

NATIONAL SADC/EU FOREST SECTOR CO-OPERATION STRATEGIES

COUNTRY REPORT : THE REPUBLIC OF NAMIBIA

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ABBREVIATIONS AND ACRONYMS

CIFOR	Centre for International Forestry Research
DAPP	Development Aid from People to People
DBC	Development Brigade Corporation
DEA	Directorate of Environmental Affairs
DoF	Directorate of Forestry
DRM	Directorate of Resource Management
DTR	Directorate of Tourism and Resorts
EU	European Union
GRN	Government of the Republic of Namibia
IRDNC	Integrated Rural Development and Nature Conservation
LUEB	Land Use and Environmental Board
MAWRD	Ministry of Agriculture, Water and Rural Development
MET	Ministry of Environment and Tourism
MLRR	Ministry of Lands, Resettlement and Rehabilitation
NGO	Non-Governmental Organisation
NPC	National Planning Commission
NDP1	First National Development Plan
OPM	Office of the Prime Minister
SADC-FSTCU	Southern Africa Development Community - Forestry Services Technical Co-ordination Unit
WWF-LIFE	World Wildlife Fund for Nature - Living in a Finite Environment Programme

1.0 Summary

This document has briefly described the status of the forest sector in Namibia starting with the place of forestry in National Development, the resource base and its potential, trade in the various products and the modes of financing in the forest sector. In the process, it has also summarised the essential elements of the *Namibia Forestry Strategic Plan of 1996*, which identified four major development areas namely; *Institutional Capacity Building, Community Level Management of Natural Forests, Environmental and Farm Forestry programmes*. Currently, Namibia has initiated the implementation of the strategy falling under the first three development areas in co-operation with EU member countries of which Finland is a major partner, followed by Denmark.

In identifying the potential programme areas for funding, it has been shown that Namibia's current strategy is very much in line with the Economic, Policy, Social and Environmental Principles guiding the EU's policies on the promotion, support and financing of Sustainable Forest Management in the tropical and sub-tropical regions of the world. An analysis of the current programmes gave priority status to two themes contained in the document on EU guidelines on forestry development. The two priority themes are; *creation of forest resources* (theme 4) and *harvesting, processing, marketing and trading in timber and non-timber forest products* (theme 5). Three other themes have been treated as supporting these two priority themes. These are *conservation of ecological systems and biodiversity of tropical forests* (theme 2), *sustainable management of forest resources* (theme 3) and *forestry-related research* (theme 8).

The two priority themes have been translated into specific interventions which are concerned with the development of *traditional and modern agroforestry* concepts into Namibia's routine forestry practice, and the *income generation from timber and non-timber forest products*. Of significance, is a case of *riverine agroforestry* using traditional nut and fruit trees, annual crops and other trees along the Kavango, Kwando and Zambezi rivers and *dryland agroforestry* along and around natural basins and natural water ways (the "Oshanas") of north-central Namibia. In addition, a case has been made for promoting income generation in the rural areas to encourage sustainable management of natural resources through improvement of crafts, processing of potential oils from tree nuts and the associated marketing support. In supporting these two themes, it has been explained that *fire management* to protect the natural woodlands which produce valuable timber, non-timber forest products and valuable grazing and browsing ranges is crucial. For that reason, a *national fire management programme* is timely and presented for consideration by the EU.

It is of course realized that in implementing projects entailed in the two themes, Namibia should not lose sight of the need for *environmental and biodiversity conservation* and in addition, the need to promote and spearhead applied research to support the priority themes. In the document, fire management, research on *Criteria and Indicators*, processing and marketing of non-timber forest products need *cross-border* or regional attention.

A budget for projects to address the priority themes of *US \$ 5.4 millions* has been proposed. This should however be considered as a guideline amount for an envisaged 4-year programme of technical co-operation.

2.0 Background

(I) National economy and major development goals

Namibia has a total land mass covering an area of 830,000 square kilometres, of which an estimated 16% is covered by arid deserts and the rest characterised by arid or semi-arid savannas (64%) and woodlands (20%). These ecosystems support four major natural resource based industries namely, mining, livestock, fisheries and tourism. Indeed, these natural resource industries in addition to some limited cropping in the northern half of the country are the mainstay of Namibia's estimated 1.7 million people, despite having the distinction of being the driest country in the Southern African Development Community (SADC). Since Independence in 1990, the new government has spelled out development objectives and targets for the country in an official document known as the **National Development Plan Number 1** of Namibia (**NDP1**) which is now undergoing a mid-term review. This plan was meant to solve new development issues as the majority of Namibians who were formerly ignored and served mainly as semi-skilled and unskilled labour had to be brought into the mainstream of economic activities and the public service after independence. The political expectations of the formerly disenfranchised majority and the aspirations of the new leadership no doubt generated the following development goals at Independence:

- Reviving and sustaining economic growth
- Creating employment
- Reducing inequalities in income distribution
- Eradicating poverty

Considering the above challenging goals, the development objectives have been expectedly based on economic, social and political principles to realize them.

The **economic aspects** are aimed at the following objectives and activities:

- To enhance and carry out a top-priority human resources development programme
- Expanding the role of the private sector and foreign investment into the national economy
- To maintain an inflation rate not exceeding her immediate trading partners
- Liberalisation of exchange controls
- Improving the status of food security
- Diversification of import sources and export markets to expand trade with more countries and achieve competitive prices
- Specifically promote productive sectors with potential for growth - fisheries, tourism, agriculture, mining and manufacturing.
- Promote appropriate science and technology

To realize the **social objectives** of development, the government is committed to undertake to:

- Reduce population growth rate, increase life expectancy and increase literacy to 80% by the year 2000.
- Promote sport and culture

On the political front the new government aspires to:

- Reduce regional imbalances in trade and access to natural resources
- Support and encourage increased participation of women, youth and other marginalised groups in the economic development activities in the country

It is also important to note that the government espouses the principle of sustainable development which tacitly reflects an article in Namibia's constitution which recognizes the need to maintain essential ecological processes and using Namibia's natural resources sustainably for its economic development.

The recent and ongoing activities in government such as the promotion of export processing zones, calls for more fiscal discipline in the civil service, rationalization and downsizing of the public service, promoting efficiency and effectiveness in government, all point to the fact that, the government intends to

- (1) maintain macroeconomic stability by strengthening monetary and public sector finance management and by consolidating fiscal discipline
- (2) improve the efficiency of the public sector by accelerating and streamlining reform in the civil service and public enterprises, and improving the delivery of infra structural services
- (3) enhance external and domestic competitiveness of the economy through further liberalisation of markets
- (4) address the social aspects of development particularly through targeted poverty interventions and increased access of the poor to social services and income generating resources..

(ii) *The resource base and its potential*

The forest resources in Namibia are characterized by the semi-open woodlands with an average canopy height of 15 metres which covers an estimated 20% of the land. Some estimates puts the total forested or high woodland area at 19 million hectares of which about 2.0 million hectares are commercially exploitable. Indeed, this is where extraction of timber from the major species of *Pterocarpus angolensis*, *Baikia plurijuga* and to some extent;

Burkea africana takes place. In addition to this, the *Acacia* savanna woodlands are gaining commercial importance as a result of a growing charcoal industry including mopane (*Colophospermum mopane*) ornamental roots harvested from semi-shrub mopane stands growing on rocky and hilly grounds in Otjiwarongo and Outjo areas of North-Central Namibia just south of Etosha Pan. At the moment, a forest inventory is ongoing and data from an area in West Tsumkwe Region dominated by the timber species of *P. Angolensis* and *B. Africana*. For *P. angolensis*, the merchantable volume per hectare is about 0.5 cubic metres per hectare. The total tree biomass is in the region of about 20 cubic metres per hectare. The figures suggest that any commercial harvesting ought to be designed to be of low impact to the timber species themselves and to the total biological diversity of the woodlands. It is worth mentioning that considering the categories of the economic contribution of the forest resources of Namibia to the national economy, the value from timber in relative economic terms is not quite high compared to construction of shelter, fencing for protection of food crops, energy, wildlife habitat important for tourism, wood carvings and other crafts.

(iii) Current and estimated future demand and supply balances

From recent studies, the consumption trends in the products and services from the forest resources will increase in the foreseeable future as income improves and population also increases in Namibia. Government policies such as poverty reduction and redistribution of incomes, and the promotion of foreign and private sector investment in manufacturing will increase the demand in forest commodities.

It is clear however, that Namibia will continue to source industrial timber from external sources. At the moment South Africa has a virtual monopoly in the supply of industrial timber and poles. It is however questionable whether Namibia is getting the most competitive prices of the supplied commodities as would be possible if other SADC countries were equally supplying Namibian Consumers. Namibia should source these commodities from elsewhere as well. The balance of payment situation in Namibia is still healthy as to allow it to source timber without foreign exchange problems in the foreseeable future. **Table 1** illustrates the trends in consumption of various products and services of the forest sector.

In summarising the situation, subsistence consumption of forest products will continue to rise more or less at the same rate with the increase in the share of the population with little or no cash income. On the other hand, the consumption of marketable forest products, and particularly industrial products, will continue to increase in the foreseeable future, as national output and income levels grow due to various Government policy measures aimed at increasing the rate of economic growth and ameliorating the prevailing inequitable income distribution.

The burden of satisfying the rising demand for forest products either as a result of subsistence consumption or due to increasing output and income levels, will have to be met by product supplies from domestic natural forest resources supplemented by imports and farm forestry products; since establishment of large scale plantations monocultures is not feasible.

(iv) Trade in forest products and services

The major forest commodities traded in Namibia include paper, timber for construction and joinery, paper, boards, fuel wood, charcoal, poles and wooden crafts.

