

PREAMBLE

The first National Forest Policy of Tanzania was enunciated in 1953 and reviewed in 1963 to detail the manner in which the forest and tree resources would be managed sustainably to meet the needs and desires of the society and the nation. Over the past three decades the perspectives on the role of the forest for the society have changed and broadened considerably as a consequence of social, economic, environmental, cultural and political changes. On the other hand, there have been relentless pressures on the forest resources arising from the ever increasing demand for fuelwood, fodder, timber and demand of forest land for other uses.

In 1988 the Government of Tanzania initiated the preparation of the Tanzania Forestry Action Plan (TFAP). The TFAP was completed and adopted by the Government in 1989 as a basis for the development of the forest sector. Although the TFAP presents a comprehensive analysis of the sector including reformulated sectoral objectives, strategies and development programmes, it did not result in the formulation of a new forest policy and revision of the sectoral legislation. Between 1992 and 1994 the TFAP was revised, including the assessment of policy related issues, as a result of the macro and socio-economic policy reforms implemented in the country.

The challenge to manage Tanzania's forest resources as a national heritage on an integrated and sustainable basis to optimise their environmental, economic, social and cultural values remains as pressing as ever. In addition, as a result of the international forest-related discussion initiated by the 1992 UNCED conference in Rio and continued by the Intergovernmental Panel on Forests (IPF), the contribution of the forests to the international conservation functions has become an important part of the national policy discussions.

This new forest policy document was prepared involving relevant stakeholders. The policy is based on an analysis of the ecological and economic needs of the country and availability of human and other resources. The revised TFAP provided a basis for the policy review. The formulation process involved both sectoral and cross-sectoral stakeholder contributions. The participation of the cross-sectoral stakeholders ascertained the consistency of the proposed policy statements and instruments with the overall macro-policy framework of the nation and the policies of the forestry-related sectors.

In line with the approach adopted by TFAP, the forest policy has also been formulated in a comprehensive way to cover all forests regardless of ownership or administration and includes trees on farmlands. The concepts of forest sector and forest administration defined and used in this policy comprise all wood and non-wood-based forestry activities.

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ABBREVIATIONS AND ACRONYMS

FAO F	ood and Agriculture Organisation of the United Nations
FBD F	orestry and Beekeeping Division
GDP G	ross Domestic Product
EIA E	nvironmental Impact Assessment
IPF Ir	nter-Governmental Panel on Forests
NGO N	Ion-Governmental Organisation
NFP N	lational Forestry Programme
PSRC P	ublic Sector Reform Commission
RPFB R	olling Plan and Forward Budget
TFAP T	anzania Forestry Action Plan
UNCED U	Inited Nations Conference on Environment and Development

GLOSSARY

- "Agro-forestry" is a practice where agricultural crops and trees are intercropped on one farm land.
- "Central government forest reserve" is a forest area administered and managed by the central government.
- "Concession" is a long-term agreement between the government and a forest industry enterprise entrusting the latter to manage a forest reserve, industrial plantation or part thereof mainly for timber production. The forest is managed in accordance with the approved management plan. The company is responsible for all harvesting and silviculture activities including road construction and maintenance. The government collects the agreed royalties and concession fees.
- "Executive agency" is an autonomous self-financing commercial agency owned by the government and created for the specific purpose of managing a forest reserve or an industrial plantation. The staff are government employees but with specific terms and conditions defined for employment by the agency.
- "Firewood" includes part of trees made up into bundles or loads or cut wood for burning, and refuse wood in general, but does not include logs or poles.
- "Forest" means all land bearing a vegetative association dominated by trees of any size, exploitable or not, and capable of producing wood or other products of exerting influence on the climate or water regime or providing shelter to livestock and wildlife.
- "Forest administration" comprises Government of Tanzania administration of forestry.
- "Forest authorities" comprise Government of Tanzania authorities of forestry .
- "Forest land" means an area of land covered with trees, grass and other vegetation but dominated by trees.
- "Forest land lease" means that forest land or land suitable for afforestation is leased to the private sector. The terms of the lease define the management principles and obligations. The management planning and plan implementation is carried out by the lessee. The lease is renewed after certain periods provided that the land is well-managed. The government collects an annual lease fee.
- "Forest product" includes all wood and non-wood forest products.
- "Forest reserve" is a forest area, either for production of timber and other forest produce or protective for the protection of forests and important water catchments, controlled under the Forests Ordinance and declared by the Minister.
- "Forest resources" include all wood and non-wood-based resources in the forests.
- "Game reserve" is a reserved area aimed for game production and conservation with a good population and diversity of wildlife and/or critical water and/or soil resources necessary to maintain ecological integrity and support the subsistence needs of communities outside the reserve boundaries.

"Industrial plantation" means an area of land planted with trees for industrial use.

- "Joint forest management" means involvement of local communities or non-governmental organisations in the management and conservation of forests and forest land with appropriate user rights as incentives.
- "Licence" means a valid licence granted by the director of forestry or any person duly authorised by him in that behalf or by a local authority.
- "Livestock" includes cattle, sheep, goats, pigs, horses, donkeys, mules and all other domesticated animals and their young.
- "Local authority" includes a district council, city council, municipal council, town council, local council and village council.
- "National park" is a area representing outstanding natural, archaeological or cultural resources of Tanzania's heritage and/or critical water and/or soil resources necessary to maintain ecological integrity. National Parks are created and controlled through National Park Ordinance and declared by an act of Parliament.
- "National tree" means any tree declared by order to be a national tree or trees reserved for a specific reason.
- "Nature reserve" is a forest reserve legally declared for nature conservation of genetic resources and for scientific studies.
- "Owner" in relation to any land means any person having a freehold or leasehold estate (or any interest deemed under any law for the time being in force to be a freehold or leasehold estate), having a right of occupancy in respect of such land.
- "Tenure" means holding of land or other property through arrangements such as leasehold, freehold, customary ownership, and other such forms of holding.
- "Traditional forest " is a forest reserve governed under customary law.
- "Tree" includes palms, bamboos, canes, shrubs, bushes, plants, poles, climbers, seedlings, saplings, and the re-growth thereof, all ages and all kinds and any part.
- "Village forest reserve" is a forest which is owned and managed by the village government.

