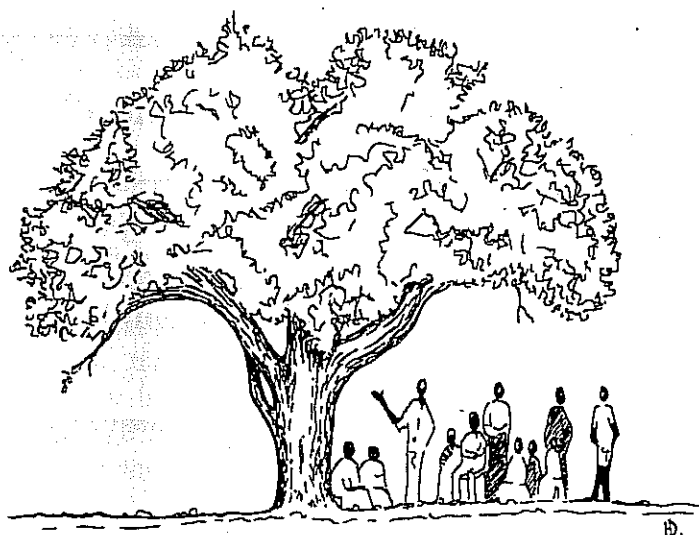
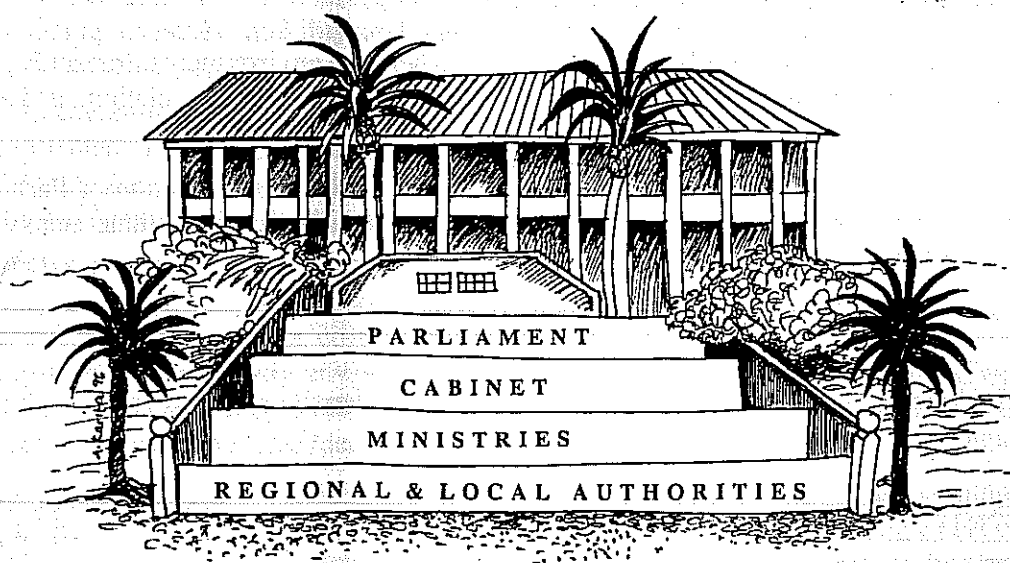


Namibian Programme to Combat Desertification



Policy Factors & Desertification — Analysis & Proposals



NAPCOD Steering Committee (April 1996)

NAPCOD is a joint initiative of the Desert Research Foundation of Namibia, the Ministry of Environment and Tourism and the Ministry of Agriculture, Water and Rural Development with financial assistance from the German aid agency, GTZ

What is Desertification?

Land degradation in arid, semi-arid and dry, sub-humid areas, resulting mainly from *negative human impacts* combined with difficult climatic and environmental conditions

The study — of which this is a summary — seeks to inform decision makers of the impact of policy factors on desertification and makes recommendations for reform. The report is intended to inform politicians and senior/mid-level public servants, while also being a tool for guiding future NAPCOD work.

The full report is divided into three sections:

Part I addresses "immediate" policy factors which have a more direct influence on desertification and which are easier to tackle in the short term (grouped around each of the key natural resource sectors: land and overall natural resource management, water, agriculture and forestry).

Part II considers more underlying policy factors where the environmental impact is somewhat removed and change is only likely in the longer term (poverty, population, and economic policies).

