

Linking National Forest Programmes to Poverty Reduction Strategies

Namibia

10 October 2006

Mission Team:

Scott Geller, Marie Karaisl, Rosalie McConnell

Food and Agriculture Organization
Forestry Department
Forestry Policy and Institutions Service
Rome, Italy

Table of Contents

SUMMARY OF KEY RECOMMENDATIONS.....	1
Overview.....	1
Strengthening the linkages between forestry and poverty alleviation.....	1
Other opportunities for forestry-based poverty alleviation	3
1. INTRODUCTION.....	1
2. POLICY PROCESSES IN NAMIBIA.....	1
2.1 OVERVIEW	1
2.2 POVERTY REDUCTION AND DEVELOPMENT POLICIES.....	1
2.3 FORESTRY STRATEGIC PLAN.....	2
3. LINKAGES, BENEFITS, CONSTRAINTS AND OPPORTUNITIES	3
3.1 MAINSTREAMING.....	3
3.1.1 Forestry aspects of the National Development Plan	3
3.1.2 Forestry aspects of the National Poverty Reduction Action Programme.....	4
3.1.3 Poverty aspects in the Forestry Strategic Plan.....	5
3.1.4 Allocations to forestry	6
3.2 CONSTRAINTS TO ESTABLISHING LINKAGES	7
3.2.1 Participation and marketing	7
3.2.2 Inter-sectoral coordination	7
3.2.3 Management capacity and decentralization	9
3.2.4 Land productivity and degradation	10
3.2.5 HIV/AIDS pandemic.....	12
3.2.6 Monitoring and evaluation	12
3.3 STRENGTHENING LINKAGES.....	13
3.3.1 Environmental economics	13
3.3.2 Integration of community-based approaches	15
3.3.3 Commercialization of non-wood forest products	16
3.3.4 Multi-purpose planted forest schemes.....	17
3.3.5 Bush encroachment and charcoal production	18
Next Steps	19
REFERENCES	20

Acronyms

CPP	Country Pilot Partnership for Integrated Sustainable Land Management
DoF	Directorate of Forestry
FAO	Food and Agriculture Organization of the United Nations
FSP	Forestry Strategic Plan
M&E	Monitoring and Evaluation
MAWF	Ministry of Agriculture, Water and Forestry
MET	Ministry of Environment and Tourism
NDP	National Development Plan
NPC	National Planning Commission
NPRAP	National Poverty Reduction Action Programme
NGO	non-governmental organization
MRLGHRD	Ministry of Regional, Local Government and Housing and Regional Development

Summary of key recommendations

Overview

Vision 2030 and the National Development Plan (NDP) – Namibia's main strategic planning documents – provide the framework for the country's efforts to alleviate poverty. Both recognize the importance of forestry, including its contributions to agriculture and livestock. The National Poverty Reduction Action Plan (2002) contains few references to the sector but it is not widely known or used. The Forestry Strategic Plan (1996) addresses forestry from the perspective of environmental protection and wildlife/tourism.

Although the recent move of the Department of Forestry to the Ministry of Agriculture, Water and Forestry from the Ministry of Environment and Tourism has raised its profile within the government hierarchy, lack of capacity and insufficient resources hinder its efforts to update and implement the Forestry Strategic Plan, establish closer linkages with other sectors, engage more actively in central planning processes, and increase stakeholder participation in decision-making.

Strengthening the linkages between forestry and poverty alleviation

Updating the Forestry Strategic Plan

The Forestry Strategic Plan (FSP) focuses more on the environment than on poverty issues, to the point that many consider it outdated. In fact, the contributions of forestry to poverty alleviation are still not well understood and forest and woodland management is suffering as a result. After ten years, the time is opportune to review and update the strategy to ensure that it responds to emerging government priorities, including poverty alleviation. As a first task, the Forest Council, slated to be established in 2006, could lead a participatory process to report progress on implementation, identify key issues to be addressed, and propose actions for the way forward.

As a priority, the Forestry Strategic Plan needs to invest adequate time and sustained funding to enable resource users and managers to overcome barriers and address the root causes rather than the symptoms of land degradation (and therefore poverty). In this regard, implementation of the Country Pilot Partnership for Integrated Sustainable Land Management¹, now in its final stages of approval, presents a real opportunity to test and replicate multi-sectoral approaches to land management in Namibia.

In consultation with stakeholders, the Directorate of Forestry should consider how to best package the new FSP in a way that (i) prioritizes and costs activities and areas for investment, (ii) identifies practical means for collaboration among government authorities, (iii) addresses cross-sectoral issues, and (vi) elaborates a coherent monitoring system.

For future monitoring of the Forestry Strategic Plan, the Directorate of Forestry will need to establish baseline information and develop indicators to measure the impact of interventions, including of policies and programmes.

Improving collaboration across sectors

Forestry's recent move to the Ministry of Agriculture, Water and Forestry from the Ministry of Environment and Tourism has meant a higher profile both internally and within the government hierarchy. Thus, the timing is right for the Directorate of Forestry

¹ The Country Pilot Partnership for Integrated Sustainable Land Management involves 5 ministries to identify the economic impacts of land degradation on commercial farms.

to open new channels of collaboration with other sectors and external partners while maintaining the alliances formed under its previous ministry.

Having successfully mainstreamed environmental and other cross-cutting issues in the second National Development Plan, the Directorate of Forestry and the Ministry of Environment and Tourism, in collaboration with the Secretariat of the National Planning Commission (NPC), should conduct a similar exercise to prepare the next version which will cover the period 2007-2012. For example, workshops would (i) expose more stakeholders to the concept of sustainable development and cross-cutting issues; (ii) help sectors to recognize how their activities are linked with other sectors; and (iii) stimulate ideas on how to improve collaboration. Such a process will strengthen the links between forestry and central planning authorities for future collaboration on initiatives to reduce poverty.

In a recent policy shift, the National Planning Commission which coordinates national policy development is calling for closer cooperation with the Directorate of Forestry, among others. As envisaged in the Forestry Strategic Plan, it would be desirable to establish the Inter-ministerial FSP Committee which the NPC could co-chair. The committee could reinstate regular consultations with stakeholders; lead the joint preparation of work plans; and manage the collection, synthesis, analysis and dissemination of information. However, care should be taken not to duplicate other agendas such as that of the high-level strategic planning body of the Country Pilot Partnership for Integrated Sustainable Land Management.

Although communities practice integrated resource management, Namibia's line ministries each provides extension services in isolation. However, the Ministry of Agriculture, Water and Forestry is gradually adopting collaborative approaches which have proven successful elsewhere. If other ministries followed suit, providers of extension services across sectors could identify synergies and build on comparative advantages.

Developing forestry-based poverty indicators

If the monitoring and evaluation processes of the Forestry Strategic Plan, the National Development Plan and the National Poverty Reduction Action Programme are linked and comprehensive in design, they can facilitate collaboration between the Directorate of Forestry and the National Planning Commission. Core poverty indicators still need to be refined and baseline data must be collected to be able to measure performance and progress. So far, poverty indicators – none of which are explicit to forestry – are not tied to baseline information nor do they appear to capture conditions on the ground.

The Directorate of Forestry should help to develop indicators for future assessment of poverty in Namibia as well as for monitoring and evaluation systems, including baseline data. Regional Chief Foresters can be instrumental in incorporating forestry dimensions into regional plans and in revising the third National Development Plan. They can also promote efforts to better harmonize village participatory assessments with regional priorities.

If the Directorate worked more closely with the Central Bureau of Statistics, they could formulate indicators that link poverty with the environment and forests, building on the data on energy consumption and utilization of forestry products which are being used in the Environmental Monitoring Indicators Network and the State of Environment Reports of the Ministry of Environment.

Strengthening valuation of forest environmental services

Although recent studies are helping to quantify the value of forest services and are suggesting ways to analyze their full contribution to Gross Domestic Product, more research is needed on the value of environmental services – water quality and supply, soil retention and fertility, carbon storage, and conservation of biodiversity, for example. Moreover, the Directorate of Forestry would raise the profile of the sector by disseminating information to broad audiences on the multiplier effects of forestry as compared to wildlife, along with other positive findings in forestry accounts.

Although new policies and community forestry are increasing awareness of how forests contribute to livelihoods, if the Directorate of Forestry and civil society were to annually report income from the sale of timber, wood for crafts, poles for construction, firewood, honey, wild fruits, clearing of firebreaks, and grazing fees, they would be able to determine the extent to which such activities alleviate poverty.

The Directorate of Forestry, in collaboration with the energy sector, should assess the importance of fuelwood to household economies, including the landless, to better estimate the importance of forestry at the household level. Walking distances to collect fuelwood should be added to the Household Income and Expenditure Survey and information from the 2004/05 Namibia Census of Agriculture should be extracted to better gauge the emerging charcoal industry.