CHAPTER ONE

1.0 NATIONAL FRAMEWORK FOR FOREST POLICY FORMULATION

The national forest policy is based on a macro-economic, environmental and social framework as discussed below.

1.1 Macro-economic framework

Since 1986 Tanzania embarked on policy and institutional reforms whose overall objectives have been to revamp the national economy and facilitate wholesome growth. These reforms have changed the macro-economic environment quite significantly. The socio-economic objectives and policies as stated in the Rolling Plan and Forward Budget (RPFB 1996/97-1998/99) are as follows:

- to combat poverty and deprivation in order to improve people's welfare;
- to ensure macro-economic stability;
- to maintain an environmentally sustainable development path;
- to create an enabling environment for a strong private sector;
- to reduce government involvement in directly productive activities;
- to improve efficiency in the use of public resources.

A comprehensive financial sector reform programme is underway and is expected to be a key element in the creation of an attractive setting for the development of private enterprises. This also involves restructuring of the state-owned banks. The Parastatal Sector Reform Commission (PSRC) adopted its Master Plan for parastatal sector restructuring in which 128 parastatals were earmarked for privatisation or liquidation. The main aim is to optimise the use of resources under new management and/or ownership resulting in a positive impact on public finances.

The main functions of the government will be reviewed and the productive ones reduced through commercialisation or privatisation with subsequent government concentration on defined priority sectors. A corresponding reduction in civil service employment will be implemented in order to allow a more realistic remuneration of remaining employees within the overall fiscal constraints which the government faces. Another objective of the pay structure reform is to reduce the importance of non-monetised allowances, leading to a more equitable and transparent pay structure.

An enabling environment for the private sector and business development will be facilitated. The policy measures include adoption of the National Investment Promotion Policy, liberalised marketing for food and cash crops, private participation in parastatal organisations and private banking. An aid strategy will be produced to guide utilisation of aid resources in the budget frame so that externally financed programmes are properly managed and effectively maintained during and after the end of foreign assistance.

Small and medium-scale industries for purposes of increasing industrial output, employment generation, sector linkages and rural industrial development will be promoted. Access to credit and foreign exchange will be improved through the development of new forms of credit institutions. An enabling environment for private sector participation both in investment and production will be created. Human resource development and technical capabilities will be strengthened so as to ensure competent technical and management skills and smooth industrial operations.

1.2 Environmental framework

The national environmental policy (Vice President's 1997), defines the environmental framework for forest policy. The overall objectives of the national environmental policy are the following:

- To ensure sustainable and equitable use of resources for meeting the basic needs of the present and future generations without degrading the environment or risking health or safety;
- To prevent and control degradation of land, water, vegetation and air which constitute our life support systems;
- To conserve and enhance our natural and man-made heritage, including the biological diversity of the unique ecosystems of Tanzania;
- To improve the condition and productivity of degraded areas including rural and urban settlements in order that all Tanzanians may live in safe, healthy productive and aesthetically pleasing surroundings;
- To raise public awareness and understanding of the essential linkages between environment and development and to promote individual and community participation in environmental action;
- To promote international cooperation on the environment agenda, and expand our participation and contribution to relevant bilateral, sub-regional, regional and global organisations and programs, including implementation of conventions.

There is a clear cause-and-effect relationship between poverty and environmental degradation: environmental degradation leads to widespread poverty and poverty is a habitual cause of environmental degradation. Satisfaction of basic needs is therefore an environmental concern relevant to environmental policy. Investment in development is vital for environmental protection because the environment is the first victim of acute poverty, urban overcrowding, overgrazing, shrinkage of arable land and desiccation.

The ownership of land and natural resources, access and the right to use them are of fundamental importance, not only for more balanced and equitable development, but also to the level of care accorded to the environment. It is only when people can satisfy their needs, have control of the resource base as well as have secure land tenure that long-term objectives of environment protection can be satisfied. The communal tenure of village lands which are administered by village councils provides a good legal environment for the development of community-based forest and woodland management.

Science and technology have a central role in the exploitation, processing and utilisation of natural resources and in the resulting environmental impacts. The primary objective in this area is the promotion of environmentally sound technologies, i.e. technologies that protect the environment; are less polluting, use all resources in a more sustainable manner, recycle more of their wastes and products and handle residues in a more acceptable manner than the technologies which they are substitute (best available technology principle).

Tanzania is one of the fourteen biodiversity hotspots in the world. Programmes for the conservation and utilisation of biodiversity shall be pursued to prevent and control the causes of significant loss of biological diversity. Policies, strategies and programmes for the conservation of biological diversity and sustainable use of biological and genetic resources shall be integrated into relevant sectoral/cross-sectoral policies, strategies and programmes.

Environmental impact assessment (EIA) is a planning tool used to integrate environmental considerations in the decision making process to ensure that unnecessary damage to the environment can be avoided. As a part of the implementation of the environmental policy, guidelines and specific criteria for EIA will be formulated.

Regarding public participation and education, environmental management must be everybody's responsibility. The major responsibilities of government institutions and non-governmental organisations are to assist local communities by making them aware of their own situation and supporting them to become responsible for their own destiny. The fundamental prerequisites for the achievement of sustainable development is broad public participation in decision-making, including the participation of individuals, groups and organisations in environmental impact assessments and decisions, particularly in those which potentially affect the communities in which they live and work.

The private sector, particularly within business and industry, can play a major role in reducing the stress on resource use and the environment. Improvement of production systems through technologies and processes that utilise resources more efficiently and generate less waste, that reclaim, recycle and reuse by-products is an obligation of business and industry. The private sector and the community of non-governmental organisations therefore offer a national network that should be tapped, enabled and strengthened in support of efforts to achieve environmental objectives. The role of women in environmentally related activities will be promoted with a view of achieving increased women's involvement in such areas as forestry, agriculture and water management programmes.