Part III prioritises the detailed recommendations contained in each section of Parts I and II, considers how policy changes might be brought about and what immediate steps should be taken by NAPCOD.

The report is based on wide consultation in addition to a review of existing research. The report has been endorsed by the NAPCOD Steering Committee (membership shown on back page) and is available from both the DRFN and DEA:

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Report Summary

OVERVIEW

There remains considerable uncertainty about the exact extent, causes and costs of land degradation. However, it is an undisputed fact that land degradation has taken place — and continues to take place — at an alarming rate.

Much is being done to understand and reduce land degradation. Such efforts include information gathering, research, extension, training and education. However, these interventions will not succeed on their own. There is no point giving farmers or water users new information, technology and skills to manage natural resources if policies and prices continue to encourage over use and constrain good management.

There is a close link between land degradation and the economic incentives provided by Government policies. Adapting policies to modify economic incentives will change resource use. Policy reforms such as securing land tenure, removing subsidies to livestock production, and ensuring effective water pricing, will alter the costs and benefits of natural resource-based activities, thereby enhancing sustainable resource use and reducing land degradation.

Radical changes in Government policy are urgently needed to address the immediate and ultimate causes of desertification and to ensure sustainable resource utilisation. Based on the first thorough analysis of the impact of policy factors on land degradation in Namibia, NAPCOD recommends the following key policy changes:

- **Land tenure** in communal areas — the National Land Policy and Communal Land Bill should prioritise the introduction of secure, exclusive tenure at the *community level* with user rights to *all natural resources* on the land conditional on sustainable use. Any "commercialisation" of communal areas must take into account the impact of fencing on reducing livestock mobility and land availability for the majority, in the context of a rapidly rising population.
- **Resettlement policy** — needs to be consistent with land reform policy, and should be reoriented towards expanding existing communal areas (and moving large communal farmers to commercial land) in line with the "communalising" of communal areas to assist the poor majority of small, subsistence farmers.
- **Water pricing** — water prices should be increased to *full cost-recovery levels* more quickly than is currently envisaged (and to long-term cost-recovery levels where this is significantly greater than the current cost). In future, where the demand for water is greater than supply at cost-recovery levels, prices should be increased to reflect the scarcity value of water to ensure it is optimally allocated (probably away from irrigated agriculture towards uses with higher value-added).
- **Natural resource user fee** — a progressive fee collected and spent at the community level should be introduced to reduce overstocking and degradation by imposing a cost on use and encouraging large communal farmers to relocate to commercial areas, at the same time as providing an income base for local development and redistributing resources from richer to poorer farmers.
- **Livestock drought relief subsidies** — fodder subsidies have discouraged destocking and should be replaced with increased spending on land reform (farm purchase) and/or destocking and restocking schemes.

Report Summary

These and other proposals are discussed in more detail below. This summary document contains the following sections:

Main themes — looks at the main problems and proposals from a more analytical perspective.

Principal recommendations in each sector — lists the prioritised recommendations as they appear in the full report.

Policy-related research proposals — suggests important areas for research to refine policy.

MAIN THEMES

(1) Institutional reform

Community tenure of natural resources

Many of the cases of over-use of natural resources which result in degradation are a consequence of the fact that rural communities do not have secure, exclusive tenure over land and natural resources. While they bear the costs of overgrazing, deforestation and excessive water extraction, they are not in a position to reap the benefits of sustainable management of these natural resources. Other communities cannot currently be excluded from using natural resources which have been well managed by someone else.

The problem is exacerbated by the increasing tendency for wealthy private individuals to fence off rangelands for their own exclusive use. This practice reduces both the amount of land available to the majority and the mobility of livestock (an essential feature in extensive subsistence systems with high variation in rainfall and hence vegetation). The inevitable consequence is heavy overgrazing of the remaining open access land.

The introduction of secure, exclusive tenure at the community level is the single most important policy reform needed to prevent degradation. Without it, many of the other proposed changes will have little effect. The recent "conservancy" initiative from the Ministry of Environment and Tourism — where communities are given user rights over wildlife on the condition that use is sustainable — represents a useful precedent.

Another key element of this institutional reform is that it should embrace *all natural resources on the land* (grazing, trees, wildlife, water). For example, it would be meaningless to grant exclusive tenure over rangeland while allowing open access to all livestock at water points (or vice versa). This holistic approach must be reflected in the forthcoming National Land Policy and Communal Land Reform Bill. Sectoral legislation and policy should fit within such a framework.