Increased support to the Environmental Economics Unit, including incentives to mitigate high staff turnover, would enhance its capacity to conduct further research and policy analysis to improve national accounting. In addition, the Ministry of Environment and Tourism, in collaboration with central government authorities, should discuss where to best locate the unit, either within or independent from government.

Marketing forestry

Awareness of forestry's contributions to poverty alleviation would be raised through the development and dissemination of material that is user-friendly and easy to understand. A key promotion strategy would be to target politicians, the media and opinion leaders through both regular and special briefings as well as press releases. The aim should be to identify and support likely champions who are prepared to demonstrate their commitment to the sector, including efforts to update and publicize the Forestry Strategic Plan.

Other opportunities for forestry-based poverty alleviation

Commercializing non-wood forest products

Of the 157 tree species in Namibia, 35% are a source of food, especially for the poorer segments of Namibia's population. A viable forest-based enterprise often depends on the processing of raw products. Because the Indigenous Plant Task Team facilitates the sharing of information on Namibia's indigenous resources and promotes their use, it is in a good position to develop a central information system, in collaboration with forestry field offices and civil society networks, to open up access to markets and increase the financial viability of small-scale enterprises for new non-wood production.

The Forestry Strategic Plan would improve its contributions to poverty reduction by focusing more on non-wood forest products and helping to improve linkages along the supply chain. Forestry extension workers should assist communities to identify potential income generating activities and link them to agencies which can provide expert advice.

Establishing multi-purpose planted forest schemes

The rising price of crude oil, the trade in carbon credits under the Kyoto Protocol, and the discovery that *Jatropha* (a tree which produces bio-oil) can grow in dry-land conditions all present unique opportunities for Namibia to take advantage of emerging markets which, in turn, will engage the private sector and spur economic growth.

The road map that the Ministry of Agriculture, Water and Forestry is preparing focuses on production, carbon credits, marketing and utilization, all of which will help the country to meet commitments to international agreements. It should be given high priority and would benefit from the inclusion the Directorate of Forestry in its formulation.

Given that investment in planting *Jatropha* will often exceed the amount that a single household can afford, the most effective means for community representation and revenue sharing may be outgrower schemes. Working closely with the Ministry of Agriculture, Water and Forestry, investors should offer safeguards to communities by:

- designing and implementing cost and benefit sharing mechanisms that consider people's capabilities, assets (material and social) and activities required to earn a decent living
- lobbying to plant *Jatropha* in areas deemed suitable as well as other species, including medicinal plants, to increase the mix of timber and non-timber products and maximize returns in a timely manner, consistent with the principles of sustainable management
- ensuring deals are flexible and long-term contracts contain provisions to renegotiate salary rates and pricing to cover inflation
- installing mechanisms that enhance transparency and accountability among and within stakeholder groups, such as regular meetings.

Decentralizing programme and service delivery

Pressure from the Directorate of Forestry's ministry to decentralize operations presents an opportunity to reform its functions, structures and procedures. Regional workshops to discuss issues associated with implementation would help move the process forward. Participants should include governors, councilors, regional forestry officers, line ministries, union representatives, among other stakeholders.

If regional councils were to take on new responsibilities for forest management, forestry staff could better articulate local demands and identify service providers. The Rural Poverty Reduction Programme, financed by the European Development Fund, should be invited to become a partner in promoting forestry within regional council planning exercises, as part of its government-oriented component to assist ministries with implementing decentralization.

Further, the Country Pilot Partnership for Integrated Sustainable Land Management should be used as an entry point to reform extension services so that they are driven by local demand rather than authorities at higher levels.

Mitigating the effects of HIV/AIDS

HIV/AIDS in Namibia, like in other countries of sub-Saharan Africa, increases the burden of individuals, households and communities in all sectors of society, in addition to decreasing productivity and eroding economic gains. Rates of infection in adults have risen from 4% in 1992 to more than 25% in 2005, reaching up to 35% in some areas. A quarter of all infected people are between 25 and 29 years old.

Namibia's woodlands form an integral part of livelihoods and poor rural households rely on these resources, especially as their capacity to farm the land and engage in other coping strategies declines. Charcoal production and the sale of firewood, mushrooms and medicinal plants can be significant sources of off-farm income to buffer rural households against the impacts of health expenses and productivity losses.

Since most Namibians rely on traditional medicine, the challenge is to ascertain the extent to which these resources help communities already suffering from widespread poverty to cope with HIV/AIDS. Initiatives which reduce its incidence, transmission and impacts and those that improve the quality of life for individual affected should be prioritized in the Forestry Strategic Plan: developing better methods of harvesting medicinal plants, targeting assistance to the most needy, conducting awareness campaigns, and researching the linkages between HIV/AIDS and forestry, for example.

Working with the ministry's HIV/AIDS Committee, the Directorate of Forestry can highlight how medicines from forests are crucial in treating HIV/AIDS related illnesses. It can also use this venue to establish partnerships with the health sector to raise awareness in the workplace, fight stigma and discrimination, promote voluntary testing and counseling, and modify working conditions of employees exposed to high risk situations.

Converting bush encroachment into income opportunities

In Namibia, bush encroachment occurs predominantly on commercial agricultural land in the central and eastern areas and in localized parts of communal areas. Fourteen million hectares of freehold farmland are estimated to be affected and policy discussions are focusing on its detrimental effects on agriculture and beef production.

Plans which the Directorate of Forestry and partners are developing to manage bush encroachment should include provisions to maximize the conversion of unwanted bush into cash and other economic opportunities. Measures should also promote the restoration of land carrying capacity as well as grazing capacity to enhance livestock production. Farmers will need to understand and conform to high standards for de-bushing, harvesting and clearing that the Directorate has yet to prepare. Compliance will require that they be made aware of and trained in new technologies and methods.

Improved charcoal production

The Directorate of Forestry, in collaboration with the energy sector, should assess the importance of fuelwood to household economies, including the landless, to better estimate the importance of forestry at the household level. To promote its sustainable use and commercialization, priorities should include setting aside forest areas geared to charcoal production, linking responsible producers and traders with buyers, and devising better methods of yield control and harvesting. On the consumption side, activities should be closely aligned to the National Strategy for Sustainable Use of Biomass Resources to facilitate joint research in the use of fuelwood for cooking and to pilot more efficient technologies.

1. Introduction

As part of a study in Africa, FAO led a mission to Namibia to examine the extent to which its Forestry Strategic Plan (FSP) is linked to the Second National Development Plan (NDP2) and the National Poverty Reduction Action Programme (NPRAP). The purpose was to identify factors that fostered or hindered the establishment of effective linkages and to enhance the presence and influence of forestry in wider planning instruments with a view to strengthening support for forest-based poverty alleviation.

In collaboration with the Directorate of Forestry (DoF) of the Ministry of Agriculture, Water and Forestry (MAWF), the team held meetings in Windhoek and participated in a workshop on national forest programmes which was jointly organized by MAWF and the National Forest Programme Facility based in Rome. Information was obtained from more than 40 people from government, the private sector and civil society. (See annex 1 for the list of persons met.)

The timing of the mission was such that contributions could be made to two important policy documents that are due for publication in 2006: the third iteration of the National Development Plan which the National Planning Commission (NPC) is preparing; and the Ministry Strategic Plan (2006-2020) which MAWF is formulating.

2. Policy Processes in Namibia

2.1 Overview

Namibia is the most arid country south of the Sahara. Comprising 800 000 km², it is slightly more than half the size of Alaska and has a population of only 1.8 million, distributed unevenly across the country, mostly in the less arid north central and north eastern areas. Average rainfall varies from more than 600 mm in the north east to less than 25 mm in the Namib Desert to the west. Rainfall is erratic both temporally and spatially, leading to large localized differences and fluctuations in precipitation annually. Drought is a regular occurrence.

Land degradation in the form of soil erosion, bush encroachment and deforestation is an increasing problem for an economy which depends heavily on natural resources and for an estimated 70% of the population which relies on subsistence agriculture and livestock husbandry.

Namibia's average per capita income of US\$ 1 800 (2004) ranks it as a lower middle-income country. This categorization, however, masks the large social and environmental debts that Namibia inherited from 100 years of colonial history and almost half a century of apartheid. Although it gained independence from South Africa in 1990, the gap between rich and poor is still evident in terms of unequal access to land and natural resources as well as education, health and housing for the rural majority.