1.3 Social framework

The withdrawal of the government from involvement in direct production activities will enable the provision of more resources to the social services sector. Greater emphasis will be placed on decentralisation of authority to the local level and promotion of community involvement in the provision and management of social services through increased cost-sharing. The overall objective in the education sector is to ensure access to basic education by the year 2000 through decentralisation and liberalisation of education services. Broader involvement of the private sector and communities is encouraged in the development and management of higher education. The objective of the health sector is to provide health services to all Tanzanians with emphasis on primary and preventive health care. Community, NGO and private sector participation in the health sector is sought through a number of ways.

The main objective in the housing sector is to ensure that all Tanzanians have a decent shelter. The private sector involvement in the housing development and provision are encouraged. In the field of information and broadcasting, the aim is to increase efficiency and effectiveness in information collection, analysis and dissemination through a multitude of media: newspapers, radio and television. In order to improve social welfare an enabling environment for private sector and NGO participation will be created. Women's workload will be reduced through introduction and popularisation of modern and appropriate technology and by imparting technological skills to communities. Public awareness on national culture will be promoted through a variety of ways in the field of cultural development.

CHAPTER TWO

2.0 MAIN SECTORAL PROBLEMS AND OPPORTUNITIES

The forest sector is vested with the responsibility of managing the forest resources sustainably. The overall priorities and current constraints evolve around the following issues:

2.1 Management of the country's forest land resources at various levels for sustainable and progressive development

Tanzania has about 33.5 million hectares of forests and woodlands. Out of this total area, almost two thirds consists of woodlands on public lands which lack proper management. Public lands are under enormous pressure from expansion of agricultural activities, livestock grazing, fires and other human activities. About 13 million hectares of this total forest area have been gazetted as forest reserves. Over 80,000 hectares of the gazetted area is under plantation forestry and about 1.6 million hectares are under water catchment management. The forests offer habitat for wildlife, beekeeping, unique natural ecosystems and genetic resources. They are also an important economic base for the country's development. The total forested area is distributed by type, use and legal status as follows:

Forest type	1 000 ha
Forests (other than mangrove forests)	1 141
Mangrove forests	115
Woodlands	<u>32 299</u>
Total	33 555
Use of forest land	
Production forest area	23 810
Protection forest area (mostly catchment areas)	<u>9 745</u>
Total	33 555
Legal status	
Forest reserves	12 517
Forest/woodlands within national parks, etc.	2 000
Non-reserved forest land	<u>19 038</u>
Total	33 555

Sources: FAO (1992) Forest Resources Assessment for Tropical Countries and FBD statistics

There are no reliable data on deforestation although the estimates range from 130 000 to 500 000 ha per annum. The main reasons for deforestation are clearing for agriculture, overgrazing, wildfires, charcoal burning and over-exploitation of wood resources. It is taking place mainly in the unreserved forest land. Since the villagisation programme the government started allocating this public land to registered villages with the aim that land titles to villages or individuals would alleviate the above problems. Due to inadequate resources to implement active and sustainable forest management, deforestation through encroachment and over-utilisation has also been taking place in the forest reserves which are under the jurisdiction of the central or local governments.

2.2 Management of forest-based industries and other forest-based activities to contribute to the national development and equitable benefit sharing between the stakeholders

The value of the Tanzanian forests is high due to the high potential for royalty collection, exports, and tourism earnings as well as the recycling and fixing of carbon dioxide and conservation of globally important biodiversity. Due to the inadequate management of the forests and related resources, the actual contribution of the forest sector to the national economy is

underdeveloped. In 1989 for example, it was estimated that the sector provided 2-3% of the Gross Domestic Product (GDP) and 10% of the country's registered exports. The contribution, however, is usually underestimated because of the unrecorded consumption of woodfuels, bee products, catchment and environmental values and other forest products, such as poles. The estimated per capita consumption of wood fuels is 1 cubic meter roundwood per annum. Bioenergy is the main source of fuel for the rural population and accounts for 92% of the total energy consumption in the country.

The sector also provides 730 000 person-years of employment (TFAP 1989). Employment is provided through forest industries, forest plantations, government forest administration and self-employment in forest related activities. The real contribution is underestimated due to unrecorded labour in the collection of woodfuels and other forest-based products consumed by households.

The wood industry accounts for about half of the sector's recorded contribution to GDP. The other half is contributed by non-wood products and services. Forest industry is facing various problems, such as obsolete machinery, inadequate road and rail network, inadequate telecommunication infrastructure, lack of working capital, non-reliable electricity supply, inadequate managerial and technical skills as well as lack of business culture.

Tanzania has a huge potential for non-wood products. The most important are tourism, game, bee products; especially honey and beeswax, tannins and gum arabic. The bulk of the non-wood products, however, still remain unknown and un-developed. The management and utilisation of these resources could be developed through multi-purpose forest management, local processing and improved marketing.

2.3 Conservation of the country's unique *ecosystems and biological diversity*, considering the needs of local populations and appropriate management and utilisation methods

About a quarter of Tanzania's land area is covered by unique ecosystems in the form of forest reserves and national parks and game reserves. The country is famous for its rich variety and abundance of wildlife, particularly big game. Tourism is one of the biggest export earning industries in the country and accounts for about 7.5% of GDP and nearly 25% of the total exports (Integrated Tourism Master Plan 1996). Forest-based eco-tourism has not been developed to its full potential.

National parks are managed for non-consumptive purposes such as photographic tourism, education and research. Game reserves are protected areas where restricted consumptive or non-consumptive use of resources is permitted. After some years of intensive anti-poaching activities in the country, poaching has recurred. Although efforts have been made to involve the local people in sharing the benefits accruing from wildlife management in some areas, there is still a lot to be done in this regard.

Apart from national parks, the country has other rich variety of ecosystems of economic, scientific and aesthetic value. The outstanding ones are the Eastern Arc Mountains which have a high level of endemism. Others include other mountain ecosystems, coastal forest patches, mangroves and wetlands. Most of them have important genetic resources for medicinal plants, timber tree species and other plants of economic importance. Forests contribute to agricultural stability by regulating water balances, protecting the soil and pollinating crops. The ecosystems are threatened by a variety of human activities, including the heavy pressure for agricultural expansion, livestock grazing, wild fires and over-exploitation of wood resources. These human activities have caused deterioration of ecosystems and soil fertility, reduced water flows and loss of biological diversity.