Community management institutions

Tenure is not, however, a panacea. Rural communities will still face pressures from poverty, population growth, high expectations and wealthy individuals. A related institutional reform which is required is the *creation of local bodies capable of managing natural resources within their community*, with the support of regional and national State institutions.

Report Summary

(2) Strategic/cross-sectoral planning

Failure to plan at a strategic (and cross-sectoral) level has resulted in poor resource management.

Land reform and resettlement

The seemingly separate planning of land management and resettlement is a case in point. The resources currently devoted to the purchase of commercial farmland for resettlement of poor farmers are far too low to have any significant impact on alleviating pressure in communal areas, with the consequence that degradation continues. If communal areas continue to be "commercialised", then far more resources will need to be invested in resettling poor farmers to commercial farmland. If communal areas are "communalised" — which NAPCOD believes to be more sustainable — then the resettlement programme will need to take on a completely different focus, towards expanding existing communal areas and moving large communal farmers to commercial land. However this issue is ultimately resolved, *resettlement and land reform (in the commercial and communal areas) must be planned together.*

Irrigation

Subsidised agricultural irrigation is an example of sector-driven policy which has adverse implications for the use of a resource which is needed throughout the economy. The desire for food self-sufficiency has spawned the current policy of subsidised water for irrigation without consideration of the value of water use in other economic activities. The rising opportunity cost of water means that *it is foolish to invest heavily in irrigated agriculture now where water will have a greater value in industrial, commercial and domestic uses in the medium/long term.*

(3) Pricing natural resources (when markets work)

Viewing natural resources as economic resources has a number of implications. First, it implies that they are *scarce* resources which should be allocated to their most highly-valued use. Second, the **market** should be used wherever possible to allocate natural resources through the pricing mechanism rather than rationing use through centralised allocation and law enforcement. Prices indicate the relative scarcity of natural resources and ensure that they are allocated to their most efficient (highly-valued) use.

Water

At the moment, nobody pays even the cost price for water, which encourages over consumption and the development of water-intensive industries (especially agricultural irrigation). Increasing prices to *at least* current cost-recovery levels would enhance the sustainable utilisation of this resource and reduce any associated land degradation (damage to groundwater and ephemeral river systems). However, *additional price increases are urgently required for urban consumers* where the long-run cost of increased provision is much greater than the current cost (because of the need to extend the carrier network to the Okavango or build expensive desalination plant). Water prices should also reflect costs passed on to other users and find some means of compensation (for example, ephemeral river degradation as a result of upstream use), and reflect opportunity cost where this is greater than financial cost (which may be the case for many irrigation schemes in the future).

Report Summary

Natural resource user fees (grazing fees)

Currently, no charge is attached to the use of most natural resources on communal land (unlike commercial land which is sold and rented). This encourages unsustainable use as there is no cost attached to using resources. If set at a high enough level, a *natural resource user fee* would reduce levels of utilisation (for example, stocking rates) by imposing a cost on use (and help to redistribute resources to poorer communal farmers — who use less land/water — through spending funded by the fee, especially if it were progressive). *A progressive natural resource user fee collected and spent at the community level should be introduced.*

(4) Regulation and enforcement (when markets fail)

Where markets do not, or cannot, function well to limit consumption to sustainable levels, *regulation* of resource offtake is required through proper planning and enforcement. Rural water and forestry are good examples where the scope to establish markets and pricing mechanisms is limited. The extraction of rural water resources needs to be managed through better siting of water points, including the introduction of seasonal and human-only boreholes to prevent overuse by livestock and sedentarisation. *Limits on the proximity of rural water points should be established in the new Water Act (or associated regulations).*

Rights over renewable natural resources should be given to communities (tenure reform) but *in conjunction* with an assessment of what constitutes sustainable offtake. If agreed offtake levels are exceeded, rights to manage the resource will need to be reviewed.

(5) Policy failure

"Policy failure" occurs when a policy designed to achieve one objective has an unintended, adverse impact on another objective — in this case, sustainable use of natural resources. These failures can often be addressed by redesigning policy instruments to eliminate such negative impacts while continuing to achieve their original objective.