The consumption of paper depending entirely on imports will continue its increasing trend with the government expanding the national economy to be supported by an equally expanding education programme. The trade in boards is also likely to increase with the expanding construction industry. However as prices continue to rise consumers may resort to alternatives.

Firewood consumption will increase as the rural population increases even though urban populations who will be more sensitive to fuel wood prices may go for alternative energy such as natural gas and electricity. It is therefore difficult to project increases in fuel wood demand simply with increasing urban populations for routine energy needs other than the occasional barbecue

The domestic charcoal industry is meant mainly for the European Export markets which is becoming a greater advocate for forest product certification. Namibia's capacity to influence sustainable management of the resource base will therefore be important in supporting the export market. At the moment, local consumption is a small share of the total production. However the domestic consumption will be directly related to the movement of households into higher income brackets namely, the middle to upper income levels.

The demand for treated fencing posts is met from South African imports. These are used in the fencing of commercial livestock farms, game ranches, industrial plants and other business premises. The increased construction in the north and the move to acquire private land which is normally fenced in will also increase demand for local and imported treated poles.

Wood carvings and other crafts are made in response to a demand created by tourism. Since tourism has one of the greatest growth potentials of all sectors, the demand for wood carvings will continue increasing. The management of the local wood resources is therefore crucial. Greater control of the raw material source should be linked to the deliberate improvement in quality as a crucial issue since better quality may help mitigate increased cutting of timber without even a significant decrease in income.

However, to concentrate on obvious tradeable forest commodities is also to lose sight of the more subtle, but equally important services from the forest sector. For example, the use of poles and branches for fencing or protection of cultivated fields during the growing season represents a huge domestic demand for wood directly contributing to food security. The conservation of woodlands by reducing deforestation improves wildlife habitats and conserves plant and animal diversity, all of which contribute to the ever-growing ecotourism industry

Table 1 Consumption Trends of Forest Products and Services in Namibia
Source: Namibia Forestry Strategic Plan, 1996.

Requirements	Trends	Driving force
Firewood	Increasing consumption in rural areas Urban consumption to increase at a decreasing rate Firewood exports to decline	<ul style="list-style-type: none"> • Subsistence economy • Possibilities of energy substitution due to changes in income • Government policy aimed at satisfying domestic needs
Charcoal	Increasing domestic consumption Indeterminate export trend	<p>Increased demand for <i>braai</i> in urban areas</p> <ul style="list-style-type: none"> • International requirement of forest products certification
Poles and posts	No changes in consumption of fencing posts on commercial farms Increasing posts consumption on farms in the Northern regions and national parks Consumption of poles to remain stable or grow in line with the expansion in the national economy	<p>Stagnant commercial agricultural production</p> <p>Possibilities of privatization of communal land and intensive management of national parks</p> <p>Telephone company switch to optic fibres</p>
Ornamental products	Increasing demand for carvings Increasing demand for mopane roots	<p>Expanding tourist industry</p> <p>Enhanced product quality and marketing</p>
Farm implements	Increasing consumption of farm implements	Share of the rural economy in gross domestic product
Sawnwood	Gently rising consumption	Changes in national output and income levels, Government housing policy and relative price level of substitute materials
Boards	Gently rising future consumption	Expansion in the construction and housing industry, and relative price level of substitute materials
Paper	Increasing future consumption	Expansion in national output income levels and education
Non-wood products	Increased future consumption	Policy incentives to encourage small scale processing activities
Recreation and ecotourism	Increasing future consumption	Expansion in tourism industry and human recreation
Environmental services	Increased flows of services are expected with improved management	Sustainable management of natural forests

There is local trade in non-timber forest products such as mopane worms, indigenous fruits such as *Berchemia discolor* and *Strychnos* species, herbal medicines, thatch grass and palm fronds for weaving. These products may have significant economic value in localised economies but they unfortunately have not been properly assessed. Marula fruit has economic value for its traditional use to make traditional juice and its nut as an oil for cooking but unlike

B. discolor, it is normally harvested for domestic use rather than formal trading.

For mopane worms, there is already a local market and in addition it is rapidly becoming an exotic dish for the curious tourist. However, care must be taken to conserve the remaining pockets of relatively high mopane woodlands which provide its ideal habitat. It has been reported that mopane worms have virtually disappeared from the now heavily populated regions of Omusati, Oshana and Oshikoto because of habitat loss.

Provided that there is proper quality control and market promotion of the two major indigenous fruits; *B. discolor* and *Strychnos* a potential local market exists since since there is a growing urban elite with roots from the communal areas.

(v) *Policies and institutional settings*

The current forest policy which was adopted in 1992 has the standard features expected of a forest policy in that it provides the basis for legislation to confer authority to government to control and regulate harvesting and the movement of forest products. It also espouses sustainable management principles by declaring the commitment of the Government to conserve its representative forest ecosystems, increase tree cover and even declare new forest reserves. Furthermore it calls for the provision of information regarding the national forest resource through inventories, maintenance of a national database, extension, research and education. All these should be done within the context of contributing to the national welfare.

The policy document though it contains all the mundane issues in modern day forest practice, has been criticized for being too encompassing and gives an inordinate amount of responsibility to the Central Government in the management, protection and promotion of forestry. In it, are no clear mechanisms for public participation in the face of today's vocal and assertive rural populace who want to take control of the natural resources occurring in their midst. Hence, the new Forestry Strategic Plan of 1996 suggests the means necessary to promote its implementation and in fact calls for the review of the 1992 National Forest Policy itself. The policy means which should also be viewed as policy incentives include; **public ownership and operation, public regulation** of the use of private forests, **public stimulation, guidance and assistance to private forest management** and promotion of the private implementation of forest policies. The current Directorate of Forestry has been called upon to seriously adopt some of these incentives.

One should note that policies in other sectors and especially local and regional government, lands and agriculture can contribute positively to forest management. A recent development in local government is the **policy of decentralization** which is meant to give more responsibility to the regions to plan and implement and monitor development projects, in addition to becoming more responsible in the management of their natural resources. Much as this policy will depend on qualified planners and government section heads in local regions of which Namibia is still seriously short, the policy is definitely a worthwhile one which must be implemented systematically and be seen as a strategic choice for the empowerment of hitherto

ignored communal areas.

The current **Forest Act of 1968** which is being reviewed can only be considered as a major improvement since the current **Draft Forest Bill of 1997** recognizes the rights of communities to identify forest resources they can claim to be theirs and legally declare them **community forest reserves** or forest management areas. In addition there is provision for local leaders being appointed and recognized as honorary forest offices. These are designed to attract public interest and to confer rights linked to their responsibilities to manage forest resources for their direct and indirect benefits. It is hoped that the bill will be accepted by parliament this year and drafted as the new forest act. The present and future revised forest legislations are complemented by the **Nature Conservation Ordinance of 1975** as far as the conservation of nature and hence biodiversity, are concerned. The act is administered by the Directorate of Resource Management in the same ministry as forestry and can be used to control the illegal harvesting of protected plants which includes Namibia's key indigenous timber and fruit or nut producing tree species. The activities of Resource Management inasmuch as they protect wildlife habitats within National Parks, are also important in maintaining forest or woodland ecosystems. The **new policy on wildlife conservancies** and the amendment of the Nature Conservation Ordinance in 1996 to allow utilization of game for tourism and consumption on communally owned land will also confer protection of tree species which form an important component of wildlife habitats.

The **traditional authorities bill** may also clarify the role of traditional leaders and help minimize land use conflicts revolving around land allocation and tenurial arrangements which are often negative to, or prejudicial to forestry development. Along with this, is the proposed **communal land bill** which supposedly will confer **individual and group or communal tenure** as a policy incentive to promote investment in land.

With regard to **International Environmental Treaties**, it is noteworthy that Namibia which joined the United Nations as an independent state only in 1990, is already a signatory to, and has ratified most major environmental treaties or conventions. In 1992, Namibia acceded to the two Conventions on **Climate Change** and **Biodiversity** at the Rio Earth Summit. Another key treaty or convention is the one concerned with the **Control of the Trade in Endangered Species (CITES)** which Namibia joined in 1991. This convention was recently the cause of much anxiety and debate in the last June 1997 CITES Conference in Harare Zimbabwe, over the proposed sale of ivory stocks by Namibia, Botswana and Zimbabwe. It also acceded to the **Convention for the Protection of the Ozone Layer** in 1993, the **Wetlands Convention** in 1995 and most recently, it ratified the **Desertification Convention** in 1997. The activities on Combatting Desertification are essentially multi sectoral even though there is a National Committee to Combat Desertification co-ordinated from the Directorate of Environmental Affairs which is a sister Directorate to Forestry in the same ministry. The **Basel Convention** on the trans-boundary movement and disposal of toxic wastes, is yet another treaty which Namibia is considering acceding to.

(vi) *Cross-sectoral linkages*

In Namibia development led by government agencies tends to be sectoral as in many countries. The irony is that these days, everyone recognizes the need for cross-sectoral or inter-sectoral linkages in policy making, review and legislation. This would necessarily be followed by cross-sectoral planning especially in the land use sectors of the National Economy. Unfortunately the creation of separate ministries to give focus on the development of respective resources is in itself an acknowledgement of the sectoral nature of development. Sectoral territoriality is therefore a never ending constraint that must be management to facilitate the smooth running of field based programmes which despite their sectoral origins, are often aimed at the same people, usually farmers and other rural dwellers.

Namibia's strategic plan therefore calls for coordination of forestry development with other sectors from the national to the local level to ensure a broader participation of all stakeholder government agencies, local government and the local communities themselves. The justification for this lies in the fact that despite the obvious tradeable forest commodities, there are other subtle, but equally important services from the forest sector. For example, the use of poles and branches for fencing or protection of cultivated fields during the growing season represents a huge domestic demand for wood directly contributing to **food security** normally perceived to be the domain of the Ministry of Agriculture. The conservation of woodlands by reducing deforestation improves **wildlife habitats** and conserves plant and animal diversity, all of which contribute to the ever-growing **ecotourism industry**. These links are the reality and yet they enjoy little if any recognition.