Its Human Development Index – a measure of well-being – is 0.65 (below 0.5 is considered low development and above 0.8 is considered high development). Although its Gini coefficient – a measure of unequal distribution – decreased from 0.7 in 1993/4 to 0.6 in 2003/4, 0.3% of the population own 40% of the land and 5% earn almost 70% of the income. In 2003/4, the estimated level of literacy was 84 and life expectancy averaged 44 years.

2.2 Poverty reduction and development policies

Two documents guide planning and policy development in Namibia: a 30-year

framework known as Vision 2030 and national development plans. The first National Development Plan (NDP) ran from 1995 to 2000 while the second covers 2001 – 2006 and aims to reduce poverty, create employment, stimulate and sustain economic growth, reduce inequality in income distribution and regional development, promote gender equality and equity, enhance environmental and ecological sustainability, and to combat the spread of HIV/AIDS (GRN, 2001). Because these objectives are interlinked, their achievement requires integrated and multi-sectoral approaches to:

- establish an environment which fosters economic growth and development
- promote environmental management and sustainable use of natural resources
- encourage participatory development and distribute benefits equitably
- develop human resources
- promote good governance.

In 1998, Namibia adopted a strategy to reduce poverty as part of its National Development Plan. Priorities have since been elaborated in the 2001–2005 National Poverty Reduction Action Programme (NPRAP) which falls within the framework of the second NDP and its Public Sector Investment Plan. Specifically, the NPRAP sets out to:

- create a long term vision for a prosperous Namibia by investing in and enhancing transport, manufacturing, education and health
- enhance the income-generating capacity of the country's poor and vulnerable people by diversifying agriculture, stimulating alternative income options in tourism, and developing small and medium enterprises
- strengthen the safety net of poor and vulnerable people against further distress and marginalization by investing in labor intensive works, strengthening grant-based transfer programmes, using public resources more effectively, decentralizing services, and developing systems to monitor and review progress.

Although NDP 2001–2006 recognizes the need for integrated, sustainable land management, including forestry, the NPRAP does not refer specifically to the sector.

2.3 Forestry Strategic Plan

In 1994, in the post colonial era, the Directorate of Forestry initiated a process to develop a strategic plan at a time when government commitment to the sector was weak. An inter-sectoral task force led the effort and produced the Forestry Strategic Plan (FSP) two years later. It consisted of four programme areas: public sector capacity building; community management of natural forests; farm forestry; and state management of environmental forestry. Subsequent revisions culminated in the *Development Forestry Policy for Namibia* which was approved in 2001. Both instruments provide a framework for sector development and consider wider macro-economic policy processes such as the National Development Plan.

Signed by the former President, an avid environmentalist, the FSP has at times enjoyed strong political backing. Despite high levels of ownership and good intentions, however, it took more than 7 years before the *Forest Act* (2001) became operational to provide the legal basis to implement the strategy. The same Act also calls for the establishment of a Forest Council to oversee implementation but members have yet to be appointed. Because the FSP was prepared when the forest legislation was being reviewed, provisions in both instruments are consistent.

The forestry strategy's main achievements since the mid-nineties have been policy development and institution building. While the 1992 policy was conservation oriented and government driven, with little regard as to how communities could play a role, the revised version aims to influence other sectors such as agriculture, energy, mining, and transport to trigger policy changes; support decentralization through local planning and community forestry; and give special attention to projects which generate income to alleviate poverty. The focus is on production (management of natural forests, supply of environmental benefits, timber processing), protection (mainly forest fires) and multi-stakeholder participation.

In broad terms, the FSP outlines how its programmes will create jobs, deliver a skilled civil service, redistribute income to communities, establish industry, generate income and contribute to foreign exchange earnings. The Directorate of Forestry updated it twice to guide its programmes and operations but stakeholders have a limited sense of ownership because consultations were not extensive. In addition, it falls short of analyzing and addressing constraints which originate outside forestry but affect the sector's viability – high transportation costs, for example. Moreover, the document identifies the need to assess and report progress in implementation yet it does not prioritize investment areas or suggest ways to measure the sector's contributions to poverty reduction.

Suggested action

After ten years, it may be time to review the FSP in terms of performance and future direction for the next decade (2007-2017). As a first task, the Forest Council (slated to be established in 2006) could lead a participatory process that takes into account findings from recent reviews to prepare a report on the state of Namibia's forests, including pertinent issues, especially those related to poverty reduction.

In consultation with stakeholders, the Directorate of Forestry should consider how to best package the new FSP in a way that (i) prioritizes and costs activities and areas for investment, (ii) identifies practical means for collaboration among government authorities, (iii) addresses cross-sectoral issues, and (vi) elaborates a coherent monitoring system.

3. Linkages, benefits, constraints and opportunities

3.1 Mainstreaming

3.1.1 Forestry aspects of the National Development Plan

In 1991, the then Ministry of Wildlife, Conservation and Tourism initiated a process to develop a Green Plan for Namibia, one which would establish a cross-sectoral and multi-disciplinary approach to “secure for present and future generations a safe and healthy environment and a prosperous economy” (Brown 1992). The plan was considered bureaucratic, narrowly focused, and externally driven. At about the same time and in parallel, the government launched the first National Development Plan which outlined the country's objectives and strategies for the first five years of independence from South Africa.

The Green Plan had a strong environmental agenda but, apart from activities related to its own mandate, the ministry was unable to implement it because of its low position in the government hierarchy. During the formulation of the second National Development Plan, the Directorate of Environmental Affairs, Ministry of Environment and Tourism (MET), and the Secretariat of the National Planning Commission (NPC) collaborated closely to integrate environment and sustainable development issues into the process.

Eighteen papers were prepared as background material for workshops which brought sectors together to discuss key sustainable development issues, including those related to natural resources, trade and industry, infrastructure, and institutions. Discussions helped to raise awareness of concerns which cut across sectors such as those related to the environment. With the participation of the Directorate of Forestry in mainstreaming the environment in NDP2, an entire chapter is devoted to describing the value of forests and forest products to the economy, consumption trends, and the core functions of the Directorate. Forest sector performance during NDP1 is highlighted in terms of institutional development; management and conservation of forest resources; and a national research agenda.

Following an update of sector constraints, the NDP2 contains targets and indicators based on 10 strategic objectives which are aligned to the four programme areas of the FSP. The mission outlined in the NDP2, “to practice and promote the sustainable and participatory management of Namibia’s forest resources to enhance socio-economic development and environmental stability”, is also the mission of the Directorate of Forestry – a coincidence that underscores a largely government oriented approach.

Monitoring of the second National Development Plan will be based on specified targets and output indicators, including those which are relevant to forestry and contained in Chapter 13. However, due to the absence of baseline information, an assessment of the impact of interventions will not be carried out. Once baselines are established, users of the information will judge the progress required to indicate whether the objectives and programmes of the Forestry Strategic Plan have been achieved. As is the case with all eighteen sectors covered in the NDP, a summary of the Directorate’s five-year operational budget is included as part of the Public Sector Investment Plan.

Suggested action

Having successfully mainstreamed environmental and other cross-cutting issues in the NDP2, the Directorate of Forestry and the Ministry of Environment and Tourism, in collaboration with the Secretariat of the National Planning Commission, should conduct a similar exercise to prepare NDP3 which will cover the period 2007-2012. As demonstrated, the previous workshops effectively (i) exposed a broad range of stakeholders to the concept of sustainable development and cross-cutting issues; (ii) helped sectors to recognize how their activities are linked with other sectors; and (iii) stimulated ideas on how to improve collaboration. The process also strengthened links between forestry and central planning authorities for future collaboration on initiatives to reduce poverty.

3.1.2 Forestry aspects of the National Poverty Reduction Action Programme

As stated earlier, the National Poverty Reduction Action Programme refers less to forestry compared to Vision 2030 or NDP2. A recent government-led review of the document revealed that it contains only a limited number of environment-related actions and indicators despite the fact that environmental sustainability is addressed in other key national development policy documents and strategies. The NPRAP is particularly silent on environmental concerns related to the sustainable management of natural resources. In this regard, the review correctly notes that (NDP, 2005):

The revised NPRAP also needs to recognize that close to 70% of the population lead a rural lifestyle. Their livelihoods mainly depend on the natural environment for food, shelter and a number of other products and resources essential for the well-being of rural people, like grazing, firewood,

water and fruits. These are essential for the survival strategies of rural people during climatic hardships, such as drought and other natural disasters. In fact it constitutes a vital safety net, which cushions populations against the potentially devastating impact of natural disasters. It is well known that being susceptible to fluctuating environmental conditions and to environmental catastrophes puts households and communities in a vulnerable position. If such shocks occur regularly, it can easily lead to loss of assets, increased vulnerability, less resilience and ultimately poverty. This may therefore require specific mitigating measures, focusing on areas where fluctuating environmental conditions are common. In addition, secure tenure of land for poor and vulnerable groups, access to productive assets and sustainable management of communal resources need to be addressed.