Livestock drought relief subsidies

The provision of livestock fodder subsidies during drought is a good example. The policy is principally intended to ensure that farmers have a viable, productive herd once the drought is over. However, the policy leads to degradation of rangeland because it discourages farmers from destocking to levels which the land can support during drought. The policy should be redesigned to ensure both that farmers have a viable herd when the drought ends and that livestock numbers efficiently "track" grazing availability and do not exert undue pressure on the range. *The policy should be overhauled to promote such long-term drought coping strategies through increased expenditure on:*

- *land reform; and/or*
- *destocking/restocking initiatives.*

Report Summary

Resettlement

The resettlement programme as currently conceived inadvertently promotes land degradation both because its high unit costs mean that few people can be moved from stressed communal areas, and because, in some cases, management practices do not appear to respect the constraints of the farming system (permanent grazing on previously rotational commercial livestock farms). In order to reduce degradation in communal areas to assist the majority of poor farmers who live there, Government should reorient the programme *away* from intensive support to a small number of farmers to resettle on land purchased on an *ad hoc* basis simply where it becomes available. Resources would be more efficiently and effectively used to relieve pressure by *expanding communal areas through the purchase of neighbouring farms* (and opening up of some new areas) and by *supporting the movement of large communal farmers to commercial areas*.

(6) Economic Policies

Economic growth has conflicting implications for natural resource use:

- economic growth *reduces* rural poverty and therefore degradation through reducing dependence on the land and primary production.
- economic growth *increases* the demand for natural resources from industries and more affluent, urban households (water, energy, investment in livestock).

This heightens the need to ensure that the *structure* of growth promotes rural poverty reduction and that growth occurs in sectors which place relatively little demand on natural resources. Useful Government interventions would include:

- extending investment incentives to service sectors (especially tourism).
- promoting growth in rural areas.
- promoting growth in high value-adding activities.
- developing an environmental protection levy (as part of the Environmental Investment Fund) to ensure that those who use/degrade natural resources contribute towards their maintenance/rehabilitation.
- liberalising trade in wildlife products (if sustainable in the long term).

PRINCIPAL RECOMMENDATIONS BY SECTOR

Three criteria have been used to prioritise the recommendations contained in each section of the report:

- how great an *impact* will the change have on land degradation?
- how *possible* is it to introduce the proposed change — are there overwhelming constraints?
- is there a "*window of opportunity*" to pursue the proposed change in the near future?

The priority recommendations identified in this way are shown in Table 1 and Table 2.

Report Summary

Table 1 Prioritising Recommendations — Specific Resources

Sector/Recommendation

Land & Natural Resource Management

- Coherent strategy for land management and resettlement, whichever option is chosen - a) communalise communal or b) commercialise communal
- Preferred option is a), with resettlement of large communal farmers to commercial areas, purchase of commercial farms neighbouring communal areas
- Introduce secure tenure which is: *holistic* (all resources), primarily for *communities*, allows for *mobility*
- Moratorium on fencing
- Progressive natural resource user fee

Water

- More rapid introduction of pricing proposals:
 - Urban — full cost recovery in 3 years; continue increases to long-run cost if consumption still rising
 - Rural — full cost recovery in 4-5 years (with cross-subsidy for lifeline supply)
 - Irrigation — full cost recovery in 3 years
- Planning of water as a scarce resource recognised through appointment of Namibian Water Resources Board as guarantor of sustainable water use (and cross-sectoral Natural Resource Accounting)
- Irrigation: cost of water should be opportunity cost if greater than financial cost; socio-economic benefits should be quantified and given as cash grant (not through water subsidy)
- Rural: water point planning to regulate spacing, type (human/livestock) and seasonality

Agriculture

- Abandon food self-sufficiency goal (in favour of household food security)
- Remove communal livestock subsidies to level playing field between:
 - i) communal and commercial areas
 - ii) livestock and non-livestock land-use options
- Replace drought aid livestock subsidies with i) destocking/restocking subsidies, and/or ii) increase in land reform spending (preferred)
- Ensure that national Agricultural Credit Programme does not lend for stock purchase where overstocked already, and that loans are available for non-livestock uses (wildlife, forestry)

Forestry

- Give communities secure tenure over forestry resources (as part of holistic natural resource management deal); meanwhile, develop forestry conservancies
- Abandon goal of declaring 10% of Namibia state forests, focus on conservation *priorities* (let community natural resource management sustain the rest)
- Promote alternative energy/building materials in long-run