Particularly, a **strategic plan task force** has been recommended. It is constituted by all Directorates of the Ministry of Environment and Tourism, Lands, Agriculture and Regional & Local Government, Planning, Mines and Energy.. This body will be chaired by the Permanent Secretary, Ministry of Environment and Tourism.

At the regional level, the **Regional Governor** will chair a forestry coordinating body composed of the regional Chief Forester, representatives of land boards, community development, NGO's, the private sector and the parastatal.

(vii) Sectoral revenues and financing

Revenues from the sector

It is not an easy task to depict revenues from the forest sector in Namibia as it would be in countries with industrial plantations, and/or large-scale commercially logged natural forests with known production and sales estimates. Despite this, an attempt was made during the strategic planning exercise to estimate the relative economic contribution of forest resources in the Namibian economy. Timber ranked relatively low compared to domestic energy, ecotourism and crop protection. **Table 2** at the end of this section depicts the situation.

Revenue accruing to private firms trading in various wood and wood products is not available. It is possible with better data collection to estimate these for products such as charcoal,

mopane roots and crafts through our normal permit records.

The direct revenue collected by the state from timber extraction is about N\$500,000.00 which is an insignificant proportion of the Directorate of Forestry's recurrent budget of N\$11,000,000.00. However with the introduction of new product tariffs and permit fees, the Directorate hopes to collect and contribute an estimated N\$2,000,000.00 or 20 % of our current recurrent budget to the exchequer.

The Directorate of Forestry estimates the current total **economic value of exploited forest resources to be about N\$1085.2 million per annum.**

Table 2 Estimated Annual Economic Value of Forest Resources
Source: Namibia Forestry Strategic Plan, 1996.

Product	Main species	Annual value (million N\$)
Construction poles	Mopane	383
Tourism	Ecosystem	218
Fences for crop protection	Mopane	175
Firewood	Mopane, <i>Acacia spp</i>	131
Medicine	Various species	31.5
Kraals	Mopane	31
Charcoal	Various bush invaders	22.4
Crafts and implements	Various species	21
Mahangu baskets	Mopane	12.4
Goat forage	Various species	9.5
Fencing poles	Mopane	6.6
Food	Marula oil	4.6
Basketry	<i>Hyphaene spp</i>	4
Commercial logging	<i>Pterocarpus, Baikea</i>	2.4
Mortar and pestle	Various hardwood	1.5
Beverages	Various species	1.5
Ornamental roots	Mopane	1.1
Carvings	Various species	1
Mopane worm forage	Mopane	0.5
Food	Mangetti kernels	0.2
Total Economic Value		1058.2

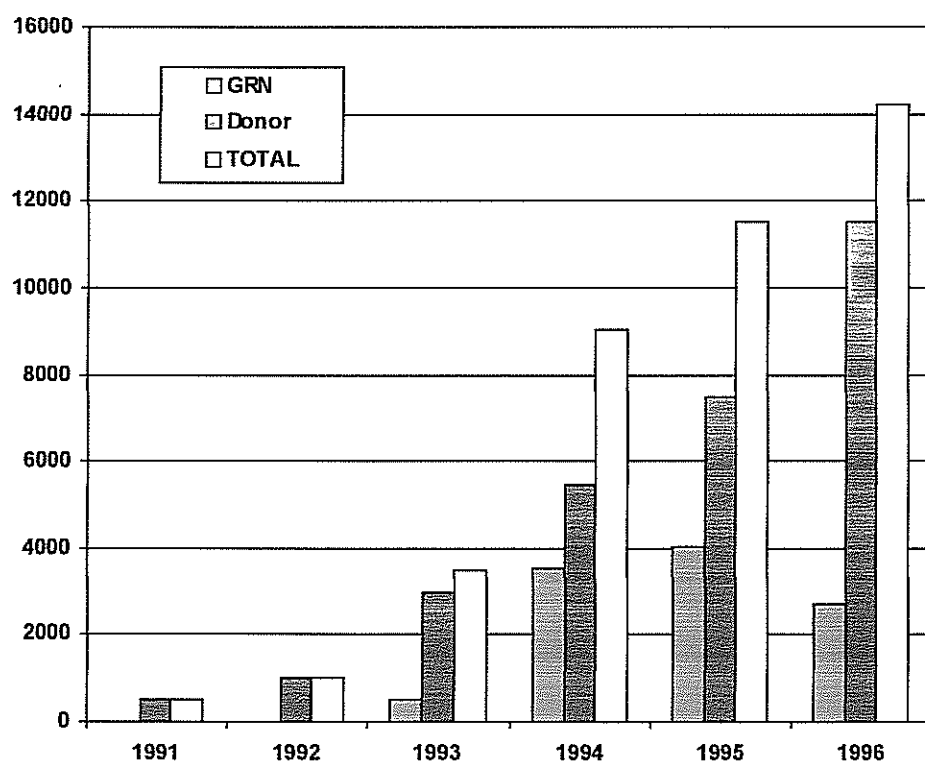
Financing

The financing of developments in the forestry sector by the Central Government is in the form of allocations for recurrent expenditure on the one hand and capital expenditure for purchases of major equipment and construction, on the other. These budgetary allocations are

supplemented by the international community. So far, the international community does not fund recurrent expenditure but only the development budget, of which they contribute 64% of the total. The development budget on the part of government is used to purchase capital goods such as vehicles, computers, field equipment and for the construction of offices, laboratories and even residential quarters since forestry activities had not been funded significantly before independence. The International Community spend almost half their allocation on the remuneration packages of their technical experts and the rest purchases some equipment, vehicles to support their technical experts, training workshops and seminars. The need for foreign technical experts is justified because of the lack of technical skills in forestry, especially at the professional levels in Namibia. Despite the obvious need, the international community is reluctant to fund construction. Figures 1 and 2 illustrate the increasing trend in development spending by both government and the donor community. This is because the Directorate of Forestry has had to increase capital spending to facilitate its new programmes and staff, and is slowly building its capacity to absorb donor funds. In any case, the directorate has to allocate match-funds for each donor project funded.

Figure 1 The share of Treasury and International Community funds in the total Development Budget of the Directorate (N\$ thousand constant 1990 prices)

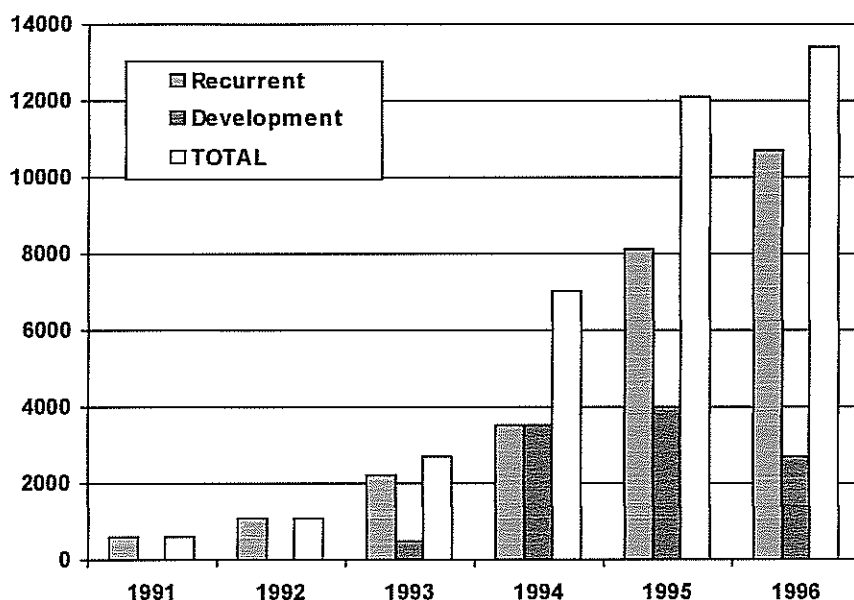
Source: Namibia Forestry Strategic Plan, 1996.



Treasury budget allocations. Treasury budget allocations to the Directorate are earmarked for financing development and recurrent expenditures. Between 1991 - 1993, all budget allocations to the Directorate were earmarked for recurrent

expenditures only. Allocations for development expenditures started in 1994. The trend in the share of funds earmarked for development and recurrent expenditures in the total budget allocations to the Directorate is depicted in **Figure 2**.

Figure 2 Development and Recurrent Expenditures from 1991-1996 (thousand N\$ constant 1990 prices)
Source: Namibia Forestry Strategic Plan, 1996.



Among donors, Finland is the leading donor providing approximately 31 % of the total international community budget support to the forestry sector. In addition, Finland supports forestry training at Ogongo Agricultural college, and offers scholarships to Namibians through its support to the SADC programme..

It is hoped that donor support will now support a programme approach to development as elucidated in the strategic plan and not according to their whims and latest topical issues.

(viii) Stakeholder Analysis

1.5 Stakeholders in forestry development

The achievement of the desired goals of managing Namibian natural forests, is the responsibility of the stakeholders who organise development efforts in the forestry sector. There are two important groups of stakeholders in the sector namely; forest resource users

and institutions that provide support for the implementation of development programmes.

Forest resource users

In the new National Forest Policy of 1992 and as expected in any revised version, the Governments of Countries all over the world have accepted even if grudgingly that no grand plans for forestry development and especially sustainable use and conservation do fail if, the interests of forest resource users and especially small scale users and forest dwelling communities are not built into management programmes. Usually, the primary users are farmers and local communities who for a long time have exploited, and continue to exploit the forest resources in order to satisfy their need for domestic forest products. The private sector also relies on the forest resources for its supplies of wood that it processes further into consumer products. Non-wood products associated with the conservation and management of the natural forests constitute a potential supply of raw materials to the private sector small scale income generating activities. Wildlife held within and supported by forest resources is an important source of human recreation, which also provide a source of income generation to private investors.

