry of Agriculture, Water and Rural Development Ministry of Lands, Resettlement and Rehabilitation Ministry of Local and Regional Government and Housing Ministry of Mines and Energy Ministry of Works, Transport and Communications
Ministry of Education and Culture
National Planning Commission
Desert Ecological Research Foundation of Namibia University of Namibia Namibia National Farmers Union Namibia Agricultural Union Namibia Development Trust Rossing Foundation Wildlife Society of Namibia Integrated Rural Development and Nature Conservation Naye-Naye Development Foundation Save the Rhino Trust Life Science Project Namibia Economic and Policy Research Unit Namibia Nature Foundation Small Industries Project Arid Zone Ecology Forum Kaoko/Opuwo Community Representatives Omusati Community Representatives Epukiro Community Representatives Bergsig Community Representatives Sesfontein Community Representatives Khorixas Community Representatives Naye Naye Community Representatives Oshona Community Representatives Southern Namibia Farmers Union Representatives Spitzkoppe Community Representatives Okamatapati Community Representatives Rundu Community Representatives Kamanjab Community Representatives Otjiwarongo Community Representatives Niko Community Representatives InterConsult Associates, Namibia Namibia Resource Consultants Groundwater Investigations Deutsche Gesellschaft fur Tecnische Zusammenarbeit (GTZ) GmbH Natural Resources Institute (UK) CSIRO (Australia) National Botanical Institute (RSA) University of Botswana University of the Witwatersrand (RSA) U.S. Peace Corp International Medical Corp Swedish International Development Authority United Nations Development Programme Secretariat of the INCD

#### 1. PREAMBLE

- 1.1 Namibia is the driest country in sub-Saharan Africa; 22% of the land surface is arid (<100 mm of rain per annum), 70% is semi-arid (100-500 mm) and 8% is dry subhumid (>500 mm). Rainfall is also highly variable and unpredictable. These factors characterise and contribute to the fragility of Namibia's environment.
- 1.2 Namibia's economy is largely reliant on renewable natural resources, including those in the sectors of agriculture, tourism, fisheries, wildlife, forestry and water. About 70% of the population are directly dependent for their livelihood and survival on the land and its resources.
- 1.3 Namibia has experienced significant to severe environmental degradation in many parts of the country, resulting in a loss of productivity and biotic diversity. Increasing human pressure on the fragile environment has been the main cause of degradation, exacerbated by the variable climate and periods of droughts. The processes leading to a loss of productivity in arid regions are known, collectively, as "desertification".
- 1.4 The manifestations of desertification in Namibia include deforestation, overgrazing, soil erosion, bush encroachment and salinization. Ultimate factors leading to desertification are often complex, and may originate in seemingly unrelated sectors. They might include issues of economic and fiscal policy, marketing, land rights and use, human population pressure, international trade, resource management practices, etc.
- 1.5 The quality of life of all Namibians, particularly the rural poor, and the development potential of the country, are threatened by desertification. Desertification leads to increased poverty, reduced food security, poor health and nutrition, and increased pressure on the environment and the national economy.

#### 2. POLICY

In view of the above, it is the policy of the Government of the Republic of Namibia to combat the processes of desertification by establishing a national programme and by supporting other activities that:

a) promote the sustainable and equitable use of land and renewable natural resources, in keeping with Namibia's variable climatic conditions;

- b) recognise that poverty and population growth are interlinked with the processes of desertification, and support and/or develop programmes to address these issues;
- c) aim to understand and positively influence the proximate and ultimate factors affecting the processes of desertification, including bio-physical, socio-economic, policy and legislative framework factors;
- d) encourage broad-based participation and strengthening of, and communications between, relevant organisations and individuals, at all levels;
- e) promote awareness, education and training at all levels through the preparation and distribution of appropriate materials, and through the active interaction of individuals and institutions;

#### 3. GUIDING PRINCIPLES

Namibia's policy to combat desertification provides a framework for a national programme which is based entirely on Namibia's needs and conditions, while making use of regional and international experience as appropriate. This programme should be dynamic, responsive, participarory, based on sound information and, above all, implementable by government, NGOs the business sector and resource users. The following "guiding principles" are applicable:

- 3.1 Combatting desertification involves long-term integrated strategies aimed at arresting degradation and improving productivity of land, leading to improved living standards, particularly amongst rural communities.
- 3.2 Integrated strategies should address the physical, biological, social, economic and policy aspects of the processes of desertification.
- 3.3 Strategies for poverty alleviation, including alternative livelihoods for rural communities, should be included into efforts to combat desertification.
- 3.4 Strategies to combat desertification should interlink with those in related fields, e.g. biodiversity, water and wetland management, early warning and food security programmes, agricultural, forestry and wildlife programmes, planned urbanisation, etc.
- 3.5 Local, regional, national and international cooperation and communication should be strengthened to support the combatting of desertification.