Report Summary

Table 2 Prioritising Recommendations — Development Strategies

Sector/Recommendation
Poverty
<ul style="list-style-type: none">• Anti-poverty measures should be "environmentally neutral", therefore avoid subsidies to use of natural resources (livestock, water, drought relief) intended as poverty alleviation/reduction measures, instead increase access to/tenure of natural resource assets (land, wildlife, forestry) so that the poor can earn income through sustainable management• Long-term anti-poverty measures should reduce the dependency of the poor on primary production — focus on labour-intensive public works, regional growth centres, processing
Population
<ul style="list-style-type: none">• Ensure Population Policy allocates adequate resources to prioritised objectives in order to achieve its optimistic reductions in the growth rate• Amend draft Population Policy to ensure that implications of current growth for changes needed in natural resource management are addressed
Economic Policy
<ul style="list-style-type: none">• Change the composition of growth towards "environmentally-friendly" sectors through:<ul style="list-style-type: none">Investment incentives for services (especially tourism)Growth in rural areas and high-value adding activitiesEnvironmental protection levyTrade in wildlife productsIntegration of Natural Resource Accounts into economic planning

Report Summary

POLICY RESEARCH

Recommended priority policy-related research proposals are shown below.

Research Priorities

Land & Natural Resource Management

- To guide land reform, policy-oriented research is required to compare the costs and benefits — including environmental ones — of communal (subsistence) and commercial (cash) systems, different tenure arrangements, and different land-use options.
- Comprehensive research is urgently needed into the extent and nature of fencing of communal land to decide how Government should approach the problem of reduced mobility.
- Research should be conducted into the reasons different groups of people have for using land to inform a strategy to reduce pressure on communal land.
- Research is needed to support the design and introduction of a natural resource user fee and appropriate local institutions to manage common property resources.
- Research is required into the economic viability of subsidised clearance of bush encroached land (to provide charcoal to people in deforested areas or as part of a resettlement programme).
- Further research into the economic returns and environmental impact of game/wildlife relative to livestock is needed.

Water

- Research into the responsiveness of water demand to price and income (price/income elasticity of water demand) to guide future supply policy.
- Research into the value of alternative water use options to assess the opportunity cost of water use (including which industries and locations are more appropriate).
- Quantify the cost of externalities such as damage to ephemeral rivers to inform decisions on pricing and allocation.