Forestry, like other resource-based sectors highlighted in the review, receives marginal attention. The exceptions are tree planting (Action 21) and forest industry as a targeted sub-sector for the Special Industrialization Programme (Action 28) which is not yet operational. Implementation of the pilot tree planting scheme is slow. In fact, the review recommends that government identify viable tree types before expanding it.

The National Planning Commission is now deliberating whether to revise the NPRAP to align it with the next 5-year period of the National Development Plan or discard it as a poverty reduction policy framework.

Suggested action

The National Planning Commission would be in a better position to make an informed decision on whether to revise the NPRAP or discard it if it consulted stakeholders to assist in weighing the pros and cons of the two options.

Public forestry authorities should take advantage of every opportunity to educate the National Planning Commission not only on the environmental aspects of trees but on the poverty reducing dimensions associated with forest enterprises and the significant benefits of viewing forestry more broadly than just planting trees.

3.1.3 Poverty aspects in the Forestry Strategic Plan

Namibia's Forestry Strategic Plan is progressive in terms of linking the forestry agenda to poverty reduction through socio-economic development. During the mid-nineties many plans were less conscious of the sector's contribution to economic growth and rural livelihoods. The document highlights the most important functions of natural forest resources to the economy which are, in order of priority (MET, 1996):

- forest environmental protection
- specialized local forest products
- support to wildlife activity and ecotourism.

During formulation of the strategy, media attention concentrated on deforestation which was prevalent in northern Namibia throughout the mid-nineties. The former President, returning to Namibia after a 30-year absence, became a strong advocate of conservation when he was unable to recognize his village due to the destruction of the forests which surrounded it. At the same time, a civil society movement emerged and has become instrumental in mainstreaming environmental issues in policy development. These factors explain the public's emphasis on tree planting and the pressure on the Directorate of Forestry to be seen as a major force in wider efforts to green the environment.

For these reasons, the FSP focuses more on the environment than on poverty issues, to

the point that many consider it an outdated document rather than a dynamic process. Thus, the contributions of forestry to poverty alleviation are still not well understood and forest and woodland management has suffered as a result. This orientation has led forestry to be largely isolated in its goals and objectives. However, the Directorate is now attempting to align its activities to the government's poverty agenda and to demonstrate forestry's pro-poor linkages, as noted in an integrated vision statement, developed as part of the ministry's strategic planning exercise:

The [forest] sector sees sustainable livelihoods with the focus on poverty reduction and food security by creating equal economic opportunities based on conducive policies and legislation, sound environmental management principles, relevant research, appropriate technologies, improved marketing and innovative product development with active participation from all stakeholders (MAWF, 2005).

Suggested action

While the Ministry of Agriculture, Water and Forestry may eventually recognize the role of forests and woodlands in poverty alleviation, other ministries involved in land use planning and management may not, including Ministry of Lands and Resettlement, Ministry of Regional Government, and Local Housing and Rural Development. Since these ministries have a strong link to forestry, integrated approaches to natural resource management which are in line with the new vision for forestry need to be developed through stakeholder participation. One entry point is Namibia's Country Pilot Partnership for Integrated Sustainable Land Management which is expected to be launched before the end of 2006.

3.1.4 Allocations to forestry

From 1991 to 1996, financial support to the forest sector increased in terms of recurrent budget for personnel costs, routine administration, fieldwork, information management, inspections, fire breaks, and vehicle purchase. Increases were also noted in the development budget for infrastructure, new technologies, and special projects. International support from donors accounted for 64% of the Directorate's total budget over the 5-year period.

When the FSP was prepared, it was envisaged that extra budgetary resources which donors had been providing for routine activities would eventually be covered in the regular budget. However, despite increases each year – from N\$15 million (equivalent to about USD 2.1 million) in 1999/2000 to N\$23 million (equivalent to about USD 3.2 million) in 2005/06 – the percentage that the Directorate spent on salaries during this time far exceeded the ministry's average of 50%, rising from 72% to nearly 90%, thereby leaving less for other expenses and capital developments.

Declines in capital spending and in revenues from the sale of timber and harvesting permits over the last 5 years have translated into understaffing and reduced capacity of the Directorate to fulfill its mandate. Less than 30 professional foresters and 3 senior managers administer core activities over a vast territory (law enforcement, tree planting, community forestry, fire management, education and research). Moreover, many of the committed donors who supported the community forestry component of the FSP are no longer engaged in the sector – a situation which threatens institutional reform toward a pro-community focus.

Namibia has a history of releasing 100% of budget allocations to ministries so that officials are confident they can plan accordingly. As government administration continues to improve, budgeting is moving away from a line item to a programme

approach where ministries must show value for money in terms of implementation. The Ministry of Finance, however, is not yet fully using the second National Development Plan and its Public Investment Plan as frameworks for annual budgeting exercises. In much the same way, the Ministry of Agriculture, Water and Forestry gives little consideration to the FSP as an investment framework for the sector. Neither does forestry hold a place in the Medium Term Plans which are used to secure funds from the Ministry of Finance.

3.2 Constraints to establishing linkages

3.2.1 Participation and marketing

The formulation of NDP2 and Vision 2030 were the first comprehensive attempts in Namibia to build policy and consensus through multiple avenues of information, participation and consultation. Conversely, the FSP still appears to be largely regarded as a document belonging to the Directorate, with little buy-in from civil society, the private sector and other government departments. Lack of publicity of the strategy and of access to the electronic media for its distribution has also limited ownership. Moreover, the document needs to better reflect regional issues and priorities.

Forestry's recent move to the Ministry of Agriculture, Water and Forestry from the Ministry of Environment and Tourism has meant a higher profile both internally and within the government hierarchy. Thus, the timing is right for the Directorate of Forestry to open new channels of collaboration with other sectors and external partners while maintaining the alliances formed under its previous ministry.

Suggested action

Given recent institutional changes, it is now opportune to market forestry and raise awareness of its contributions to poverty alleviation through material that is user-friendly, easy to understand and made widely available. A key promotion strategy would be to target politicians, the media and opinion leaders through both regular and special briefings as well as press releases. The aim should be to identify and support likely champions who are prepared to publicly demonstrate their commitment to the sector, including efforts to update and publicize the Forestry Strategic Plan.

Stakeholder engagement with a variety of sectors and institutions to discuss options, influence decisions, and develop action plans is a prerequisite to successful implementation. Therefore, the Directorate should build on the procedures instituted for the development of other government policy initiatives and, as appropriate, extend participation beyond conventional sources, including to local traditional authorities.

3.2.2 Inter-sectoral coordination

In Namibia, forests are of particular importance due to the ecosystem services they provide. In addition, forested areas are less prone to drought. They also provide grazing for cattle and habitat for wildlife, as well as supply goods for subsistence purposes. Given that inappropriate land management causes the destruction of forests, tackling land degradation and the consequent decline in productivity requires inter-sectoral approaches at national, regional and local levels. Although resource managers on the ground generally practice integrated resource management (Box 1), national approaches do not always take into account the extent to which efforts require coordination and collaboration.

The FSP clearly states that “purposeful inter-ministerial coordination to support implementation of forestry programmes is at the moment negligible”. Ten years later,

policy makers outside the sector are still not fully engaged and coordination mechanisms have not been established, including the high level Forest Council which is called for in the *Forest Act*, the Inter-ministerial FSP Committee and the FSP Task Force. Moreover, since forestry's shift to a new ministry in 2005, the Directorate is unable to enforce some of the legislation because the laws are specific to the mandate it had under its former Ministry of Environment and Tourism.

Despite the lack of institutional arrangements for forest policy and FSP coordination, the Directorate of Forestry participates in multi-sectoral task forces and committees such as the Indigenous Plants Task Team and the National Biodiversity Task Force which bring together politicians and technical experts. In 2006 for example, the minister established a Bio-Energy Task Team to guide MAWF in the development of policies related to plant perennial bio-oil crops, payments for carbon credits, and bio-diesel initiatives. As part of a more client oriented MAWF, stakeholder expectations of forestry working closer with agriculture on such schemes are now significantly higher.

High level policy development in Namibia is coordinated by the recently established National Planning Commission (NPC). Despite the need noted in the FSP for "NPC to assume a high profile in the effective coordination of forestry projects", neither party engages in each other's processes to any great extent other than in the Country Pilot Partnership for Integrated Sustainable Land Management. As well as being the focal point for policy analysis and planning, the NPC houses the Central Bureau of Statistics and the Information Systems Centre – departments which play a key role in monitoring policies and initiatives related to poverty.