- 3.6 Strategies to combat desertification should be dynamic, flexible and adaptive to cope with different local socioeconomic and bio-physical conditions, and to respond to new research findings.
- 3.7 Informed decision-making should be facilitated at all levels by identifying information needs, and collecting, analysing and communicating appropriate information to relevant individuals and institutions.
- 3.8 Broad-based participation of the resource users, resource managers, extension staff and policy makers is essential for the success of a national programme to combat desertification.
- 3.9 People directly dependent on land and natural resources should be empowered to making decisions regarding their management. These rights over decision-making should be linked to obligations of wise and sustainable management and utilization.
- 3.10 Factors influencing resource management and issues such as desertification can originate in sectors seemingly far removed from those in which the problems manifest themselves. For this reason, decision-makers at all levels and in all relevant fields should be made aware of desertification processes, and all policies should pass through an environmental assessment procedure before being approved.
- 3.11 Provide an enabling environment for Namibians to effectively combat desertification over the long-term by supporting and, where necessary, strengthening relevant institutions, programmes and legislation and, where they do not exist, enacting new laws and establishing appropriate institutions, programmes and strategies, and promote education, awareness and training at all levels.



#### **GOBABEB**

Gobabeb - the 'place at the fig tree' - is the location of a research station - on the Kuiseb River in the heart of the central Namib Desert.

Known throughout the world, Gobabeb (23° 34′ S, 45° 03′ E, 408 m) has been an international focus of desert research for the last 25 years. More than 1 500 international scientists have visited and worked here. This research has yieled over 500 scientific and popular articles making the Namib one of the most thoroughly studied deserts on earth.

Research at Gobabeb is carried out under the auspices of the Desert Ecological Research Unit guided by an international Panel of Advisors. Research at Gobabeb is supported by funds collected and administered by the Desert Research Foundation of Namibia.

Gobabeb is an equal opportunity employer.

#### NAMIB DESERT RESEARCH AND CONSERVATION

In Namibia, active descrification and destruction of the land has been confined. Information resulting from the ongoing research programme at Gobabeb is available to help prevent descrification taking over large tracts of land - a very real threat in this arid environment.

Research at Gobabeb also has created a broad knowledge base upon which the teaching of ecology and environmental principles to students at all levels has

been established.

Information from basic Namib research has also pointed out areas and organisms where special conservation efforts are required. Good conservation of the Namib has resulted in increased tourism. Continued conservation of this very special environment will contribute towards sustained tourism and its associated monetary income for Namibians for centuries to come.



#### ... CILITIES

Self-catering accomodation in furnished bungalows or individual rooms is available. Hot water, stove, refrigerator, deep freeze, cooking and eating utensils, and linen are supplied. Visitors bring their own food and drink; there are no shops at Gobabeb. Candles, matches, torch (flashlight), insect repellent, sun-screen lotion, lip-ice and detergent for clothes and dishes are important items.

In addition:

- the station generates its own 220 volt 50 Hz AC electricity for 16 hours each day;

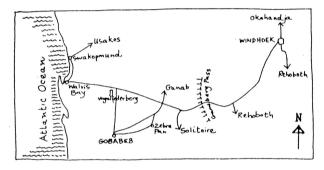
- only petrol, but not diesel fuel, may be purchased at

Gobabeb;

- medical aid is available only in Walvis Bay;

 visitors are responsible for their own health and welfare and for damage, loss or theft of their own personal effects or scientific equipment;

- tariffs are available upon request.



#### ACCESS AND COMMUNICATION

Gobabeb is 140 km by gravel road from Walvis Bay and 300 km from Windhock. The roads are easily traversable by two-wheel drive vehicles, but care must be taken on the loose gravel. No petrol is available along these roads. Gobabeb has a small landing strip for light aircraft.