Government

The Directorate of Forestry is the lead public forestry institution charged with the responsibility of forest policy making and implementation. Therefore, the Government is an important stakeholder with the commitment to provide financial resources to the Directorate that will enable it to carry out policy implementation through; legislation, development programmes, provision of technical expertise in forest planning and management, research and resource assessment.

Non-governmental organisations

With the present spate of democratisation among formerly ignored rural communities, the role of non-governmental organisations in the forestry sector has markedly increased especially in countries where economies have collapsed. Their influence in the forest sector is rather weak in Namibia compared to the wildlife sector where they are eager to follow up on the touted success of community based wildlife management projects in Zimbabwe. Their influence is through strengthening rural organisations and building up the confidence of the rural people in finding independent solutions to their problems. Their presence and their advice tend to be more acceptable because of their mass-consultative approach and their perceived empathy with the people's problems and needs. Some of the roles that can be found for non-governmental organisations are: advocacy of the rights of the rural people, community organisation and mobilisation, capacity building and skills development, participatory and action-oriented research and extension, access to resources and direct participation in forest conservation and management.

International community

International community provides financial support that complement Government budgetary allocations to development programmes in the sector. This support is used mainly to sponsor

forestry development projects. International community possession of financial resources gives them the ability to influence, to a certain degree, the decision process in the forestry sector. **However, it is important that international community influence does not lead to the preparation of plans and programmes that reflect their demands which make aid conditional upon them.** Planning and implementation of programmes in the sector should reflect national stakeholders own willingness to assume responsibility for forestry development. The International Community produce a large share of global pollutants and in most cases do not have ample opportunities to increase their total forest cover. It is important that they therefore support forest conservation projects and even plantation forestry projects since they provide valuable carbon sinks with global benefits. In addition the global benefits underpinning calls and a convention on biodiversity conservation is enough justification to solicit commitment by the international communities to provide funds to sustainably manage and otherwise projects areas of endemism and rich animal and plant diversity found in the developing world.

Table 3 Stakeholders in forestry sector development and their expectations

Stakeholder	Expectations
Farmers (particularly women)	<ul style="list-style-type: none"> • Firewood as a source of energy for cooking • Food collected from forests as a source of nutrition for good health • Basketry and wood tools for domestic chores
Local communities	<ul style="list-style-type: none"> • Poles and posts for building and fencing • Medicine for good health • Fodder for livestock • Beverages
Non-governmental organisations	<ul style="list-style-type: none"> • Local communities participation in forestry management • Women empowerment through participation in forestry activities
Private enterprises	<ul style="list-style-type: none"> • Raw materials for industry • Income generation opportunities from forests environmental services
Government	<ul style="list-style-type: none"> • Contribution to rural economic development through job creation and income generating activities • Environmental conservation
International community	<ul style="list-style-type: none"> • Contribution to rural economic development by complementing Government development programmes • Conservation of biodiversity and restriction of potential climate change

3.0 Main national issues and priorities for co-operation

As explained in Namibia's Forestry Strategic Plan, the main national issues in forestry development which are also the basis for technical cooperation are hereby categorised under the three main issues of **Production, Protection and Participation**. These three issues in order to tackle them require appropriately trained Namibian personnel in **an institutional framework relevant to today's development objectives**. The Strategic Plan of 1996 describes these as challenges to Sustainable Forestry Development.

(I) Production

Production on the Namibian scene revolves around the **management of natural forests** which is quite constrained at the moment by factors such as the lack of appropriate silvicultural technology, skimpy inventory data on the growing stock, under exploited potential for income generation in recreational use and ecotourism. Furthermore, the status of forestry on farm lands is hindered by a lack of culture of tree growing and undeveloped product processing and markets. Plantation forestry though there is some potential in the moister Eastern Part of the country is largely constrained by short planting seasons higher than normal evapotranspiration rates.

With respect to the **supply of environmental benefits**, poverty and low income levels is a major constraint, since poor farmers will expectedly ignore values such as biodiversity and watershed conservation if faced with no alternative options but to clear forests and woodlands for food production.

Linked to production is the **processing of forest products**. Despite the scarce timber resources of Namibia, the saw milling sector does not use appropriately trained people and equipment. Hence the rates of recovery after saw milling is barely above 40%. Worse still, the government has been operating saw mills using subsidized raw materials and at the same time running the saw mills inefficiently. On the wood carving industry, efficient and conservative use of the available wood and the marked improvement of workmanship are of utmost importance. Even then, marketing channels need to be improved for groups of carvers and other craftsmen. There are also possibilities in the production or manufacturing of non-wood forest products. In this regard the fruit and kernel of Marula (*Sclerocarya birrea*) and the nuts of *Schinzophyton rautanenii* (mangeti) have market potential as industrial oils. Other indigenous fruits and nuts also have potentially significant domestic markets if propagation, storage, promotion and marketing are properly done.

To attend to the issues of production, the following solutions which the strategic plan has alluded to, are listed herein:

- ***The sustainable management of the natural forests requires breakthroughs in research to provide silvicultural information***

undertaken either domestically or imported from countries with similar conditions.

- *To exploit income potentials in recreation and ecotourism will require requisite public investment in infrastructure (roads, water supply, telecommunication, etc.) and design of incentive schemes for private sector investors.*
- *Promotion of farm forestry will require the design of land tenure that will make the farmers in the communal areas the de facto managers of the land they farm, and market incentives to encourage long-term investment in tree growing.*
- *There is need to undertake provenance trials to establish appropriate species for plantation forestry that could make the country self-sufficient in selected plantation wood products.*
- *The challenges these social supply problems pose require allocation of international resources to conserve biodiversity and prevent global warming, and domestic resources to ensure the provision of local forest environmental benefits.*
- *To increase efficient management and utilisation of forest resources, Government should divest state-run sawmills (that generally benefit from subsidised access to raw materials and tax exemptions) to the private sector.*
- *Increased benefits from value added require Government assistance through creation of an enabling frame work for the ornamental products by; expanding markets and strengthening capabilities along the marketing chain through training, research and technology transfer.*
- *To realise the income potential of non-wood products, extractive reserves (to which local people have sole access rights) should be established in areas with special potential for producing sustainable yields of economically important non-wood products.*

(ii) Protection

The issues under protection can be enumerated as follows:

- the effect of uncontrolled and accidental fires,
- the emerging population pressures on the forest resources,
- the inability of the traditional state forest reservation to protect forest resources,

- inadequate partnership between the Government and non-governmental stakeholders in forestry development,
- ill-defined forest policy that constrain access to and the use of forest resources by people dependent on them,
- policy failures outside the forest sector.

The solutions to the protection issues are also listed herein as follows:

The occurrence and severity of uncontrolled and accidental forest fires has to be reduced, and the policy of burning off patches of woodlands to improve hunting grounds should be changed to one of using fire only as a controlled tool under specific circumstances.

To pre-empt the negative impacts of population pressure on forest resources will require two measures: a) increased investment in health and education services to accelerate the democratic transition. b) containment of large-scale migration into environmentally fragile areas by carefully planning investment in infrastructure, and by reasserting the land and resource use rights of local populations in return for co-operation in forest protection.

The reservation of land for state forest management should take place only when communal and private ownership: a) is unwilling or economically unable to give the land continuing and productive forest management and b) cannot conserve special public interests like watershed and biodiversity conservation, which are important in many forest areas.

By encouraging and aiding the participation of local communities and the private sector, the Government through the Directorate of Forestry, will be performing one of its most important functions as a facilitator of the sector activities.

The management of forests for the benefit of the welfare of the people should be the raison d'etre for their protection.

(iii) Participation

The topical nature of **participatory forest management** is simply an aspiration by society to have a greater say in how forest resources are managed and the sharing of the benefits of a managed forest resource. Some people have however misunderstood it in their endeavour to realize their own feeling of importance, to suggest that traditional foresters can no longer manage forests and yet there is no evidence that without the technical knowhow it require to manage forests, there has been any success story of forestry management with expertise from outside the sector. The issues of participation have to do with:

- Forest policy formation
- Forest policy implementation

- Public management of policy implementation
- Co-ordination of the activities of stakeholders in forestry development

Policy formation today should not be the preserve of department officials and parliament, but must necessarily include a wider range of opinions to reflect the diverse interests that have the potential or do impact forestry negatively or positively. Its implementation thereof, should also conduct a stakeholder analysis to clarify the roles of each group and consider if necessary, the policy incentives to get the interest groups to participate. In Namibia, the need to consider the role of traditional authorities and community-based structure in forest and wildlife management is now well recognized.

The responsibility of the Non-Governmental Organizations in strengthening community organizations and channelling aid directly is necessary and gaining currency, provided the NGO's are not perceived or do not conduct themselves in a manner akin to usurping the powers of Central Government. The role of the private sector in developing markets and processing capacity will go along way in stimulating income generation from both timber and non-timber forest products. ***The International community as much as they are still keen on carbon sinks, oxygen sources and biodiversity should support sustainable management of forests by directly funding forestry development projects consistent with these objectives and also press upon their governments to be more responsive and sensitive to trade policies in the developed world which directly and indirectly contribute to deforestation or degradation.***

The Government's role in planning, policy formation, resource assessment and monitoring and legislation are still important.

(iv) The Programme Approach to Development of Namibia's Forestry Sector

Having analysed the national capacity to meet the needs in forest commodities and services and having elucidated the major issues of forestry development in Namibia, the Strategic Planning Exercise argued for development in four programme areas. These areas are quite consistent with the arguments which have been presented under the broad issues of production, protection, participation and the underpinning institutional framework needed to address them. The four programme areas are :

- **Public sector capacity building**
- **Community level management of natural forests**
- **Farm forestry**
- **State management of environmental forestry**

The objectives and expected results of these programmes are depicted in the 4 tables adopted from the Strategic Plan of 1996.