Suggested action

In a recent policy shift, the National Planning Commission is calling for closer cooperation with the Directorate of Forestry, among others. As envisaged in the original FSP, it would be desirable to establish the Inter-ministerial FSP Committee which the NPC could co-chair. The committee, whose membership should include NPC development planners, could reinstate regular consultations with stakeholders; lead the joint preparation of work plans; and manage the collection, synthesis, analysis and dissemination of information. However, care should be taken not to duplicate other government agendas such as that of the high-level strategic planning body of the Country Pilot Partnership for Integrated Sustainable Land Management.

Although communities practice integrated resource management, the organization of Namibia's line ministries is such that each sector provides extension services in isolation. However, the Ministry of Agriculture, Water and Forestry is gradually adopting collaborative approaches which have proven successful elsewhere. If other ministries followed suit, providers of extension services across sectors could identify synergies and build on each other's comparative advantage.

Box 1. Fora for Integrated Resource Management (FIRM)

In partnership with communities, farmers, service providers and other stakeholders, fora for integrated resource management were developed and piloted in three areas of Namibia: Uuvudhiya in north central Namibia, Khoad in the northwestern, and Gibeon in the south. The fora serve as a venue to exchange information on integrated natural resource management and to make informed decisions, drawing on the local monitoring of biophysical indicators identified by farmers such as livestock conditions, rainfall, rangeland condition (grasses), carrying capacity and bush density. According to an evaluation in early 2004, these fora have enhanced knowledge-sharing, established a platform for discussion and assisted communities to obtain external support. FIRM also

increases the influence that communal farmers have on their rangeland resources. In addition, it empowers extension staff and organizations to work together, cutting across sectoral and institutional lines. Depending on the needs of communities, participants can be NGOs such as Women's Action for Development or Centre for Research Information Africa Action; private sector institutions such as Agra or Meatco which can bridge skills gaps by involving farmers in joint ventures, opening up investment possibilities or assisting with auctions or other marketing practices; and government institutions such as regional planners and councilors, traditional authorities and local authorities. Some political members are less involved than others but they give the fora legitimacy and increase the networking that keeps people informed.

3.2.3 Management capacity and decentralization

Namibia is moving toward decentralization but, in practice, a small population spread over a vast territory makes decentralization difficult and costly. Moreover, national decision-makers are reluctant to give up control not only because they wish to maintain their importance and influence but also because they are concerned that regional offices will exploit rather than manage resources sustainably.

Given that many of Namibia's citizens were denied access to proper education during apartheid, large gaps in skills and institutional capacity prevail throughout the country. Despite the education sector receiving more than 20% of the budget allocation per annum, these gaps are only slowly being filled – a problem which has to be taken into account when designing interventions and recommending future action related to the FSP and other development initiatives.

Lack of capacity is also largely responsible for the slow pace in which decentralization is being carried out and the reason that sector ministries are overlooking regional priorities for development and poverty reduction. In practice, the process has been less about devolving responsibilities than about replicating structures at regional and district levels, with Windhoek still having the final say.

With respect to natural resource management, devolution of management rights over resources is vastly different from decentralization of service delivery. While the former should ideally be devolved to resource managers, the latter should support their needs and demands. As noted above, the Directorate of Forestry is devolving management rights through community-based forestry, a move which implies that communities should take decisions on forest management and service providers should give technical support.

The Directorate of Forestry delivers services through 13 regional offices, an indication of its commitment to decentralize operations. However, administrative procedures are burdensome, weak staff capacity remains a major problem, and lack of funds and equipment hinder implementation. Furthermore, the provision of services continues to be top-down with little involvement of community resource managers. Experience from the water sector could provide lessons in this regard (Box 2). As a general rule, decentralization requires:

- clearly defining the roles of those to whom power is devolved
- integrating sectoral frameworks
- harmonizing the policies that support natural resources management
- empowering the actors.

Suggested action

Pressure from the Directorate of Forestry's ministry to decentralize operations presents

an opportunity to reform its functions, structures and procedures. Regional workshops to discuss issues associated with implementation would help move the process forward. Participants should include governors, councilors, regional forestry officers, line ministries, union representatives, among other stakeholders.

If regional councils were to take on new responsibilities for forest management, forestry staff could better articulate local demands and identify service providers. The Rural Poverty Reduction Programme, financed by the European Development Fund, should be invited to become a partner in promoting forestry within regional council planning exercises, as part of its government-oriented component to assist ministries with implementing decentralization.

Further, the Country Pilot Partnership for Integrated Sustainable Land Management should be used as an entry point to reform extension services so that they are driven by local demand rather than authorities at higher levels.

Box 2. Decentralization in action – lessons from the rural water supply sector

In 2001, Namibia's Population and Housing Census revealed that almost 80% (close to 1 million rural dwellers) had access to safe water - double the number since 1991. This achievement in the era immediately following independence was all the more remarkable because it was accomplished 6 years ahead of schedule. Success is attributed to community-based management, partnerships between government and rural communities, shared responsibilities, and decentralization.

In 1993, the Department of Water Affairs in MAWF established the Water and Sanitation Sector Policy and created the Directorate of Water Supply soon after. Although the Directorate was given 5 years to formulate a holistic, participative approach to rural water supply, it launched the Community-based Management Strategy in 1997.

Unlike many sectors in Namibia, those involved in supplying water to rural areas fully supported the move toward decentralization. Although the policy is not yet implemented, plans have been prepared that will shift responsibility for regional planning, design and operations to regional authorities. Policy development, national planning, the setting of national standards, monitoring, training and advisory services will remain with specialists in Windhoek, in an office yet to be established.

The ultimate step in the process is to shift full responsibility for rural water supply to communities and channel resources through regional councils charged with implementing the strategy. The Directorate of Water Supply is concluding the first phase of decentralization and has finalized plans for delegation and eventual devolution. Each region has prepared plans to implement the transfer of authority and identified capacity needs for regional councils in terms of human resources.

Source: MAWRD, 2004. 10 Years of Directorate of Rural Water Supply (1993-2003)

3.2.4 Land productivity and degradation

Land degradation, desertification and frequent drought lead to loss of land productivity and are major contributing factors to poverty. These problems also present serious obstacles to sustainable development in Namibia where 90% of the land is arid and 70% of the population depends on subsistence farming. The search for solutions, therefore, is high on the government's agenda.

Traditionally, livelihoods through cattle husbandry and cultivation of land are based on the use of natural resources and, in the past, practices were considered to have been

sustainable. Today, people on communal land still lead subsistence lifestyles due to the absence of employment and other means to earn income. As affordable alternatives are not available, food, fuel, housing materials, and medicines are extracted from the land, in most cases barely allowing it to recover.

The actual impacts on livelihoods of land degradation in communal areas are not easy to measure given the complex interactions between the bio-physical environment and socio-economic conditions. The non-monetary goods and services that communities derive from natural resources are difficult to calculate as well. However, one source has estimated the cost per year of land degradation to households for the most basic goods (see table below). Aggregating these costs over the estimated number of households in the northern areas of Namibia indicates a loss of about N\$81 million annually in reduced output and resource availability, e.g. cost of increased work or distances to collect wood. The brunt is likely to be borne by disadvantaged members of rural society, especially women responsible for collecting water and fuelwood (Project Design Document for the Country Pilot Partnership for Integrated Sustainable Land Management, 2005).

Some costs of land degradation incurred to households per year

Item	Explanation	Cost per year (N\$)	Cost per year (USD)
Lost fuelwood supply	Cost of commercially purchased fuelwood 1bundle/day at N \$2	720	102
Lost fencing materials	Cost of purchasing wire and poles for replacing 1/5 of fence around mahangu field	400-640	56-90
Lost livestock (lack of access to grazing, drought)	Replacement cost of 2 cattle/3 goats	480	68
Lost milk output	Cost of purchasing substitute protein plus loss in income	300-600	42-84
Reduced millet production	Purchase of commercial substitute foods for 1.5 months	165	23
Total		2,065-2,605	292-368

Source: Directorate of Environmental Affairs, Research Discussion Paper No 3 (1994)

Despite the lack of data and understanding of bush encroachment, it has been estimated that land degradation on commercial farms leads to a loss of 34,000 tons of beef production per year, worth N\$ 102 million in 1994 prices (ibid). This loss has direct impacts on the national economy with regard to the level of output, export and tax revenues (ibid).

Suggested action

Because of the need to adapt to new factors and circumstances that influence the state of land and its resources, combating land degradation is a long-term endeavor. Therefore, as a priority, the Forestry Strategic Plan needs to invest adequate time and sustained funding to enable resource users and managers to overcome barriers and address the root causes rather than the symptoms of land degradation (and therefore poverty). In this regard, implementation of the Partnership, now in its final stages of approval, presents a real opportunity to test and replicate multi-sectoral approaches to land management in Namibia.