Gobabeb has no telephone service but radio contact is routinely made three times a day at 0800, 1400 and 2000 and radio-telephone connection can be made at these times. Book incoming calls with Walvis Bay Radio (0642) - 3581 about 20 minutes in advance; the call will be returned within the hour. Telegrams addressed to ZIRR 226 Walvis Bay Radio will be sent through at these times. Outgoing radio-telephone calls can be made at any time depending on atmospheric conditions.

#### **APPLICATIONS**

Application to visit Gobabeb should be made three months in advance. As Gobabeb is located in the Namib-Naukluft Park, special permission from Nature Conservation is necessary for collection of plants and animals and prior arrangement made for export of such material. Information and application forms may be obtained from the Director of DERU.

# Desert Ecological RESEARCH UNIT of NAMIBIA

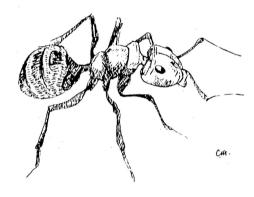
## GOBABEB



#### THE CENTRAL NAMIB DESERT

The Namib is a long, narrow desert on the southwestern coast of Africa and includes the entire coast of Namibia. In the southern Namib, winter rainfall occurs and in the northern Namib summer rainfall prevails. The central Namib is the driest part of the desert, although a few millimeters of rain may fall at any time of the year.

Throughout its length, the Namib is greatly influenced by the Benguela cold water upwelling system of the south Atlantic Ocean. Onshore southwesterly winds, fog and gypsum soils are dominant characteristics influenced by proximity of the Benguela. The steep west-cast climatic gradient characterized by cool temperatures, high humidity and fog near the coast and by warmer temperatures, low humidity and scant summer rainfall farther inland, is also accentuated by the presence of the Benguela.



The Kuiseb River, with its permanent underground water and occasional surface flow, forms a linear oasis cutting across the central Namib. North of the Kuiseb, the gravel plains are punctuated by inselbergs. South of the Kuiseb River lie the dunes. Transverse dunes along the coast give way to linear dunes and then multi-armed star dunes farther east. Their colour also changes from pale yellow on the coast to deep red in the east.

In concert with the change in climate from the coast inland, species of plants and animals in each of the desert habitats differ. On the plains, communities of plants and animals are different on each rock type. and they differ again from communities of level plains or shallow dry washes. Similar variation occurs on different dune types. Consequently, a wide array of unusual adaptations for life in these varied habitats has evolved. Fog-basking beetles and sand-stabilizing perennial grasses are but a few of the more spectacular examples.



#### RESEARCH OPPORTUNITIES

The Namib is a relatively undisturbed desert supporting a high diversity of plants and animals - and perhaps can be compared best with the Galapagos Íslands as a natural laboratory for ecological research. An ancient dune desert underlying the currently active dunes makes the area even more intriguing. The central Namib near Gobabeb offers unparalleled opportunities for research into all aspects of desert ecology and conservation. The dunes, gravel plains and the Kuiseb River all lie within easy walking distance of the research station. Gobabeb is located approximately halfway across the west to east climatic gradient and thus experiences precipitating fog more than 60 days of the year and, in some years, rain. Mean monthly air temperatures vary less than 7°C between summer and winter, but mean daily temperature fluctuations are about 17°C.

Research involving observation or long-term measurement is often carried out in the immediate vicinity of Gobabeb. In addition, several research sites have been established elsewhere in the Namib. Field research is the main activity at Gobabeb, however, simple laboratory facilities are available to back-up field observations and experimentation. Bibliographies of DERU and Namib-related publications are

available.

#### **EDUCATION OPPORTUNITIES**

Opportunities exist at Gobabeb for individual or group educational experiences, but as facilities are limited, advance planning is required. Arrangements may be made with the Director of DERU for:

- large groups - up to 30 persons - on day visits:

- small groups- up to 10 persons - on extended over-

- individuals to gain experience assisting with ongoing

- registered students to carry out projects for higher degrees.

A variety of activities can be arranged:

- self guided nature trails through the dunes, plains and Kuiseb River near Gobabeb;

- screening of video tapes on the biology of the central Namib, the dynamics of the Kuiseb River and research activities of DERU:

- lectures, field demonstrations and field exercises dealing with aspects of desert ecology and conserva-

The public is invited to Open Weekends at Gobabeb between 0800 and 1700 on specific dates announced in the local news media. At that time the staff is on hand to discuss research activities and the biology, ecology and conservation of the Namib. Videos, guided walks, posters and illustrated talks form part of the programme. Permits for the Namib-Naukluft Park and Gobabeb are available from Nature Conservation offices in Swakopmund and Windhoek.