Effective conservation of ecosystems has been impaired by the lack of sufficient coordination between the sectors concerned. Attempts to establish new conservation areas, such as nature reserves, forest reserves, game reserves or national parks, have been difficult due to some legal procedures having not been in place, shortage of funds for compensating the dwellers and land shortage.

2.4 Adaptation of the *institutional framework* and arrangement of the necessary *human resources and financial inputs* to meet the pre-conditions for the desired development

Sustainable forest management requires strategic sectoral planning which takes into account changes in macro-policies towards market economy, participation of the private sector and other major stakeholders. The capacity to address these issues is weak and has not been adequately developed. This is partly due to the increase in number and scope of donor-driven planning frameworks undermining the development of the national capacity in planning and management. Although Tanzania has been formulating and implementing programmes related to environmental conservation with considerable success, the forest sector is facing constraints affecting the design and implementation of plans and programmes.

The implementation and administration of environmental programmes require collaboration and coordination across various sectors related to land use. The policies of the related sectors are not harmonised. There is no effective mechanism or framework for enhancing intersectoral coordination. The sectoral policies that require effective coordination include agriculture, wildlife, environment, land development, water, energy and minerals.

For over two decades, the public sector has dominated the country's economy. Since 1985, the country's macro-economic policies have changed towards a market economy and an active involvement of the private sector. However, strategies for active participation of these other stakeholders in the development and management of forest resources are yet to be developed. The country has undergone structural adjustments and sectoral reforms to open the economy through trade liberalisation. However, there is a lack of clear transitional arrangements for private sector involvement in many areas previously managed by the government, i.e. the development of forest resources and the operation of forest-based industries. Investments in forestry programmes require a long time to generate returns. Financial mechanisms in place do not effectively promote long-term investment by the private sector.

The government budget on forestry has consistently been less than 1% of the total national budget. Other sources of funding include the private sector and external donors. Donor contribution to forestry projects and related activities has been over 90% of the total sectoral funding. This trend has persisted in contrast to the 30% contribution from donors, 33% from the government, and the rest from the private sector, NGOs and individuals envisaged by the TFAP.

The planning and implementation of forest and other land-based programmes have traditionally been done at the central level. There have been inadequate consultations to encourage grass-roots participation in forestry planning and the potential of indigenous knowledge has not been fully utilised. This is partly due to limited resources for participatory consultations. There has been a political will to address gender concerns. However, strategies for effective gender involvement remain to be developed so as to enhance equitable participation and sharing of resources. The government's decision to implement a decentralisation policy is expected to address these problems as some powers of the central government will be delegated to the districts.

CHAPTER THREE

3.0 SECTORAL GOAL AND OBJECTIVES

The overall goal of the national forest policy is to enhance the contribution of the forest sector to the sustainable development of Tanzania and the conservation and management of her natural resources for the benefit of present and future generations.

The objectives of the forest sector on the basis of the overall goal are as follows:

- Ensured sustainable supply of forest products and services by maintaining sufficient forest area under effective management;
- Increased employment and foreign exchange earnings through sustainable forest-based industrial development and trade;
- Ensured ecosystem stability through conservation of forest biodiversity, water catchments and soil fertility; and
- Enhanced national capacity to manage and develop the forest sector in collaboration with other stakeholders.

Based on the above objectives the four **policy areas** are:

- Forest land management
- Forest-based industries and products
- Ecosystem conservation and management
- Institutions and human resources

In each area the relevant <u>policy issues</u> are discussed and <u>policy statements</u> given, followed by a description of the main <u>policy instruments and directives</u> to be applied.

CHAPTER FOUR

4.0 POLICY STATEMENTS

4.1 Forest land management

OBJECTIVE: Ensured sustainable supply of forest products and services by maintaining sufficient forest area under effective management.

4.1.1 Central and local government forest reserves

This policy area deals with the management of central and local government forest reserves including natural forests and industrial plantations. The core problem is the low capability of the government institutions to manage these resources to meet the growing demands for forest products and services. As a consequence, the forests cover is being reduced due to the prevailing trends of forest destruction and degradation as well as the unsustainable conversion of forests to other land-use.

Government forest reserves, i.e. gazetted forests, are constantly threatened by encroachment and shifting cultivation resulting from a high population pressure. Wild fires are taking place annually affecting both natural forests and plantations. Lack of systematic management, unclear boundaries and inadequate resources for controlling have led to illicit felling of trees. Economic and environmental values of the forests are not internalised in product pricing and royalties do not reflect true economic values.

The forest plantations in some areas have been subject to uncontrolled settlement by squatters who have followed permitted residents. Industrial plantations are facing a backlog of silvicultural operations and regeneration because of inadequate funding. Some exotic plantations have been damaged by diseases and pests, such as the cypress aphid (*Cinara cupressi*) which has reduced the growing stock and caused deterioration of wood quality. Forest management plans have not been adequately updated and, as a consequence, silvicultural operations and regeneration have not been implemented as required resulting in uneven age-distribution of the plantation stands and reduced growing stock.

Policy statement (1):To ensure sustainable supply of forest products and services and environmental conservation, all types of forest reserves will be managed for production and/or protection based on sustainable management objectives defined for each forest reserve. The management of all types of forest reserves will be based on forest management plans.

Policy statement (2): To ensure the efficiency in forest management and conservation, the central government forest reserves will be managed by one or several specialised executive agencies or by the private sector. Forest reserves of national strategic importance may remain under the management of the central government until executive agencies have developed sufficient and proven capacity for their management. Forest reserves under local governments will remain under their management or may be managed by specialised executive agencies or by the private sector.