3.2.5 HIV/AIDS pandemic

HIV/AIDS in Namibia, like in other countries of sub-Saharan Africa, is severely increasing the burden of individuals, households and communities in all sectors of society, in addition to decreasing national productivity and eroding the economic gains of the past. HIV infection rates are lower in rural Namibia compared to urban areas but are on the increase. Rates of infection in adults have risen from 4% in 1992 to more than 25% in 2005, reaching up to 35% in some areas. A quarter of all infected people are between 25 and 29 years old.

The disease constrains agricultural productivity, reduces household wealth and food security, and increases the demand for healthcare. Namibia's woodlands form an integral part of the livelihood and farming systems and poor rural households, particularly those affected by the disease, rely more and more on these resources as their capacity to farm the land and engage in other coping strategies declines. Commercial woodland activities such as charcoal production and the sale of firewood, mushrooms and medicinal plants can be significant sources of off-farm income to buffer rural households against the impacts of health expenses and productivity losses.

Many families are consumed with looking after the sick and attending funerals, including Directorate of Forestry staff. This loss of productive time results in decreased revenue, reduced extension services, less monitoring of forestry practices, and weakened law enforcement - all of which contribute to over exploitation of forest resources.

Government departments are now ensuring that measures to mitigate the impacts and reduce the incidence of HIV/AIDS are considered in their operations. The newly established HIV/AIDS Committee of the Ministry of Agriculture, Water and Forestry is mandated to raise awareness of issues and implement programmes in the workplace.

Suggested action

Since most Namibians rely on traditional medicine, the challenge is to quantify the contributions of forests in this regard and to ascertain the extent to which these resources help communities which are already suffering from widespread poverty to cope with HIV/AIDS.

Initiatives which reduce its incidence, transmission and impacts and those that improve the quality of life for individual affected should be prioritized in the Forestry Strategic Plan: developing better methods of harvesting medicinal plants, targeting assistance to the most needy, conducting awareness campaigns, and researching the linkages between HIV/AIDS and forestry, for example.

Working with the ministry's HIV/AIDS Committee, the Directorate of Forestry has a significant opportunity to highlight how medicines from forests are crucial in treating HIV/AIDS related illnesses. It can also use this venue to establish partnerships with the health sector to raise awareness in the workplace, fight stigma and discrimination, promote voluntary testing and counseling, and modify working conditions of employees exposed to high risk situations.

3.2.6 Monitoring and evaluation

If the monitoring and evaluation processes of the Forestry Strategic Plan, the National Development Plan and the National Poverty Reduction Action Programme are linked and comprehensive in design, they can facilitate collaboration between the Directorate of Forestry and the National Planning Commission. In the absence of such systems and without a clear indication of who is responsible for various aspects of implementation, it is difficult to identify entry points for interventions and to effectively assess progress.

Although the National Planning Commission has developed a poverty monitoring strategy, draft core poverty indicators still need to be refined and baseline data must be collected to be able to measure performance and progress. So far, the indicators – none of which are explicit to forestry – are not tied to baseline information nor do they appear to sufficiently capture conditions on the ground.

The Directorate of Forestry is keen to participate in Namibia's first Participatory Poverty Assessment and to influence the design of new monitoring and evaluation systems. It is also eager to have forestry included in Regional Poverty Profiles which focus on poverty, vulnerability, well being, livelihood systems, service delivery and governance at the village level. These profiles will inform development plans in the country's 13 regions and feed into the third National Development Plan.

Despite trees being important to livelihoods (fuelwood for energy and timber for construction), forestry is not considered a priority intervention in regions, even in Caprivi where much of Namibia's forests are found, likely because forestry officials are not well engaged in the assessment process.

Suggested action

The Directorate of Forestry should help to develop indicators for future assessment of poverty in Namibia as well as for monitoring and evaluation systems, including baseline data. Regional Chief Foresters can be instrumental in incorporating forestry dimensions into regional plans and the third National Development Plan which will be launched in 2006. They can also promote efforts to better harmonize village participatory assessments with regional priorities.

If the Directorate worked more closely with the Central Bureau of Statistics, they could formulate indicators that link poverty with the environment and forests, building on some of the primary and secondary data on energy consumption and utilization of forestry products which are being used in the Environmental Monitoring Indicators Network and the State of Environment Reports of the Ministry of Environment.

The establishment of a monitoring and evaluation system for the Forestry Strategic Plan would allow the sector to assess implementation and identify obstacles and constraints which hinder progress. The framework should detail the data to be collected, the methods of collection and analysis, and the institutions involved. Most users of the information prefer quantitative indicators because they can be interpreted more easily and objectively – important considerations when analyzing trends over time. However, where relevant and appropriate, qualitative assessment should also be carried out.

Along similar lines, monitoring and evaluation of the FSP and the Community-based Natural Resource Management Programme which is now being established should consider relevant activities at the household level and take into account the targets and objectives contained in the third National Development Plan and the National Poverty Reduction Action Programme. In addition, walking distances to collect fuelwood (Section E8) should be added to the 2003/04 Household Income and Expenditure Survey and information from the 2004/05 Namibia Census of Agriculture should be extracted to better gauge the emerging charcoal industry.

3.3 Strengthening linkages

3.3.1 Environmental economics

Economics has always been a mainstay of forest policy formulation in Namibia. During the 1996 strategic planning process, an attempt was made to place a value on goods and

services derived from forests and woodlands, in some cases using indirect substitution values. The estimated figure totaled N\$ 1.05 billion per annum. Because timber remains the only output for which the Directorate is responsible, the value of annual sales in comparison to the total economic value of the forestry sectors contribution to GDP is insignificant. However, it would be much higher if products such as construction poles and fuelwood were included in the statistics. Moreover, if the direct and indirect benefits of the services that forests provide to wider society were taken into account, some figures suggest that they would pay for the administration and management of Namibia's forests (MET, 1996).

When Namibia undertook resource accounting in the early nineties, it was the first country in Africa to do so. The FSP implementation coincided with a dynamic initiative which the Environmental Economics Unit in the Directorate of Environmental Affairs is driving. As is the case in most countries, the full range of forest products is generally not included in Namibia's standard accounts because of the difficulty in capturing data once raw materials are transformed through processing. Their exclusion weakens planning efforts and the sector's contributions to sustainable development are not well recognized.

Recently published forest accounts estimate the value of woodfuel, poles for housing and fencing, and non-wood forest products (crafts, foods, medicines, cosmetics and grasses). These accounts are only partially accurate because they exclude other values such as livestock grazing and brows, shade or use of wild fauna in woodlands and savanna (MET, 2006). The accounts show that woodfuel, construction and NWFP add slightly more than N\$ 1 billion to the national economy each year (roughly 3% of Gross Domestic Product, a figure comparable to agriculture at 4.6%). If multiplier effects to the broader economy are considered from activities such as wood cutting which add value through labor and capital, transport and fuel, contributions are estimated at N\$1.8 billion.

The importance of an environmental economics unit in setting policy in Namibia is highlighted in Box 3. However, high staff turnover is jeopardizing its capacity to continue performing valuable functions within its ministry and government as a whole.

Suggested action

Although recent studies are helping to quantify the value of forest services and are suggesting ways to analyze their full contribution to Gross Domestic Product, more research is needed on the value of environmental services – water quality and supply, soil retention and fertility, carbon storage, and conservation of biodiversity, for example. Moreover, the Directorate of Forestry would raise the importance of the sector by disseminating information to broad audiences on the multiplier effects of forestry as compared to wildlife, along with other positive findings in forestry accounts.

Although new policies and community forestry are increasing awareness of how forests contribute to livelihoods, if the Directorate of Forestry and civil society were to annually report income from the sale of timber, wood for crafts, poles for construction, firewood, honey, wild fruits, clearing of firebreaks, and grazing fees, they would be able to determine the extent to which such activities alleviate poverty.

Increased support to the Environmental Economics Unit, including incentives to mitigate high staff turnover, would enhance its capacity to conduct further research and policy analysis to improve national accounting. In addition, the Ministry of Environment and Tourism, in collaboration with central government authorities, should discuss where to best locate the unit, either within or independent from government.

Box 3. An environmental economics unit makes the case

In 1993, the Directorate of Environmental Affairs initiated an economics programme to support environmental policy development within government. Efforts were guided by a technical committee which consisted of the Directorate of Scientific Services, the Directorate of Tourism, the Central Bureau of Statistics, the Department of Water Affairs, the Directorate of Planning, the Namibia Economics Policy Research Unit, the University of Namibia, the Namibia Nature Foundation, the Namibia Community-based Tourism Association, and the WWF-LIFE Programme.