Agriculture

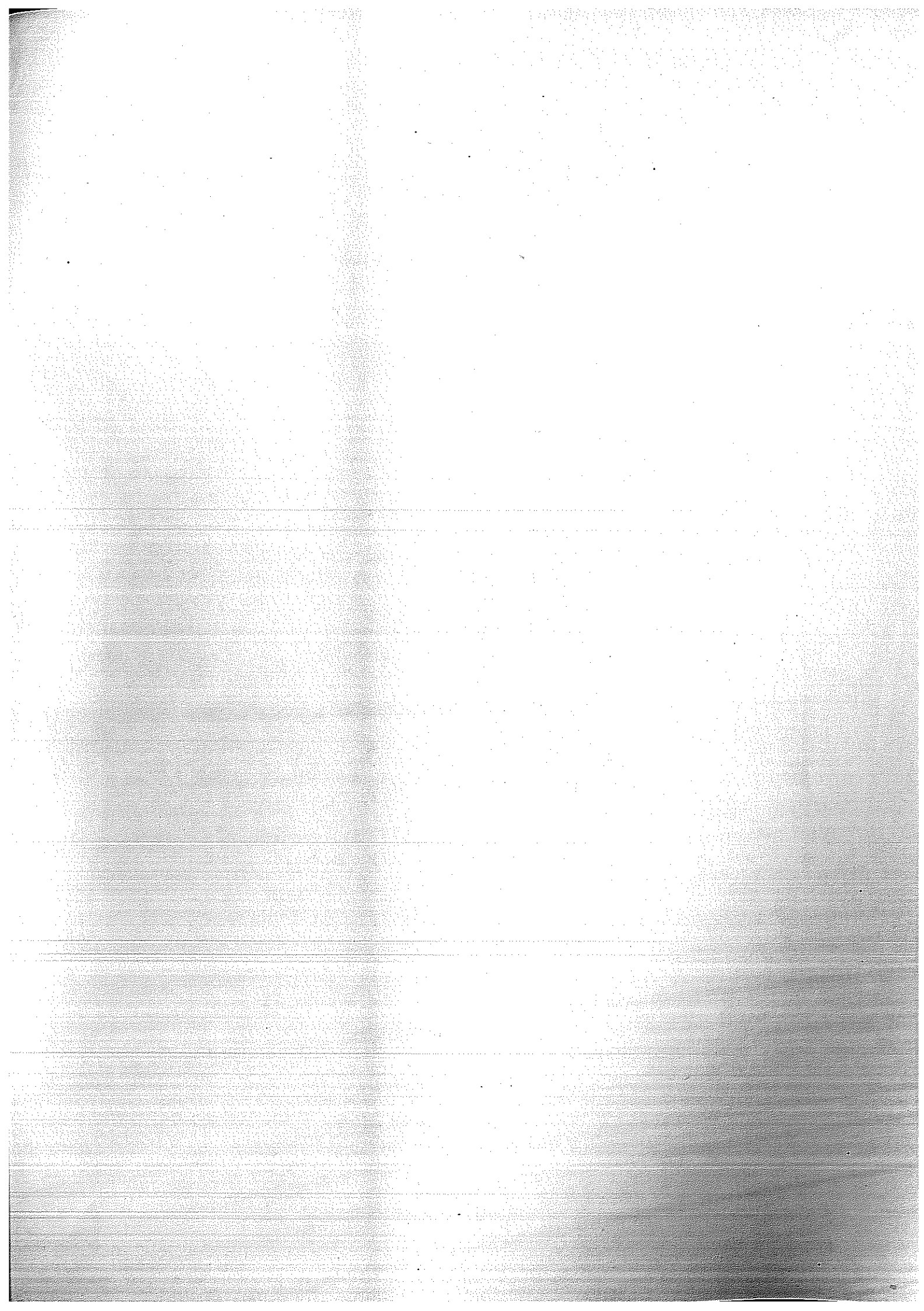
- Research the costs and benefits of different destocking/restocking mechanisms.

Forestry

- There is a need for research into the subsistence value of forest resources to compare alternative land uses and to develop forestry as a complementary land-use.
- Government should increase research on alternative energy resources and building materials, in particular the potential to subsidise access to kerosene/gas, possibly through a tax on fuelwood consumption.

Economic Policy

- Research into the natural resource demands of different industries would enable policy makers to plan economic growth within natural resource constraints.
- Government should conduct an environmental impact assessment of the policies, programmes and growth strategy presented in NDP1.



About NAPCOD

The Namibian Programme to Combat Desertification (NAPCOD) began in 1994 as a joint initiative of the Desert Research Foundation of Namibia (DRFN), the Ministry of Environment and Tourism (MET) and the Ministry of Agriculture, Water and Rural Development (MAWRD).

The first phase of NAPCOD involved awareness raising activities, a preliminary assessment of the state of desertification in Namibia and the formulation of a long-term programme. A major national workshop in June 1994 produced a draft Policy to Combat Desertification and identified an overall goal with eight contributory objectives for the second phase of NAPCOD.

Working Groups have been constituted for each of objectives 2-7 and their activity is overseen and directed by the NAPCOD Steering Committee. The Working Groups for Policy and Planning merged in January 1996 to promote joint consideration of these closely related areas.

NAPCOD Objectives

Overall goal of Namibian Programme to Combat Desertification:

- To combat the processes 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.

Subsidiary objectives, the achievement of which will contribute to the overall goal:

- 1 Key players are identified and their capacity is established/improved.
- 2 Mechanisms for information collection, analysis and communication are established, strengthened and functioning.
- 3 Integrated planning and strategies 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 Frame conditions, incentives and decision making affecting sustainable resource management identified, monitored and influenced (policy framework).
- 8 Organisational management structure established and functional.

The following institutions are represented on the NAPCOD Steering Committee:

Ministry of Environment and Tourism
Ministry of Agriculture, Water and Rural Development
Ministry of Lands, Resettlement and Rehabilitation
Ministry of Regional and Local Government and Housing
Desert Research Foundation of Namibia
Namibia Agricultural Union
Namibia National Farmers' Union
Namibia Development Trust
Namibia Economic Policy Research Unit
University of Namibia (Social Sciences Division, Multidisciplinary Research Centre)