Policy statement (3): To enable participation of all stakeholders in forest management and conservation, joint management agreements, with appropriate user rights and benefits, will be established. The agreement will be between the central government, specialised executive agencies, private sector or local governments, as appropriate in each case, and organised local communities or other organisations of

Policy statement (4): To enable sustainable management of industrial plantations, one or several specialised executive agencies or the private sector will manage these plantations on a fully commercial basis through appropriate lease, concession or joint management agreements.

DIRECTIONS:-

To ensure sustainable supply of forest products and services and environmental conservation, all types of forest reserves will be managed for production and /or protection based on sustainable management objectives defined for each reserve. The management of all types of forest reserves will be based on forest management plans. All central and local government forest reserves will be demarcated on the ground, management objectives defined, and multi-purpose forest management plans prepared based on reliable inventory data and covering all different uses of forests.

To achieve more efficient management of central government forest reserves including industrial plantations, the management responsibilities will be delegated from the forest authorities to one or several executive agencies created for this purpose. These agencies will operate on a purely commercial basis. Forest reserves of national strategic importance, such as critical watershed areas and forest areas with high biodiversity or endemism may remain under management of the central government. However, the long-term goal is to delegate the management of these reserves to executive agencies when they have developed sufficient and proven capacity.

Concessions or leases of forest reserves to private forest industry will be promoted. The industry will be entitled to operate in the forests in accordance with the forest management plans based on the principle of sustainable forest management. The capacity of the forest authorities to monitor forest operations undertaken by the private sector and/or executive agencies will be strengthened. Control of the number of people living in forest reserves and plantations will be intensified. Protective buffer zones around gazetted forest reserves will be demarcated in collaboration with local communities. The purpose of the zones is to protect the respective reserve and provide benefits for local communities and they will be managed in accordance with the management plans.

In order to improve forest conservation and management and to ensure equitable sharing of benefits amongst all stakeholders, joint management agreements between the central government, specialised executive agencies, private sector or local governments, as appropriate in each case, and organised local communities or other organisations of people living adjacent to the forest, will be promoted. The local communities will be granted appropriate user rights for forest produce and forests will be managed in accordance with approved management plans.

4.1.2 Forest on public lands (non-reserved forest land)

The forests on public lands, i.e. open access forest areas, are subject to conversion to other land uses such as shifting cultivation, grazing and also suffer from repeated forest fires. In the absence of security of tenure or formal user rights over these forest resources, there has been little incentive for their systematic and sustainable management. Uncontrolled grazing and wildfires are hampering natural regeneration resulting in eventual deforestation.

Policy statement (5): To enable sustainable management of forests on public lands, clear ownership for all forests and trees on those lands will be defined. The allocation of forests and their management responsibility to villages, private individuals or to the government will be promoted. Central, local and village governments may demarcate and establish new forest

DIRECTIONS:-

To reduce uncontrolled use of forests, allocation of forests on public lands to villages, private individuals and the government will be promoted so as to have a defined owner. The primary policy instrument in this regard is the establishment of village forest reserves. Village institutions will be granted appropriate user rights as incentives for sustainable forest management including rights to indigenous trees. The other instruments include the allocation of forest to private individuals and the establishment of central and local government forest reserves. Accordingly, central, local and village governments may demarcate and establish new forest reserves.

4.1.3 **Private and community forestry**

Private and community forestry involve forestry on leasehold and village lands including farm forestry, natural forest on leasehold lands and traditional forest areas/trees. However, the legal framework for the promotion of private and community-based forestry, including village forest reserves, is currently non existent. Shortage of land and unclear land and tree tenure, particularly for women, have hampered investments in forestry on private and village lands. Moreover, inadequate awareness of tree growing and of sustainable forest management, as well as lack of financial incentives, have been constant obstacles for private and community forestry development.

Conflicting messages from different land-based extension services create uncertainty amongst local communities whose preferences, for example, in the selection of species for tree planting have not been sufficiently considered. This applies particularly in favouring timber species instead of fast growing firewood species preferred by women. Moreover, planting and management of native species has not been adequately promoted as compared to planting of exotic species. The tradition of obtaining tree seedlings free of charge has also discouraged the establishment of private nurseries. By and large, farmers' general knowledge on tree management is inadequate for the establishment of agroforestry systems. Wood products from private farms have found limited markets due to free wood supply from public lands and, consequently, investment on tree growing has not been considered financially attractive.

Policy statement (6): Village forest reserves will be managed by the village governments or other entities designated by village governments for this purpose. They will be managed for production and/or protection based on sustainable management objectives defined for each forest reserve. The management will be based on forest management plans.

Policy statement (7): Private and community forestry activities will be supported through harmonised extension service and financial incentives. The extension package and incentives will be designed in a gender sensitive manner.

DIRECTIONS:-

The legal framework for the promotion of private and community-based ownership of forests and trees will be established. Farmers will be entitled to have owner rights of indigenous species including reserved species and not only planted exotic ones. Village forest reserves will be managed by the village governments or other entities designated by village governments for this purpose, such as NGOs, user groups, associations, church institutions, etc. The reserves will be demarcated on the ground, management objectives defined, and multi-purpose forest management plans prepared covering all different uses of forests.

Gender-specific and farmer-to-farmer extension advice as well as financial incentives will

be provided for the establishment of forest plantations on farmlands. Plantations of multipurpose trees with good growth will be promoted. Establishment of private nurseries will be promoted through intensified extension and appropriate credit systems. Extension on agroforestry practices will be gender sensitive and women's preferences on species selection will be given due consideration. Support in forest management planning and implementation, intensified and harmonised extension as well as financial incentives will be provided to promote sustainable forest management of private and community forest areas including village forest reserves.

In the special cases of natural high forests on leasehold lands, conservation agreements between owners and the government will be promoted and management plans with a due consideration of biodiversity management prepared. Existing traditional forests with established indigenous management systems will be protected from any disturbance and new traditional forests will be encouraged to be established.

4.2 Forest-based industry and products

OBJECTIVE: Increased employment and foreign exchange earnings through sustainable forest-based industrial development and trade.