Table 4 Public Sector Capacity Building Programme

Source: Namibia Forestry Strategic Plan , 1996.

Component	Principal results	Responsible stakeholders
Policy revision and preparation of legislation	Government approved forest policy and legislation	<ul style="list-style-type: none"> • DoF
Design and implementation of DoF organizational structure	Efficient organizational structure implemented	<ul style="list-style-type: none"> • DoF • OPM
Development of competent human resource base	Adequate qualified local staff available	<ul style="list-style-type: none"> • MAWRD/Ogongo • DoF
Development of sector-wide management information systems	Availability of information for forestry planning and operational management	<ul style="list-style-type: none"> • DoF
Revive research division	Availability of an ideas base for implementation forestry programmes	<ul style="list-style-type: none"> • DoF in cooperation with specific end users

Table 5 Community-level management of natural forests
Source: Namibia Forestry Strategic Plan , 1996.

Component	Principal results	Responsible stakeholders
Communal forest land zoning	Decentralized forest land use plans	<ul style="list-style-type: none"> • LUEB • MET (DoF) • Local communities
Formulation of forest management agreements	Demarcation of sharing of natural forests management responsibilities	<ul style="list-style-type: none"> • MET • NGOs • Local communities
Design of participatory forest incentive scheme	Increased local involvement in forestry activities	<ul style="list-style-type: none"> • DoF • NGOs
Implementation of community-level forest management pilot projects	Lessons for future implementation	<ul style="list-style-type: none"> • DoF • Local communities • NGOs

Table 6 Farm Forestry Programme
Source: Namibia Forestry Strategic Plan , 1996

Component	Principal results	Responsible stakeholders
Design of farm forestry incentive scheme	Expansion of tree stocks on agricultural land	<ul style="list-style-type: none"> • DoF • Ministry of Finance • NPC
Institutionalization of farm forestry coordination and collaboration mechanisms	Effective tree growing on agricultural land	<ul style="list-style-type: none"> • DoF • MAWRD • NGOs • Farmers (women)
Development of national tree seed center	Supply of high quality seed for farmers seedling production	<ul style="list-style-type: none"> • DoF • NGOs • MAWRD
Employment of well trained extension field officers	Effective tree growing on agricultural land	<ul style="list-style-type: none"> • DoF • MAWRD • NGOs

Table 7 Environmental Forestry Programme
Source: Namibia Forestry Strategic Plan , 1996.

Component	Principal results	Responsible stakeholders
Demarcation of national strategic forests	Watershed, biodiversity and nature conservation forests established	<ul style="list-style-type: none"> • MET • LUEB
Undertake strategic research	Information on management of strategic forests available	<ul style="list-style-type: none"> • DoF • SADC-FSTCU • CIFOR
Development of silvicultural management regimes	Proven management techniques established	<ul style="list-style-type: none"> • DoF • DRM
Determination of local communities participation in environmental forestry	Partnership with local communities	<ul style="list-style-type: none"> • DoF • DRM • NGOs • Local communities

4.0 Compatibility of National Priorities with EC Principles

The objectives of the Forest Policy of 1992 are generally consistent with the policy, social, economic and environmental principles contained in the two EU documents; *Forests in Sustainable Development Volumes I and II of 1996 and 1997* respectively. In summary, the objectives cover the maintenance of environmental stability, restoration of ecological balance in selected critical areas, conservation of representative ecosystems and their biodiversity. On issues of participation, the policy is explicit on the participation of rural communities with specific reference to women. Furthermore it recognizes the need to put forestry practice within the wider context of land use and supports the role of the private sector in the efficient utilization of forest resources and calls for the need to contribute to food security. It goes further to give government the responsibility to provide information on the extent and state of the forest resource, to educate professionals to manage forest resources and also to educate the public through information.

The **Namibia Forestry Strategic Plan of 1996** also shares the EU Forestry Principles as explained separately under the four groupings..

(I) Policy principles

- Considering strategic processes and seeking compatibility with National /Regional Forestry Programmes
- Considering forests in a broader pattern of land use
- Respecting customary rights and ownership of land and resources

One positive element in the Namibian Forest Sector, is that a strategic planning exercise was used to define development priorities in consultation with other government agencies, non-governmental organizations and local leaders in order to put forestry development in the national context and in consideration of other land use options. The Ministries of Lands, Agriculture, Local government and the Directorate of Environmental Affairs, all participated in the process. The plan itself has recommended the review of the current policy in a broader participatory context and has called for a shared implementation among government agencies, local government, NGO's and communities in the public implementation of the forest policy.

(ii) Social Principles

- Understanding social and cultural features and responding to perceived needs
- Encouraging participation of all stakeholders in the development process and seeking to empower local communities
- Seeking to reach poor and disadvantaged populations and seeking to integrate them into development
- Recognizing gender roles and establishing equal participation and benefits

The strategic plan recognizes the limited participation that the old legislation and forestry practice encouraged. The programme termed "Community Level Management of Natural

Forests”, espouses the social principles contained herein. The Farm Forestry Programme also wishes to integrate tree management on farm land as long as there is an economic incentive to do so. The local level coordination of forestry activities recognizes the role of local institutions. In addition, the present **draft legislation** provides for the identification and legal recognition of “**community forest reserves**”, to be managed for their direct benefit and may allow greater authority to **traditional leaders** by way of being appointed honorary forest officers. The plan also calls for the promotion of income generation from forest products such as carvings through quality improvement and the development of marketable industrial oils from nuts. This is both a social and economic incentive that will support sustainable forestry.

(iii) Economic Principles

- Promoting the private sector
- Determining and valuating environmental costs and benefits

The participation of the private sector is the main reason why the Directorate of Forestry has opted to divest itself from running saw mills which have been running inefficiently. In addition, the processing of other wood-based and non-wood products are better done by the private sector. Currently the charcoal and mopane roots industry is run entirely privately and the government only oversees the harvesting of the raw materials. In this particular regard, the Directorate is keen to try certification as a tool to deter the unsustainable harvesting of wood for charcoal and mopane roots. This is consistent with EU theme 6 on certification.

(iv) Environmental Principles

- Avoiding harmful effects including biodiversity
- Enhancing the environmental resource base and maintaining biodiversity for future generations

The environment is sufficiently covered in the 1992 forest policy and the government recognizes the need to still conserve and manage representative forest ecosystems. A whole programme on Environmental Forestry is in the strategic plan along side community-based management areas and forests on farm land.

To implement all the three programme areas, it is necessary to build an appropriate institutional framework, to provide proper technical and professional education in forestry and to build an information base for management based on resource assessment and applied research. Fortuitously, the recently concluded forest cover mapping project and the ongoing forest inventory will provide invaluable data on the country’s forest resource. All these are contained in Namibia’s Forestry Strategic Plan, which is incidentally and timely enough, in its first year of implementation. Institutional capacity building is very much consistent with themes 7, 8 and 9 and crucial for the realization of the aspirations of the strategy and the EU principles and themes.

(v) Ongoing programmes and projects

In line with the programme areas identified and described in the strategic plan, the Directorate of Forestry has embarked on a number of co-ordinated projects in an attempt to implement its programmes. These projects are largely donor-funded with the Government of Namibia funding the recurrent budget and a percentage direct cash contribution as counterpart funds to donor budgets. The projects are listed herein in **Table 8**.

The community-level and the environmental forestry projects funded by Finland and Denmark are implemented in a total of 5 regions in the Northern parts of Namibia. These are the regions of Omusati, Oshana and Ohangwena in North Western Namibia and Caprivi in the North Eastern Part. The idea is try to implement inter-related projects under community, environmental and farm forestry programme areas in each region. Underpinning and supporting these programmes will be information, policy, legislation and human resources development as aspects of institutional development. *However, it is apparent that forestry on farms and particularly agroforestry and the development or promotion of marketable forest products on farms and natural forests has not received attention in the ongoing projects.* Hence any cooperation should look at this closely and find ways of complementing ongoing projects.

Table 8 Current Projects addressing the major programme areas in forestry development.

PROJECT	DONOR	PROGRAMME
Policy Review	Finland, GRN	Institution Capacity Building
Technical and Professional Training	Finland, Australia, Denmark, Luxembourg and GRN	Institution Capacity Building
Institutional Management Systems	Finland	Capacity Building
Mapping and Forest Inventory Cooperation and Coordination	Sweden, Finland	Information/Capacity Building
Study on wood consumption	Norway	Capacity Building/Policy
Identification of Community Forest Reserves	Finland	Community level management
Development of Stand Management Regimes/Systems	Finland	Community level management

PROJECT	DONOR	PROGRAMME
Forest Management Agreements	Finland	Community level management
Community-based forest fire control	Finland	Community level management
Community Forestry and Extension	Denmark	Community level management
Identifying and setting management plans of strategic/conservation forests	Finland	Environmental Forestry
Rehabilitation of Mopane woodlands	GRN	Community level management
Marula plantations	GRN	Community level management & Farm Forestry
Afforestation	GRN	Farm Forestry

Deducing from the ongoing projects and what the strategic plan calls for, the main priority themes for cooperation are presented in **Table 9**:

Table 9 Priority themes for EU Support in Namibia

1.	Creation of forest resources (theme 4)
2.	Harvesting, processing, marketing and trading of timber and non-timber forest (theme 5)
3.	Sustainable management of forest resources (theme 3)
4.	Forestry related research (theme 8)
5.	Conservation of ecological systems and biodiversity of tropical forests (theme 2)

Even amongst the 5 listed above, themes **4, 5, 3** and **8** placed here in an **a descending order of priority** for EU support are considered the most important for any future cooperation and explained in section 7 of the document.