The Environmental Economics Unit provides information and analyses of land use, including the use of wildlife, wild plants, forests, water, fisheries, and the production of crafts, crops and livestock. Models for budget/cost-benefit analysis of resource use were refined and further developed. Findings have answered questions on the financial and economic viability of natural resource use, the value of associated activities, and the extent to which land and resources were efficiently allocated for these purposes. In the past 12 years, it has published 85 documents about the value, costs, benefits and trends in resource use resulting from different policies.

Accounts developed earlier for the water, fish and minerals sectors were upgraded and new accounts were established for energy, forest resources and wildlife. The Natural Resource Accounts (NRA) supplements the national accounts and provides valuable data for sectors and central government to plan in an efficient and economical manner. Data from the NRA, tourism satellite accounts, and the analysis of national economic impacts were used to develop an economic social accounting matrix for the entire economy.

The Environmental Economics Unit was able to show that investments in wildlife and other natural resources significantly improved rural livelihoods. It also demonstrated how conservancies contribute to Namibia's goal of alleviating poverty without the need for extensive subsidies that other rural development activities require, such as irrigation schemes. Thus, the unit played an important role in getting legislation passed in 1996 to allow the development of conservancies to manage resources on common property (see section 3.3.2).

Source: SIDA, 2006. Project to Institutionalise Environmental Economics in the Directorate of Environmental Affairs.

3.3.2 Integration of community-based approaches

The development of community-based forestry has increased awareness of how forests contribute to livelihoods, especially when government grants communities exclusive commercial rights. However, local authorities need the mandate and capacity to manage resources in an integrated fashion. Collaboration among sectors at national and regional levels is not sufficient to bring about required changes on the ground.

Although it has been the sector's key strategy for a decade, the Directorate of Forestry had registered only 13 community forests as of February 2006. Slow progress is largely attributed to inadequate incentives and legislative requirements for complex management plans. However, forestry and wildlife legislation appear to be compatible in terms of community approaches, despite some key differences (Jones, 2005). Thus, there is sufficient flexibility for a conservancy to be recognized as a community forest and for a community forest to be recognized as a conservancy should communities apply for such designations. Integrating the two legal frameworks is now high on the political agenda, as is institutional support for community-driven sustainable natural resource management. Closer collaboration between Ministry of Environment and Tourism and Ministry of

Agriculture, Water and Forestry should prevent any community forest from being established that overlaps with a conservancy and vice versa.

The Forestry Strategic Plan promotes a community-based approach in much the same way as the conservancies under the Ministry of Environment and Tourism (Box 4).

Box 4. A conservancy approach - lessons from the wildlife sector

Namibia recently adopted a conservancy approach to wildlife management – a system in which communal land owners share the use and benefits of natural resources. The approach promotes the sustainable management of wildlife while improving the livelihoods of rural people. As a result, more conservancies are exploring ways to integrate wildlife and tourism with the management of other renewable natural resources.

Conservancies also help Namibia to meet its commitments to conserve biodiversity by, for example, protecting threatened endemic species which are located along the western edge of the escarpment and fall outside state protection. In addition, conservancies protect corridors adjacent to protected areas through which wildlife can move.

To date, 44 communal area conservancies covering almost 80,000 km² are registered and more than 20 others are in various stages of development. In 2004, when 33 of them were in operation, income and benefits from the Community-based Natural Resources Programme amounted to N\$ 14 113 901 or US\$ 2 142 723 as follows: income from enterprises, N\$ 6 572 458; household/wage income, N\$ 5 873 150; and non-financial benefits, mostly in the form of meat from trophy animals or game culled, N\$ 1 668 293. Although one conservancy earned N\$ 644 440 or US\$ 97 837, less than 5 are self-financing.

With significant support from non-governmental organizations, conservancies have reduced illegal hunting and poaching; increased wildlife and their habitat; and promoted wildlife and tourism as legitimate and viable land uses on communal land. Most registered conservancies have allocated specific areas for wildlife management where trophy hunting and/or tourism is promoted. This zoning precludes their use for settlement and cropping purposes and, in some cases, for livestock husbandry.

Source: The Country Pilot Partnership for Integrated Sustainable Land Management, 2005.

Suggested action

Integrated natural resource management at the community level which includes forestry, wildlife use, rangeland management and monitoring is being called for in policy circles. Partners should make every effort to integrate forestry, tourism and bushmeat into broad economic development and conservation strategies by designing and implementing incentives for conservation which generate income through ecotourism while serving as safety nets for the poorest sectors. Simplifying forest management plans would assist in this regard and, in the context of regional planning, greater involvement of the Ministry of Lands and Resettlement and Regional Land Boards is critical to long-term success.

3.3.3 Commercialization of non-wood forest products

Indigenous fruits, nuts and tubers form a high proportion of the diet amongst the poorer segments of Namibia's population. Plant foods are among the most important non-wood forest products (NWFP), with considerable variation in abundance and availability. Of the 157 tree species in Namibia, 35% are a source of food. The non-income benefits in the form of food consumption and nutrition provide an incentive to manage resources sustainably. Therefore, practitioners of community forestry incorporate this aspect in the

participatory planning process but recognize that cash is needed as well.

Almost all rural households use the nearly one third of Namibia's tree species for medicinal purposes, some of which treat several conditions. Efforts to engage the private sector and enhance the capacity of communities to commercialize plant products as components of modern medicines are now being strengthened and progress is being made. For example, Silver-leaf *Terminalia* (*Terminalia Sericea*) is being investigated as an anti-inflammatory agent in cosmetics, and Sausage Trees (*Kigelia Africana*), as a treatment for skin cancer (Mendelson, 2005).

Successful commercialization of natural products requires a sound understanding and knowledge of markets to generate income. Under the Integrated Community-based Ecosystem Management Project – funded by the Global Environment Facility (GEF) through the World Bank – the recently launched Community Funding Facility supports registered conservancies and community forests with small scale ecosystem-based income generating activities and builds local capacity to develop business plans and design equitable benefit-sharing arrangements. Funds are also made available for rehabilitation projects such as eco-tourism infrastructure, reclamation of degraded land and control of soil erosion. Some activities which do not generate income are eligible provided they have the potential to reduce poverty and support investments in the sustainable management of natural resources.

Suggested action

A viable forest-based enterprise often depends on the processing of plant foods or medicinal products. The Indigenous Plant Task Team facilitates the sharing of information on Namibia's indigenous resources and promotes their use. Thus, it is in a good position to develop a central information system, in collaboration with forestry field offices and civil society networks, to open up access to markets and increase the financial viability of small-scale enterprises for new non-wood production.

Enterprise development, as an economic activity to support community forests and conservancies, requires capacity in general management, market analysis, product development and business planning. The Forestry Strategic Plan would improve its contributions to poverty reduction by focusing more on NWFPs and helping to improve linkages along the supply chain. Forestry extension workers should assist communities to identify potential income generating activities and link them to agencies which can provide expert advice.

3.3.4 Multi-purpose planted forest schemes

Vision 2030, the second National Development Plan and the National Poverty Reduction Action Programme all stress the importance of engaging the private sector to spur Namibia's growth. Commercial aspects of timber harvesting dominated South Africa's agenda during its administration but post-independence saw the establishment of only about 15 planted forests, covering 300 hectares.

Despite high-level commitment in the Ministry of Agriculture, Water and Forestry, tree planting is sporadic, mostly on arbor days. However, the rising price of crude oil, the trade in carbon credits under the Kyoto Protocol, and the discovery that *Jatropha* (a tree which produces bio-oil) can grow in dry-land conditions all present unique opportunities for Namibia to take advantage of emerging markets.

The proposal to have both small- and large-scale farmers invest in planting *Jatropha* for these multi-purposes is fostering dialogue across sectors. The initiative requires US\$ 150 million and the involvement of 1 800 households to each manage 40 hectares. Based on

these figures, the potential income per household is estimated at US\$ 1 000 per month from seed processing, timber and carbon storage. However, critics caution that land availability which meets the criteria of the Kyoto Protocol (carbon credits are only accessible on land cleared and not planted prior to 1990) is a serious constraint and may reduce the hectares available to only 11 per household, thereby reducing income opportunities substantially.

Such an undertaking will only be technically and financially feasible if conditions are in place for a fair deal. Because of its magnitude and potentially significant social, economical and environmental impact, government is preparing a road map to guide the support of its relevant ministries to this new type of planted forest development. The document will outline the pros and cons of proceeding, including those associated with massive employment creation.