4.2.1 Wood-based industry and products

The wood-based industry comprises mechanical and chemical wood industry, woodfuel and artisanal wood-based products. The core problem is the industry's current insignificant contribution to the national development in terms of products, export earnings and employment. The industry has also failed to create adequate wood demand to stimulate primary forest production. The present inefficient models of parastatal companies and low private investment have also contributed to the current poor state of the industry.

4.2.1.1 Mechanical and chemical wood industry

Lack of information on raw material availability and insecure procurement have prevented the current industries from operating at full capacity as well as discouraged any investments in the rehabilitation of infrastructure. The raw material supply from natural forests has been rapidly decreasing due to degrading resource base and increasing conservation requirements. Consequently, the use of this resource needs to be increasingly substituted by wood procurement from plantations. Industrial plantations have not been sustainably utilised due to non-existing or outdated management plans. The implementation of the existing plans has also been inefficient.

As the existing plantations have not been efficiently managed and most silvicultural operations neglected, the quality of the raw material has deteriorated accordingly. Moreover, poor transport and communication infrastructure as well as inaccessibility to and within the plantations has made all forest management and harvesting operations cumbersome to implement. The mills are usually located far from the actual resource base resulting in high harvesting and transport costs. The performance and efficiency of the forest industry plants is poor because of old or obsolete machinery and inadequately trained staff. Moreover, the existing plants are mainly designed to process raw material from a relatively limited number of indigenous species.

Policy statement (8): To enable the mechanical and chemical wood industry to plan its investments, information on raw material base will be ascertained through periodical resource assessments, and made available to the industry. The rehabilitation of existing technology and establishment of efficient forest industries using appropriate technology will be promoted.

DIRECTIONS:-

The information on the availability of raw material will be secured through periodical forest resource assessments and all relevant data will be provided to potential users. The supply of raw material will be improved by commercialising or privatising the management of existing industrial plantations through concessions and forest land leases. A favourable environment for the establishment of new forest industries will be promoted and facilitated through appropriate financial incentives. The use of appropriate technology in forest harvesting and wood processing will be promoted through training and extension.

4.2.1.2 Woodfuel

Woodfuel is the main source of energy both in rural and urban areas. Lack of alternative and affordable sources of energy has contributed to the degradation of natural forests due to practically uncontrolled harvesting of woodfuel. Efficient wood conversion technology and methods are currently scarce. A significant amount of woodfuel is also wasted as coordination between the logging companies and woodfuel suppliers is non-existent.

Policy statement (9): Establishment of private woodlots and plantations for woodfuel production will be encouraged and supported through research, extension services and financial incentives.

DIRECTION:-

Private individuals will be encouraged to establish woodlots in their farms through research and extension as well as through financial incentives. Dissemination of information on appropriate technology on woodfuel production and use will be enhanced. Private investment in establishing woodfuel plantations will be promoted by introducing appropriate credit systems. The use of alternative affordable sources of energy will be promoted through research and extension.

4.2.1.3 Artisanal wood-based industry and products

The operations of artisanal entrepreneurs are suffering from inadequate information on raw material and its availability. Moreover, the resource base for these products is narrow, the most important species currently being muhuhu (*Brachylaena hutchinsii*) and mpingo (*Dalbergia melanoxylon*). The existing technology is wasteful and unsuitable for mass production. Poor marketing skills and systems as well as the current narrow range of products have negatively affected the business. Wood carving skills are also likely to decline in the future due to lack of opportunities for sustainable skill development in this area.

Policy statement (10): The manufacturing of artisanal wood-based products will be encouraged through resource information and promotion of other suitable lesser-used species, training and extension services as well as research and product development.

DIRECTIONS:-

The artisanal wood-based products have favourable market prospects likely to result from the potential expansion of the tourism industry and exports. Resource data on lesser-used species suitable for artisanal products will be derived from forest inventories and information on the resource base made available to potential users. Specific tree species particularly suitable for wood carving will be identified and conserved. Research, training and transfer of conversion technology on artisanal wood products will be strengthened. Research for the widening of product range and on the suitability of lesser-used tree species will be intensified. Marketing strategies for wood carving products will be developed.

4.2.2 Beekeeping

Beekeeping is the principal industry dealing with management of bees and processing of bee products from natural forests, plantations, agricultural land and other habitats. Main beekeeping products include honey, beeswax, royal jelly, propolis and pollination services. Almost all beekeeping is currently practised through traditional methods.

Constraints faced by beekeepers include lack of appropriate equipment as well as handling facilities. Inappropriate storage facilities, poor packaging and obsolete technology have also contributed to the problems the industry is facing. Knowledge on honey and beeswax handling to maintain quality and quantity is also poor. Supporting services offered to the beekeepers are weak in such areas as local processing and commercial arrangements. Inadequate extension services and poor research facilities have further hampered the development of the industry. Declining natural forest cover and the use of pesticides in vermin and pest control are also constantly affecting the industry's capability to operate.

Policy statement (11): A beekeeping component will be incorporated in the management plans of forest reserves. Beekeeping resource assessment will be intensified.

DIRECTIONS:-

Beekeeping resource assessment will be intensified and a beekeeping component will be incorporated in the management plans of forest reserves in the context of joint forest management. The component may include setting aside suitable habitats for beekeeping activities in forest reserves. Beekeeping activities will be promoted for local communities and other stakeholders through joint management agreements.

4.2.3 Eco-tourism

Development of eco-tourism is a potential source of income for forest owners and communities in the rural areas adjacent to natural forests. The existing wildlife based tourism as well as related marketing services form a sound basis for the development of forest-based eco-tourism activities. The national legal framework for this type of tourism development is, however, currently lacking and its full potential has not been assessed to date. Poor infrastructure in the rural areas is one of the main obstacles in the development of eco-tourism. Specific marketing services for other than wildlife tourism are also lacking at present.

Policy statement (12): Private sector and community involvement in the development of forestbased eco-tourism will be encouraged. This will be linked with the overall tourism development and an appropriate legal framework established.