Specific Interventions that should benefit from EU support.

A listing of suggested specific interventions are provided here but more detail and justifications for each intervention are provided in section 7 of this document.

- On-Station Agroforestry Demonstration Trials
- Community-based Agroforestry Demonstration Plots
- Evaluation of Traditional Tree Management on Cultivated Fields
- Development of Tree-Annual Crop Agroforestry mixtures on riverine strips (Okavango and Zambezi)
- Fire Control
- Identification, development or adoption of alternative building or fencing materials to reduce pressure on existing woody resources.

5.0 Cooperation and Coordination

The modalities of co-operation and co-ordination is an important exercise in development planning and implementation for Namibia, both at the National and Regional Levels because there should be a priority of areas requiring urgent attention. Hence donor funded projects should be channelled through government and even NGO's to priority areas in which a rational analysis would show such a need.

In addition, the mode of cooperation and collaboration should be based on a well discussed and officially adopted development plan which should be respected by donor and lending institutions. This would mean that development programmes and associated projects should have their regional locations well described to avoid unnecessary overlaps.

Once a country has a clear and comprehensive plan, projects should then be zoned and the decision to fund a project should depend on its potential to succeed which is related to the recipient country's ability to provide competent counterpart staff and other infra structural provisions agreed upon prior to project signing and inception.

Cooperation among donor projects is desirable at the project planning phases in order to avoid potential overlaps. In addition, exchange tours of project staff to other projects is highly advisable. However the coordination of donor projects and their prioritizing should be the domain of a recipient government. It is important that the recipient government takes the lead and gives direction since a kind of unified "donor cartel" simply kills local initiative to think, plan and prioritize for themselves. This is an important factor of sustainability that most donors in their quest to influence how countries run their things, tend to forget.

6.0 Constraints to cooperation between Namibia and the EU

Another way of approaching the issue of constraints is to look at the challenges that Namibia's Government Forest Service, the Directorate of Forestry face in its operations. From these the major constraints can be derived. The constraints described are grouped into two categories; namely policy/institutional and operational ones.

(a) Policy / Institutional Constraints

The development of management programmes with virtually no baseline data on the resources to be managed (Even though resource assessment is currently ongoing)

Dealing with policies external to the forest sector but often having a negative impact on it. Examples are land settlement practices and agricultural expansion activities which often run counter to forest conservation principles but tend to override forestry because of their inherent appeal to proponents of **food security and poverty alleviation**.

The formulation of new appropriate and socio-politically acceptable policies or refinement of existing ones, to guide the forestry sector in view of continued government and donor interest in the sustainable management of natural resources and general environmental management.

The difficulties inherent in attempts to protect existing forest resources against uncontrolled / unsustainable harvesting, and also the destructive forces of fire.

Convincing other sectors involved in land management to appreciate the immense contribution of forestry to their sectors with a view to getting them to advocate for the sustainable management of forest resources and practice activities in manners not detrimental to forestry.

The development of income generating projects based on wood and non-wood forest products to alleviate rural poverty and demonstrate the need for forest management.

With regard to donor funded projects;

A general reluctance on the part of donors to incur capital expenditure to improve the institutional status of forestry in the regions despite the need to do so. The government continues to carry the burden for construction and equipping of offices and also residential quarters.

A habit of not seriously supporting income generating projects even at the pilot phases

(b) Operational Constraints

The adoption and actualization of the highly subscribed concept of participatory management of forest resources in the face of scanty local and regional experience together with the attendant confounding factors of land tenure, economic destitution

and reluctant bureaucrats. This tends to affect the direct implementation of field programmes.

A general lack of trained forestry personnel starting from the vocational to the professional levels of expertise.

The improvement of the skills of incumbent personnel without seriously impairing ongoing operational and development programmes.

A general shortage of adequately trained counterparts to donor personnel

Over-reliance on European experts whose personal tendencies may not be conducive to sustainable community-based forestry initiatives.

It is also true that land use planning even though it has been put on paper, has not been implemented at the local level. In this case the institutionalisation of the Land Use and Environmental Board (LUEB) and its eventual adoption and routine use will help coordinate land use activities in the regions.

7.0 Proposed Cooperation Strategy

This section should not just be a mere listing of objectives, specific interventions and their respective justifications, but also a commentary on how support should be delivered and targeted to needy areas of the strategic plan and also to particular regions or locations within Namibia.

In preparing this section, the strategic plan of Namibia has been fully considered. To date, the one programme area namely **farm forestry** has not received any attention so far both on the part of Namibia and other donors. This is because of Namibia's arid environment and the limited local experience and expertise in this area. In neighbouring countries as well, donors tend to show preference in the other three programme areas of conservation, community involvement and capacity building.

In this document, proposals have been made after considering various scenarios regarding the channelling of new funds. These are:

- (a) Duplicating programmes which are already being implemented but in pilot areas which are not yet covered by any existing donor activities.
- (b) Strengthening ongoing activities in given areas by broadening the scope of the ongoing project or by merely giving funds for the continuation of successful programmes or those of proven feasibility.
- © Initiating the implementation of Programmes which are not funded so as to build a basis for the trial and adoption of new or well known technology.

(I) Objectives of cooperation

General Objectives

- (1) To increase the benefits of maintaining forest and tree resources through inter-sectoral efforts, by using them as tools for income generation, through activities such as resource management for production, product processing and marketing in order to improve food security and alleviate poverty.
- (2) To conserve the biodiversity, ecological services and productivity of Namibia's forest resources in a sustainable manner within the framework of shared regional and global objectives of forest management, but without compromising the welfare of the local people dependent on the same forest resources.

The two objectives capture the ecological/environmental, social and economic principles of forest management.

Specific Objectives

- (1) To develop, improve and extend technology for the management of planted and naturally occurring trees on farm lands to help institute deliberate agroforestry and/or agro-silvopastoral practices in Namibia.
- (2) To develop income generating projects from forest products such as indigenous fruits, nuts and roots through research on resource production, processing, marketing, financing mechanisms and training in entrepreneurial skills.
- (3) To strengthen pertinent institutions with an influence on forest management through training and joint programme planning, in addition to developing supporting policies and legislation on important areas such as land and resource tenure arrangements..
- (4) To make sustainable forest management a part of the local and national debate on sustainable development of Namibia as an economy and promote the recognition by the public, of the value of forests in ecosystem protection and ecotourism development.
- (5) To assist in developing a system of fire management to protect and even help renew the forests and woodlands of Namibia.

(ii) Priority themes

In this subsection, all the five themes are described including their specific relevance to the forest sector of Namibia. Of these, themes 4 and 5 take priority and are classified as main themes. Themes 2, 3 and 8 are also important but for the purposes of this document, should be

considered supportive to the major themes proposed for support by the European Union.

Main themes

Theme 4: *Creation of forest resources*

The aridity of Namibia limits massive tree planting programmes even though it has the material resources to undertake such plantings. Despite this, there is at least the potential to create forest resources on already existing farm lands in a manner that will not interfere with the production of agronomic crops. In fact, it would increase the overall productivity of the land and enhance its ecological status. Trees on farm land are also likely to be taken care of better than those planted on communal lands as community woodlots or orchards.

The creation of forest resources will primarily depend on agroforestry plantings such as intercropping with nitrogen fixing species, indigenous fruit and nut tree species and the creation of fruit groves and woodlot around homesteads. In certain parts of North-Western Namibia, some farmers tend through protection and even pruning, pockets of natural woodlands normally dominated by mopane. At the same time, a number of woodlands are degraded especially on the commons where they are routinely overharvested for fencing croplands. Their well planned mapping and management through farmer participation schemes may need certain incentives. The desired end result of this will be well managed woodlands with various sizes of tree crops on the landscape; in effect, an increase in forest resources.

Currently, the Directorate of Forestry is undertaking an exercise in trying to raise marula plantations in the Oshikoto Region. To the extent that marula's economic worth will be increased through technology and marketing, this is likely to lead to the protection and deliberate planting of this traditionally important tree in Namibia, thus increasing the specific resource with its associated ecological benefits. The marula also has a significant natural distribution in the Kavango and Caprivi regions which may increase its management based on its economic value beyond its traditional users in the four regions of "Former Ovambo". In Caprivi, the marula fruit is not utilized in any significant way. The temporary waters which collect during the rainy seasons in the natural basins and waterways known as the "Oshanas" in Central North could also be harnessed to support dryland agroforestry production. Indeed, the Oshanas can be used to grow fruit and nut trees of commercial importance in addition to being used as temporary domestic water sources and fishing grounds.

The Caprivi, Kavango and Tsumkwe regions also have an untapped potential to increase the deliberate cultivation and management of indigenous fruit and nut trees such as *Berchemia discolor*, *S.rautanemii*, *Strychnos spp.*, *Garcinia livingstonii* and *Syzigium cordatum*. However, moisture limitations may hinder the widespread cultivation of such species. In this regard it is timely to turn to the status of Riverine Agriculture in Namibia. Unlike most dry countries which utilize riverine belts because of the availability of water for livestock and crop irrigation, riverine agriculture is not as exploited as one would expect. Sudan and Egypt have used rivers from time immemorial. A case is therefore made here for riverine agroforestry.

Riverine agroforestry is a strategy to harness not only flood waters for cropping but also

presents an opportunity to grow annual and perennial tree crops in such a way that at any one time there ought to be some crop cover other than **mahangu** millet which only lasts on the fields for the three months of the cropping season. The regions of Caprivi and Okavango are prime candidates for riverine intercropping which will involve food crops, fruit trees and boundary plantings of species which can provide poles and fuel wood from branches and twigs.