Suggested action:

If forestry reforms are to take hold, forest industry will need to create employment and demonstrate that it can bring foreign exchange benefits in the form of import substitution to the country's wider economic agenda. The road map that the Ministry of Agriculture, Water and Forestry is preparing focuses on production, carbon credits, marketing and utilization, all of which will help Namibia to meet commitments to international agreements. This activity should be given high priority and would benefit from the inclusion the Directorate of Forestry in its formulation.

More specifically, given that investment in planting *Jatropha* will often exceed the amount that a single household can afford, the most effective means for community representation and revenue sharing may be outgrower schemes. Working closely with the Ministry of Agriculture, Water and Forestry, investors should offer safeguards to communities by:

- designing and implementing cost and benefit sharing mechanisms that consider people's capabilities, assets (both material and social) and activities required to earn a decent living
- lobbying to plant not only *Jatropha* in areas deemed suitable, but other species, including useful medicinal plants, to increase the mix of timber and non-timber products and maximize returns in the shortest time possible, consistent with the principles of sustainable management
- ensuring deals are flexible and long-term contracts contain provisions to renegotiate salary rates and pricing to cover inflation
- installing mechanisms that enhance transparency and accountability among and within stakeholder groups, such as regular meetings.

3.3.5 Bush encroachment and charcoal production

Bush encroachment occurs when dense layers of woody plants replace desirable grass species in areas that were once open. It reduces grazing capacity, results in loss of habitat, and can suppress indigenous species if encroaching species are exotic. Although the Forestry Strategic Plan is silent on the issue, policy discussions are focusing on the detrimental effects of bush encroachment on agriculture and beef production. They also highlight the need to respond in an environmentally friendly manner. The high costs associated with the problem include reduced contributions from farming to the national economy, perhaps by as much as N\$700 million per annum (Mendelson, 2005).

The causes of bush encroachment and the effect it has on agricultural production are not

clearly understood. It is believed to be the result of a number of complex inter-related factors such as overgrazing, browsing patterns, lack of veldfires and prolonged droughts. In Namibia, bush encroachment occurs predominantly on commercial agricultural land in the central and eastern areas and in localized parts of communal areas. Fourteen million hectares of freehold farmland are estimated to be affected.

Since 20% of annual energy consumption in Namibia is from woodfuel, off-grid renewable energy has become a major government focus. The country has more than 27,500 small and medium enterprises that depend on biomass energy, including 150 charcoal producers. The National Strategy for the Sustainable Use of Biomass Resources promotes charcoal production to reduce bush encroachment, especially in communal areas (R3E, 2003). The rising cost of fuelwood and the need for charcoal producers to remain competitive in the export market to Europe call for increased efficiency in the use of energy from biomass. Little wood is used as industrial fuel and only around densely populated areas are living trees harvested for fuel.

Suggested action

The strategy which the Directorate of Forestry and partners are developing to manage bush encroachment should include suggestions on how to convert unwanted bush into cash and other economic opportunities. Measures should also promote the restoration of land carrying capacity as well as grazing capacity to enhance livestock production. Farmers will need to understand and conform to high standards for de-bushing, harvesting and clearing that the Directorate has yet to prepare. Compliance will require that they be made aware of and trained in new technologies and methods.

The Directorate of Forestry, in collaboration with the energy sector, should assess the importance of fuelwood to household economies, including the landless, to better estimate the importance of forestry at the household level. To promote its sustainable use and commercialization, priorities within the Forestry Strategic Plan should include setting aside forest areas geared to charcoal production, linking responsible producers and traders with buyers, and devising better methods of yield control and harvesting. On the consumption side, the FSP should be more closely aligned to the National Strategy for Sustainable Use of Biomass Resources to facilitate joint research in the use of fuelwood for cooking and to pilot more efficient technologies.

Next Steps

Based on the findings and suggestions contained in this report and in collaboration with civil society, donors and ministries, the Directorate of Forestry may wish to prioritize actions needed to strengthen the linkages between Namibia's third National Development Plan and the Forestry Strategic Plan. In this regard, the National Forest Programme Facility might be able to lend some assistance.

References

- Brown, C. 1992. Namibia's Green Plan. Ministry of Environment and Tourism. Windhoek.
- CPP, 2005. Country Pilot Partnership for Integrated Sustainable Land Management. Project Design Document, Global Environment Facility.
- Directorate of Environmental Affairs, 1994. Research Discussion Paper No 3. Ministry of Environment and Tourism. Windhoek.
- GRN. 1996. Nature Conservation Amendment Act, 1996. Government Gazette No. 1333. Government of the Republic of Namibia. Windhoek
- GRN, 2001. Second National Development Plan (NDP 2) 2001/2002 – 2005/2006 Volumes 1 – 3, Namibia
- GRN. 2002. Forestry Act. Government of the Republic of Namibia. Windhoek.
- Jones, B. 2001. Integrating environment and sustainability issues in the development of Namibia's National Development Plan 2: *A participatory process for developing a sustainable development strategy*. Paper prepared for the OECD-DAC Project on Donor Developing Country Dialogues on National Strategies for Sustainable Development. Windhoek.
- Jones, B. 2005. A strategy for Integrating Conservancies and Community Forests: Comments and Recommendations.
- MAWF, 2005. Vision 2030 Strategic Planning. Integration Workshop Report. September 29-30, 2005. Hotel Furstenhof, IMTL Seminar Room. Windhoek.
- MAWRD, 2004. 10 Years of Directorate of Rural Water Supply (1993-2003). Ministry of Agriculture, Water and Rural Development.
- MET, 1996. Namibia Forestry Strategic Plan: Forest Biodiversity for Present and Future Generations. Directorate of Forestry, Ministry of Environment and Tourism. Windhoek.
- NPC, 2004. Poverty Monitoring Strategy. Poverty Reduction and Equity Sub-division, NPC Secretariat. February 2004. Windhoek.
- NPC, 2005. Review and Mainstreaming of Gender, HIV/AIDS, Environment and Sustainable Development into the National Poverty Reduction Action Programme for Namibia. April 2005. Windhoek.
- SIDA, 2006. Project to Institutionalise Environmental Economics in the Directorate of Environmental Affairs, Namibia. Final Report. Draft March 2006. Windhoek.
- UNDP, 2003. National Strategy for the Sustainable Use of Biomass Energy Resources of Namibia. August 2003. United Nations Development Programme. Windhoek.

Persons met**Food and Agriculture Organization**

Moeketsi Mokati, Representative

Louis Muhigirwa, Assistant

Ministry of Agriculture, Water and Forestry

Joseph Hailwa, Director, Directorate of Forestry

Esther Kamwi, Deputy Director, Directorate of Forestry

Simeon Hengari, Chief Forester, Directorate of Forestry

Vincent Louw, Chief Forester, Directorate of Forestry

Michael Otsub, Chief Forester, Directorate of Forestry

Harold Koch, Deputy Director, Rural Water Development

Marina Coetzee, Chief Agriculture Researcher, Agriculture Department

Johan Bierkes, Senior Accountant, Finance Division

Uaeta Muzuma, Chairperson HIV/AIDS Committee, Planning Division

Helen Mavetera, Vice-chair HIV/AIDS Committee, Planning Division

Prisca Mbereshu, Cooperative Officer, Planning Division

Barbara Curtis, National Botanical Research Institute

Rolf Sprung, Programme Coordinator, Community Forest NEN

National Planning Commission

Vekondja Tjukuzu, Deputy Director, Poverty Reduction and Human Resource Planning

Ndamona Kali, Deputy Director, Economic Statistics

Kalinde Chibdevu, Monitoring and Evaluation Expert

Guy Broucke, Environment Cross-cutting Expert, Rural Poverty Reduction Programme

Erick Dirx, Poverty Expert, Rural Poverty Reduction Programme

Ministry of Environment and Tourism

John Hazam, CBNRM Coordinator, Parks and Wildlife Management

Brian Jones, Policy Advisor, Integrated Conservation Environmental Management

Jonathan Barnes, Technical Advisor, Environmental Economics Unit

Ministry of Finance

Fabian Bornhorst, Economist

Ministry of Regional, Local Government and Housing and Rural Development

Johan de Kock, Chief Regional Planner

Ministry of Education

O. Hailobe, Head Office Planner

Heidi Tavakoli, Economist and Financial Planner

Namibia Nature Foundation

Chris Brown, Executive Director

Benedict Libanda, Programme Manager

Desert Research Foundation

John Pallet, Director

Urban Dynamics

Ernst Simon, Director

Centre for Research Information Africa Action

Saskia del Adel

RAISON

John Mendelson, Director

University of Namibia

Alfons Wabake Mosimane, Head of Life Sciences Division

United Nations Development Programme

Catherine Odada, Programme Officer, Environment Unit

Akiko Yamamoto, Programme Officer, Environment Unit