DIRECTIONS:-

The potential of eco-tourism will be assessed and suitable types of forest areas identified. Private sector and community involvement in developing eco-tourism products and services, such as lodges, trails and guided tours, will be promoted. Linkages and cooperation with other sectors involved in wildlife based tourism development will be promoted. Establishment of an appropriate legal framework to regulate eco-tourism in forest areas will be developed in the context of the tourism and other appropriate legislation.

4.2.4 Other non-wood-based industry and products

The main non-wood forest products include gums, resins, bark, tannin, aromatics, latex, natural dyes, fruits and nuts, fibre, spices, naval stores, medicinal plants, etc. Decline of the natural

forest cover and over-harvesting of some tree species have contributed to the reduction of the resource base. Poor market information and undeveloped marketing channels have hampered the development of the industry. Moreover, further processing to value-added products has been almost non-existent. Skills of the artisans operating the industry are likely to decline in the long run due to inadequate transfer of knowledge from one generation to another.

Policy statement (13): Investments in non-wood forest products industry, product development and marketing will be encouraged in order to utilise the full potential as well as to domesticate and commercialise the products with high demand.

DIRECTIONS:-

Resource assessment of non-wood forest products will be incorporated in forest inventories and resource assessments for forest management planning. Private sector investments will be promoted in order to utilise the full potential as well as to domesticate and commercialise products with high demand. Research, training and product development programmes will be strengthened in the existing forest research and training institutions. Information on potential markets will be produced and efficient marketing channels developed. Awareness raising on the products and markets will be intensified.

4.2.5 Trade in forest products

Trade in wood and non-wood forest products offer considerable potential for increased economic development through income and employment generation as well as export earnings. In some cases, international agreements require the trade in certain forest products to be regulated. Unregulated trade can instigate uncontrolled exploitation and has the potential of accelerating forest destruction and degradation through loss of biodiversity.

Policy statement (14): Internal trade and exports of forest produce, excluding those regulated by international agreements of which Tanzania is a party, will be promoted. To prevent forest destruction and degradation through commercial exploitation, trade of certain forest products may be regulated.

DIRECTIONS:-

To enable free trade of forest produce in the long-term without causing destruction of the resource base, an enabling regulatory environment for sustainable forest management practices will be created through a number of measures incorporated in this policy. The most important of the instruments for sustainable forest management are forest management plans and monitoring systems for their implementation. Internal trade and export of certain forest products such as roundwood, charcoal and endemic species, may be restricted or remain under licensing until the conditions for sustainable forest management and utilisation are in place. The introduction of mechanism for sustainable forest management through national, regional or global initiatives will be supported. Private sector initiatives will also be encouraged in this respect.

- 4.3 Ecosystem conservation and management
- **OBJECTIVE:** Ensured ecosystem stability through conservation of forest biodiversity, water catchments and soil fertility.

4.3.1 Forest biodiversity conservation

Forest biodiversity comprises biological diversity at the ecosystem, species and genetic levels. The current encroachment and shifting cultivation taking place in forested areas are reducing the natural forest cover and forest biodiversity. Moreover, repeated wildfires are hampering the regeneration of all types of forests. Lack of systematic forest management as well as inadequate infrastructure and staff to control illicit felling have further contributed to loss of biodiversity.

The recognition of the importance of biodiversity conservation and management is a recent development at the national level. These concepts have not yet been well popularised amongst the local communities. Lack of baseline data on biodiversity and a low level of awareness on environmental and economic values of indigenous forests have, therefore, been the main causes for the negligence of forest conservation. The current forest management plans have not considered biodiversity management or multiple-use aspects of forestry. Furthermore, values such as lost biodiversity have not been internalised in the valuation of forests.

4.3.1.1 Natural protection forests

Policy statement (15): New forest reserves for biodiversity conservation will be established in areas of high biodiversity value. Forest reserves with protection objectives of national strategic importance may be declared as nature reserves.

Policy statement (16): Biodiversity conservation and management will be included in the management plans for all protection forests. Involvement of local communities and other stakeholders in conservation and management will be encouraged through joint management agreements.

Policy statement (17): Biodiversity research and information dissemination will be strengthened in order to improve biodiversity conservation and management.

DIRECTIONS:-

New forest reserves will be identified and established in areas of high biodiversity value in consultation with other stakeholders. The status of existing forest reserves with high biodiversity value will be upgraded to nature reserves to ensure their protection in perpetuity. Conservation and management objectives for each forest reserve and nature reserve will be defined and management plans prepared. Local community and other stakeholder involvement in the conservation and management of such reserves will be promoted through joint management agreements between the parties involved. Buffer zones around reserved areas and corridors to link fragmented forests will be established in collaboration with the local people. In-situ and ex-situ conservation programmes including gene banks for threatened species will be established. Biodiversity research and information dissemination will be strengthened.

4.3.1.2 Natural production forests and plantations

Policy statement (18): Biodiversity conservation will be incorporated in the management regimes of natural production forests and plantations. Biodiversity conservation and management guidelines will be incorporated in the management plans. The replacement of natural forests by exotic plantations will be minimised.

DIRECTIONS:-

Principles of multiple-use forest inventories will be developed and biodiversity conservation and management guidelines incorporated in the management plans for natural production forests and plantations. Management guidelines for natural forests will be developed and their replacement by exotic plantations minimised. Establishment of monoculture plantations will be minimised by introducing stands of various species. Biodiversity management and landscaping principles will be incorporated in the management regimes of plantation forests. Management and monitoring of biodiversity will be further incorporated in the practical forest operations when implementing the plans.

4.3.2 Watershed management and soil conservation

Sustainability of water sources is one of the key prerequisites for local and national development. Population pressure and inefficient forest management and protection have contributed to the deterioration of catchment forest areas causing water shortages. Poor species selection and illegal logging combined with inappropriate logging methods have further reduced the quantity and quality of water as well as created sedimentation and peak floods. Cultivation of riverbanks outside forest reserves has caused erosion. The value of water is not internalised in the pricing of forest products, leading to conversion of forests to other land use in the catchment forest areas.

Policy statement (19): New catchment forest reserves for watershed management and soil conservation will be established in critical watershed areas.