It is clear that under this theme the **participation or collaboration** from the **agricultural sector** and other players in rural development will be essential. Of particular importance are **farmers co-operatives, women's groups and other non-governmental organisations**. It is also important to note that investment in fruit tree and other forms of farm forestry is influenced by **tree and land tenure**.

Theme 5: Harvesting, processing, marketing and trading of timber and non-timber forest products

This theme which is related to the preceding one described above, describes an area in which Namibia has an opportunity to address poverty alleviation and also provide a motive for society to sustainably manage the resource base. It is also a theme that most donors have not given serious attention and yet it is crucial to sustainability of tree or forest management.

The processing requirements for **marula juice** to make liquors is now well known and has commercial application in the Republic of South Africa. However, **marula kernels** after decortication, produces an oil with properties that makes it have a wide range of **industrial and pharmaceutical applications**. Currently, an NGO is experimenting with ways to harvest, store and press the kernels for oil of a reasonably stable quality. It is reported that the technology for pressing to produce a consistent oil quality is what remains to be perfected. Its commercialisation will necessitate a look at its raw material production as described previously. The oil from **Mangeti Nut (*S. rautanenni*)** is also known and with proper promotion it may create a market given the present preference for natural products in certain quarters of our society.

The production and promotion of indigenous fruits will also create an internal demand of such products and provide some people with an income. For too long, Africans have passively sat by as their indigenous foods were cast aside in favour of exotic ones. There is need for a diversity of foods and Africa may surprisingly have a lot to offer.

Namibia also has *Acacia senegal* but of a subspecies that does not produce quality industrial gum. In Southern Africa, gum from *Acacia karoo* is used even though it is not as good as gum arabica from *A. senegal var senegal*. There is also a possibility of using gum from *Acacia mellifera sub-sp detinens* and being the major "culprit species" of bush encroachment in the rangelands of Namibia, its use in charcoal making and gum production can help offset its negative economic effects on livestock production.

In **traditional timber processing**, Namibia also needs to develop cost effective and cheap technology on maximizing outputs from the saw milling of its scarce wood resources. The recovery rates from milling are apparently below 45% and the utilization of branch wood is

almost non-existent. The presence of branch wood alone in the market and its promotion and demonstrated use will lead to a more efficient use of the available timber. It is also possible to overcome the difficulties in sawing *Burkea africana* through research. It produces a fine-grained attractive timber and its exploitation will definitely lead to a reduced pressure on the overexploited *P. Angolensis*.

The **wood carving** industry in Namibia is bound to increase in relation to the increase in tourism. However, the quality of wood carvings does not measure up to the standards in neighbouring Zimbabwe and Zambia. This should be taken seriously in that there is currently a massive influx of crafts from these countries selling at prices cheaper than Namibian ones. The sizes of say, carved pieces in Namibia and pricing may also not reflect the value of the raw material. The marketing of these products is slowly improving due to more exposure of the craftsmen to the world of commerce and also because of interventions by some NGOs. It is clear that **product quality, efficient use of available wood resources, pricing and marketing** are areas worth looking at quite seriously.

There is also a potential for the development of **small scale charcoal burning** and briquetting from the acacia woodlands in the commercial ranching areas. This is because the amount of bush encroachment on such farms can enable the harvesting of wood on a sustainable basis. At the moment, the improvement of small scale carbonising technology and a strong marketing support is necessary. In addition, safeguards against environmental degradation through a **product certification** scheme

Within this theme, it is important that the planned and rational use of **Indigenous Knowledge Systems** in production, processing and use of various trees and their products ought to be promoted since local knowledge has been for historical reasons relegated to so-called primitive and therefore not formally marketed.

Supporting Themes

Theme 2: Conservation of ecological systems and biodiversity of tropical forests

This theme is not proposed as a priority area for EU funding but is a component of our current cooperation with Finland to implement the conservation forestry as recommended in Namibia's Forestry Strategic Plan of 1996. It is however important to bear in mind that a developed farm forestry system and the creation of forest resources for economic benefits tend to reduce poverty and in turn promote conservation by reducing pressure on areas already identified for conservation. The theme has direct relevance in the proposed cooperation because it is based on nationally and globally shared objectives of maintaining essential ecological processes for present and future generations. Namibia has some interesting types of dry woodlands, some of which are on their extreme western distribution limits such as Mopane in Etosha and Parts of the Kunene Region. These woodlands and wooded savannas are home to wildlife populations and indigenous plants some of which are endemic to the country and are natural "gene banks" in a country where drought is recurrent. This makes their ability to recover lost vegetation from natural seed and other propagules quite ecologically important.

Other than the woodlands, Namibia has unique centres of endemism as exemplified by the Namib and the Karoo biomes which are endowed with unique **succulent plant species** and also some animal species. Hence, the discipline of maintaining the ecological integrity of the natural woodlands as a country is important in inculcating the discipline to conserve other ecosystems.

Another example are the unique **riverine woodlands** dependent upon ephemeral rivers draining the Namib Desert. These woodlands support “desert elephants” which is probably a uniquely adapted gene pool. Such vegetation formations ought to be protected by law in order to maintain not only ecosystem but also intra-specific plant and animal diversity.

Namibia’s plan for forestry development recognizes the fact that poverty often breeds the habit in people to eke a living off the land which results in the destruction of forest land through repeated fires, overgrazing and cultivation with disastrous long-term effects. To safeguard against such improvident but understandable behaviour, it is the responsibility of government, against all the modern arguments of today’s “community-based management enthusiasts”, to still retain and manage certain areas as core conservation areas of representative forest and woodland ecosystems. This is the essence of the Environmental Forestry Programme of our Strategic Plan.

It is therefore important that donors assist a Government such as Namibia that already has initiatives to not only conserve ecosystems, but also to sustainably utilize resources thereof, from such ecosystems.

Theme 3: Sustainable management of forest resources

This theme has to recognize the pressure of utilization on the indigenous forests and woodlands of Namibia especially in cases where people live on the fringes or periphery of a forest or woodland, or where a particular woodland formation is surrounded by human settlements. The present situation in Namibia is that no woodland today has an institutionalized system of deliberate management which is respected by hunters, pastoralists, timber harvesters and other users. Hence the use of fire as a tool for facilitating hunting will often predate the timber harvester and an ill-timed fire may be detrimental to a pastoralist.

Such requires a system of management that minimizes conflicts by the development of a system of agreed practices, the technology to manage certain resources, legal checks and a system of monitoring. It is however possible to find mechanisms that will motivate such a system of management. Income generation from products often lead to destruction especially in cases of common access as is commonly the case in publicly owned forests and woodlands. The appropriate policy incentives and enforceable legislation may deter any destructive tendencies.

Specifically, Namibia needs to examine the major timber producing woodlands which require a look at tree species such as *P. Angolensis*, *B. Plurijuga*, *B. Africana*, *G. Colophosperma*, *C. Mopane*, *Terminalia sericidae*, *Combretum imberba*. These species are either for timber and craft making or are important as poles for fencing and construction. In addition, the woodlands may yield fruits and nuts from *S. birrea*, *S. Rautanenni*, *Strychnos pungens* and *S. Spinosa*. Harvesting of thatch grass, palm fronds, and a number of “veldt foods” are also important to the rural economy.

In the sustainable management of the forest resources, the **use of fire** to achieve a single objective such as forage improvement for livestock can limit the harvesting of other products, especially if the burning is not done at the right time and is not confined to only the portions it is intended to improve. **Repeated fires** that are used in bush clearing or to destroy crop residues during cultivation often escape and cause a lot of unintended damage. **Rational and planned fire management is therefore an important part of any sustainable management of natural forests in Namibia.**

Technologies for assessment of major products from such a system, the setting of harvesting limits, protection from agents of destruction and specific treatments to enhance the availability and/or quality of key products are therefore crucial. To support these technologies must be policies that will make it attractive for people who are the major players to participate in such management. These are the major issues of this theme.

Theme 8: Forestry related research

Research is necessary to support all the above 4 themes described with specific reference to Namibia.

One major cross-cutting researchable topic is in the area of forest policy since the adoption of agroforestry technology, woodland management systems and ecosystem conservation depend to a very large extent on government policies which require political commitment as well. It is however not only forest policy but also those policies in agriculture, lands, rural credit schemes and other land based sectors. **Land tenure** has been particularly cited as a major constraint to both production and protection of forest resources.

(iii) Specific interventions

The specific interventions listed herein are merely derived from the preceding sub-section.

- (1) The establishment of a national agroforestry centre/programme within an existing national institution to demonstrate technologies from Sahelian and Miombo Woodland types for the demonstration of various perennial crop-annual crop configurations, fodder species management.
- (2) Conduct a systematic and in-depth evaluation of existing traditional farm forestry and agroforestry systems in order to find out the socio-economic basis of their adoption and ways of their improvement.

- (3) Establish riverine agroforestry trial sites for inter-cropping systems with a variety of tree-crop - annual species. Indigenous fruit trees should be particularly encouraged.
- (4) Strengthening the already existing community-based fire control pilot programme by providing funds to make it a national programme. At the same time adopt existing fire management/ecology studies to demonstrate economically and socially feasible options that can be used to manage our woodlands and rangelands for multiple benefits. An investigation of the socio-economic aspects of fire use would also be timely.
- (5) Conducting adaptive research to polish up the processing of marula oil through the provision of processing equipment, technical expertise and market promotion. This will also include the improvement of marula cultivation through vegetative propagation and planting techniques.
- (6) Conducting further processing trials on potential oils from other native trees with a view to bringing them to the market.
- (7) Establishing a project aimed at training traditional craftsmen to improve product quality, resource management and conservation, pricing and marketing support.
- (8) Supporting the protection and conservation of key forest areas for biodiversity and ecotourism value through policy reform and special investments.
- (9) Support for relevant Research, Demonstration, Training and Extension to support the specific interventions.