For further information contact:

The Director Desert Ecological Research Unit P.O. Box 1592, Swakopmund 9000, Namibia.

## Study Into The Threat Of **Environmental** Degradation

#### **Impact & Causes** Of Desertification

BY STEPHANIE WOLTERS AND KAMEPAKO URAVIA - KAKUJAHA Large parts of Namibia's land is currently threatened by severe environmental degradation. Bush encroachment, soil erosion, salinisation, deforestation and their final stage, desertification, are real issues and must be addressed now in order to avoid irreversible environmental damage. The image of desertification as sand dunes creeping over large areas of land is narrow and outdated. Desertification is in fact the loss of productivity of land, and can take place thousands of kilometres away from sand dune deserts.

We must not make the mistake of thining that such damage is natural to our environment simply because it is so arid. With improved land management techniques and an increased awareness of sustainable use levels. Namibia can avoid making the mistakes that have been made in numerous other arid and semi-arid countries. The Sahel region of northern Africa which has a similar climate and so, similar environmental challenges, is already facing the drastic results of desertification.

In the effort to assess the impacts and causes of desertification in Namibia, the Ministry of Environment and Tourism and the Ministry of Agriculture, Water and Rural Development have contracted the Desert Ecological Research Unit of Namibia (DERUN), a subsidiary of the Desert Research Foundation of Namibia (DRFN) to undertake a preliminary study. The information which will result largerly from research and networking with organizations and

presented and discussed at a workshop in early July.

A second, longer-term project will build upon this information and will address the issues which have been identified as relevant to desertification and land management.

While the DERUN will be the primary executing organization, the project is guided by a steering committee which is composed of representatives from the non-governmental sector.

The aims and objectives of this phase of the project are to increase national awareness with respect of desertification and to assess the current state of entakes a multidisciplinary approach to desertification

workshop, DERUN staff Namibia.

ed in the larger issues of desertification. The focus at this level will be both on groups which are conventionally associated with land management, as well on those whose work is indirectly linked to such

DERUN staff will also be interacting with rural communities, both commercial and communal in order to gain an idea of their land management practices and experiences with desertification. This will involve several extensive fieldtrips to representative areas and communities throughout Namibia.

In order to represent the breadth of desertification's impact on people and their land, all of the organizations and communities which will be approached will be asked to create and present a poster of display. These exhibits will express the variety of activities or concerns with regard to desertification, and will be displayed throughout the workshop.

Several position papers on government as well as the desertification in Namibia will be put together from existing information.

The First Steering Committee on Namibia's Program to Combat Desertification met on April 21 in Windhoek. In attendance vironmental degradation as were representatives from caused by poor land the Ministry of Environmanagement. The project ment and Tourism, the Ministry of Agriculture and Rural Development, the and strongly emphasizes the Ministry of Land, Resettlelinks between the larger ment and..., the Namibia socio-economic and policy National Farmers Union, environment and poor land the Namibia - Agricultural Union and the Desert In preparation for the Ecological Research Unit of

will be networking with The agenda involved a urban-based NGOs and discussion of the overall communities will be Ministries which are involv- strategy of the project and a

review of the aims and objectives as perceived by the members of the Steering Committee.

Particular group consensus was formed around the ideas of strong rural community participation and representation, and the importance of approaching the issue of desertification within as large a context as possible.

#### Africa Day **Festival**

WINDHOEK: Government and the Namibia Football Association will be marking the celebration of this year's Africa Day, tomorrow (the 25th of May) at the Independence Stadium with a range of cultural activities, including soccer matches involving African Stars, Black Africa, Civics and Orlando Pirates and musical performances by Jackson Kaujeua.

The official part of the programme will start at 12:15 with the arrival of the VIP guests and will finish with statements by the Dean of the Diplomatic Corps; the Secretary-General of the OAU (which will be read); the Namibian Government, made by the Hon. Theo-Ben Gurirab, Minister of Foreign Affairs and that of the President of the DTA, Mr. Mishaka Muyongo. The celebration (cultural) activities start at 09:00.

A warm invitation is extended to the public to support this celebration, which will coincide with celebrations throughout the continent.

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