(iv) Cooperation Arrangements

Execution agencies

The lead agency in implementing or promoting the implementation of forestry programmes, is the **Directorate of Forestry** of the Ministry of Environment and Tourism. The Directorate produced a National Forest Policy in 1992, a Strategic Plan in 1996 and has a new draft forest bill to replace the old Forest Act of 1968. Plans are now underway to review the current policy in view of new themes such as community participation and community forest reserves.

The Directorate is also taking the lead in arranging for technical and professional forestry education and is building a forest publicity and extension unit. It also liases with other Directorates in government and several field-based NGOs. Within its 7 years of existence, it now has a regional infrastructure by way of Regional and District Offices and has recently revised its organisational structure effective from July 1997. An important feature of this structure is a division of the heavily populated northern region into two regions namely, North-East and North-West. The rationale is to give more attention and services to the Northern Regions where most of the deforestation and forest resources are.

The **Directorate of Agricultural Extension and Engineering Services** of the Ministry of Agriculture, Water and Rural Development is another important player in forestry whether passively or actively. The Directorate operates under a new Agricultural Policy which has a strong focus on poverty alleviation and food security. However, agricultural production may require that local communities create more land from forest areas or keep more livestock and use fire as a tool of range management. Such activities if carried out without cooperation with forestry may lead to unintended deterioration of forest resources which in any case, are also important to a rural economy which is also the focus of Agriculture. It is therefore necessary to work closely with agriculture especially in the proposed projects of riverine agroforestry, woodland management around farms and in fire control and fire usage for range improvement. In addition, farm forestry and agroforestry systems and the control and management of fire in fields and rangelands is of relevance to Agriculture as it is to forestry.

The **Directorate of Environmental Affairs**, Ministry of Environment and Tourism, are also important in our activities in that forest practice viewed as applied ecology must bring its activities into an environmental context. It is also important for us to work with them in that they will coordinate the development of indicators of sustainable development within a project supported by Finland. And as long as forestry is also bound by its own principles of management to develop indicators of sustainable management, we will no doubt give them some in puts. We are already collaborating on issues of biodiversity inventories and resource mapping.

In addition, the **Directorate of Resource Management**, Ministry of Environment and Tourism does control a large network of protected areas which are substantial repositories of both plant and animal diversity. The Directorate also has a law enforcement unit which collaborates with forestry to control illegal harvesting and transport of animal and plant products. Soon they will also oversee the establishment of community-based wildlife conservancies in which the management of tree vegetation for utilization could be a component provided that this would not jeopardize quality of wildlife habitat. Forestry's aspirations to realize community-based management of forest resources is bound to gain from their experience with wildlife conservancies, especially with respect to the formation and running of community institutions for forest management..

The **Directorate of Lands and Resettlement** is pushing an agenda to institutionalize land use planning at both the national and regional levels. This will be effected through a Land Use and Environmental Board (LUEB). Since our policy requires that forestry needs should be considered from the land use planning level working with lands is quite important for us. It is hoped that the communal land bill with its envisaged provision for communal tenurial rights to land will enhance land management in general and promote economic activity as well.

In addition to the above government agencies the Directorate of Forestry is quite keen to collaborate with both **wildlife and agriculture based NGOs** in the field since they already have forged links with community groups and leaders that we also would wish to work with to promote forestry. In the Omusati Region of Northern Namibia, forestry collaborates with a rural development group; Development Aid from People to People (DAPP). Other organizations such as the Integrated Rural Development and Nature Conservation are run on the principles of income generation and conservation which we also share. The support to

Community Based Wildlife Conservancies by World Wildlife Fund for Nature (WWF) makes it a natural partner to our forestry programmes. In fact, we co-operate with WWF-LIFE Project in the proposed Salambala Wildlife Conservancy in the Caprivi Region.

Role of Technical Assistance

This is an area in donor assistance that is usually critical to the success of any cooperation. The apparent thinking in donor circles appears to be concerned with the sustainability of initiated programmes or projects. Hence any technical experts from a donor country or hired using donor funds should assist a programme to bring about sustainability. This has implications on how local capacity can be built in any given venture. In several cases donor personnel will shy away from getting involved in implementation because they perceive their role as that of advisers and administrators of donor funds. What they often forget is that their local counterparts who are often less qualified than they are, tend to learn more from what they do rather than, what they say. In other words, coaching through demonstration is often more effective than merely advising and having a tight hand on funds.

In the Namibian case, the role of Technical Assistance can be summarised ; “Providing technical expertise and associated accessories and equipment, in specific areas of interest, with a view to coaching local counterparts and joint implementation of field programmes, as a way of contributing to the long term sustainability of a development programme. Genuine technology and technical skills transfer to partner countries is what counts towards sustainability.

With specific reference to the priority areas assistance will be required in the following manner:

To provide technical expertise in dry land forest ecology and management, crafts production, processing of oils and other products from fruits and nuts, agroforestry systems and fire control.

To supplement partner government budgets on forestry and other conservation programmes since this is an area that is often given low priority compared to politically and socially sensible programmes on food security and resettlements.

To provide seed money for capital purchases for the development of light industries to process proven prospective products.

Financing support

The mechanism for financing which appears to be efficient is to allocate funds through an implementing body; usually a consulting firm to avoid bureaucratic delays in the disbursement of funds. However, a steering committee chaired by the Directorate should sanction expenditure which is normally anticipated through a quarterly budget system.

The Government of Namibia can also contribute in kind and in some cases in cash. Normal contributions are in the form of office space, housing (if available), vehicles, secretarial

support, telephones and faxes.

Estimation of overall budget

It is difficult at this time to give accurate budget estimates since no firm proposals have been provided. For purposes of this document Agroforestry, Processing and Marketing of Forest Products, Fire Control and Training have been used as the 4 major areas for budgeting.

In agroforestry it is envisaged that 3 technical experts will be engaged. The equipment, adaptive research trials, consultancies, vehicles and housing will cost a total of US \$ 1.3 million for a 4 year project.

In the processing and marketing of timber and non-timber forest products; 2 technical officers should be engaged. The elements of budgeting would consist of training (of craftsmen and other technicians), workshops, research, product development, micro-processing facilities and associated investment, consultancies, transport and housing. These will cost approximately US \$2.5 million over a 4-year period.

The cost of building and institutionalizing a national fire control programme on a 3-year project will cost an estimated US \$ 1.2 millions.

Formal training to increase the capacity of the Directorate of Forestry to give technical guidance in the above areas will entail 3 officials trained at the post graduate levels in Agroforestry, processing of key non-timber forest products, and management of forests for multiple products. In addition 3 undergraduate level training should be undertaken to address the same issues. The estimated cost of this will be US \$ 0.4 million.

The total estimated cost is **US \$ 5.4 millions** for an initial 4-year programme or project..

8.0 Proposed next steps

This document has now benefited from the comments of members drawn from several sectors who attended the national workshop. So far, there was general agreement with the themes suggested for support by the EU as an organisation or its member countries. The comments made generally centered around bringing more focus on the general and specific objectives and strengthening collaborative arrangements and coordination among institutions in adopting or researching agroforestry.

It is hoped that the EU Forestry Desk will give written formal approval of this national document which after all has been guided by its principles and themes and also enjoyed the advice from consultants of its member countries. This will enhance Namibia's case and those of member countries of the SADC and even the SADC-FSTCU (on cross border issues) in attracting the attention of the EU when examining proposals. In addition, SADC countries can use the same documents when sourcing funds from individual EU member countries. It is hoped that the role of the EU Forestry Desk in promoting these documents will not stop with the conclusion of this SADC study. a wider circulation of these documents among EU member states accompanied by a supportive letter from Brussels is suggested as a worthwhile follow up to the process.

With special reference to Namibia, funding possibilities for the two priority themes; (I) Theme 4: Creation of Forest Resources (ii) Theme 5: Harvesting, Processing, Marketing and trading of Timber and Non-timber Forest Products appear to be suited to but not restricted mainly to two EU sources; namely Budget Line **B7-6201** which is “**Actions in Favour of Tropical Forests**” and the “**European Development Fund (EDF) under the Fourth ACP-EC Convention of Lome**”

Budget Line B7-6201, is relevant to both themes but more so on the creation of forest resources since it is concerned with projects having an impact on conservation and sustainable management.

The **EDF** is relevant to **Theme 4: Creation of Forest Resources** since it covers reforestation, agroforestry and adaptive research in that regard. It is also relevant to Theme 5: Harvesting, processing and marketing of timber and non-timber products since it also particularly covers agroforestry, processing and education. It is also important to point out that the two themes fall within the prescribed activities and principles contained in the **Protocol on Sustainable Management of Forest Resources (June 30,1995)** which covers biodiversity conservation, buffer zones, timber production, re-afforestation, rehabilitation of lands, institution building, development of action plans and associated research, timber marketing and certification. The **theme: harvesting** may sound **exploitation-oriented** but in this document, it should be seen in the light of sustainable management for both direct economic benefits and the non-traded environmental and biodiversity benefits of forest ecosystems.

Namibia will develop proposals to the EU and individual EU member countries by the middle of 1998. These proposals will link themes 4 and 5 which will be supported by research and training to build local human capacity. These will be done within the framework of the supporting themes; conservation of ecological systems and biodiversity (theme 2) and the sustainable management of forests (theme 8)

Issues which will require **cross-border co-operation** include:

- research on criteria and indicators for the dry woodlands
- certification as a tool in promoting sustainable management
- development of technology for processing and regional marketing of non-timber forest products
- cross-border fire control and management strategies

10.0 References

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9.0 Annexes

(A) Map of National Parks, Recreation areas and Forest Reserves in Namibia

(B) Government of Namibia 1996. National Indicative Programme for Co-operation under the Second Protocol of the Fourth Lome Convention between the Republic of Namibia and the Commission of European Communities.