Policy statement (20): Watershed management and soil conservation will be included in the management plans for all protection and production forests. Involvement of local communities and other stakeholders in watershed management and soil conservation will be encouraged through joint management agreements.

Policy statement (21): Research and information dissemination will be strengthened in order to improve watershed management and soil conservation.

DIRECTIONS:-

The most important watershed areas will be identified and new catchment forest reserves established in areas of high watershed value. Management objectives for each catchment forest area will be defined and management plans prepared. Specific provisions will be included for the protection of water sources such as rivers, streams, wells and wetlands. Local community and other stakeholder involvement will be encouraged in the establishment and management of buffer zones as well as in the overall catchment forest protection through joint management agreements. The establishment of water conservation funds will be promoted. Coordination between the forest authorities and other institutions involved in watershed protection will be strengthened.

Information and awareness on the value of forests in the protection of water supply will be enhanced through research, training and extension. Watershed management guidelines will be prepared and management aspects incorporated in forest management planning (riverine zones, steep slopes, alignment of road network, etc.). Selection of appropriate species for watershed protection will be emphasised in plantations.

4.3.3 Wildlife

Encroachment, wildfires, illegal logging and poaching in the reserved forests have contributed to the deterioration of the wildlife population. Baseline data on wildlife species and their habitats outside game reserves and national parks is scarce and wildlife management is not incorporated in the current forest management plans. Coordination between the government institutions involved in wildlife and forest management is poor. Some forest reserves overlap with game reserves or game controlled areas, causing conflicts in management activities. Inadequate infrastructure and financing within wildlife and forest sector have further exacerbated the situation.

Overgrazing is a prominent problem in public forest lands and impacts negatively on the living conditions and survival of the wildlife population. Damage caused by wildlife on property, agricultural crops, livestock and even human lives creates conflicts of interest between wildlife conservation and the rural population. The level of awareness of local communities on the need for sustainable wildlife management is low.

Policy statement (22): Management of forest reserves will incorporate wildlife conservation. Wildlife resource assessment will be intensified.

DIRECTIONS:-

Resource assessment of wildlife in forest reserves will be intensified and wildlife component incorporated in the forest management plans. The component may include setting aside corridors, grasslands, wetlands, etc. so as to ensure habitats for different types of wildlife. Local community and other stakeholder participation in wildlife conservation will be promoted through joint management agreements between all relevant parties. Coordination between the forest and wildlife authorities will be improved in the management of wildlife inside forest reserves and in resolving conflicts arising from overlapping forest and game reserves or game controlled areas.

4.3.4 Environmental impact assessment

Various types of investment projects in forest areas may cause adverse environmental impacts. Environmental Impact Assessment (EIA) must, therefore, be incorporated in the planning and decision-making process in order to ensure beforehand that unnecessary damage to the environment is avoided and possible mitigation measures are identified.

Policy statement (23): Environmental impact assessment will be required for the investments which convert forest land to other land use or may cause potential damage to the forest environment.

DIRECTIONS:-

The potential damage to the forest environment may be caused by development activities such as forest industries, mining, road construction, agriculture, dams, settlements, shrimp farming and tourism. Environmental impact assessment will be required before investments are undertaken in forest areas. Definition of the scope and guidelines for EIA for the forest sector will be prepared in collaboration with other sectors and stakeholders.

4.4 Institutions and human resources

OBJECTIVE: Enhanced national capacity to manage and develop the forest sector in collaboration with other stakeholders.

4.4.1 Framework for forest policy, planning and coordination

Lack of timely policy revision and implementation has hampered the development of forestry, beekeeping and forest-based industries. Weak cross-sectoral and donor coordination has led to overlapping and poorly coordinated donor-financed forest projects, resulting in unsustainable forestry programmes and weak self-financing initiatives.

Policy statement (24): The policy analysis and planning capacity within the forest sector will be strengthened with the emphasis on strategic planning and coordination. A broad based consultative group with advisory functions will be established to guide on policy-related cross-sectoral issues.

DIRECTIONS:-

A strong policy analysis and strategic planning unit within the forest administration will be created. A suitable consultative group to advise the sectoral administration and promote cross-sectoral and donor coordination will also be established. A strategically focused National Forest Programme (NFP) to guide policy implementation will be prepared and periodically updated.

4.4.2 Legal and regulatory framework

The Forest Ordinance of 1957 which is the main forest regulatory instrument was based on a strong controlling function of the sectoral authorities and centralised administrative structures for its implementation. Approaches to encourage community and private sector involvement in forestry were not adequately addressed. Updating of policies related to wildlife, land use and tenure, and creation of an environment policy has been done. However, supporting legislations have not been completed.. There is also a lack of coordination in formulating by-laws between the central and district levels as well as between the relevant sectors. Some by-laws established by local governments have turned out to be contradictory to the principal laws. Guidelines for active and sustainable forest management are non existent and royalties and other license fees collected by the government are based on administrative pricing and do not reflect their economic values.

Policy statement (25): Legislation for the forest sector will be periodically updated and harmonised with the legislation of other related sectors.

Policy statement (26): National criteria and indicators for sustainable forest management will be developed. Management guidelines for different forest types will be established on the basis of these criteria and indicators, and management plans for all types of forest reserves prepared accordingly.

Policy statement (27): Royalties and other fees for forest products and services will be determined to reflect their economic values. Revenue collection will be made more effective.

Policy statement (28): Pricing of forest products and services sold from central and local government reserves will be determined based on free market values.

DIRECTIONS:-

Revision of forest legislation will follow the approved policy and will be harmonised with the legislation of other related sectors. National criteria and indicators for sustainable forest management will be established. Management guidelines for different forest types will be developed based on these national criteria and indicators. Management plans for all types of forest reserves will be prepared. The capacity of the sectoral administration to monitor the implementation of the plans will be strengthened. Royalties and other fees collected by the government will be adjusted to reflect their economic values. Revenue collection will be strengthened and made more effective. Prices of forest products and services sold from central and local government reserves will be determined based on free market values.

4.4.3 Forest administration

The sectoral administration, like other natural resources sectors, is operating under three parallel structures, namely the local governments, regional administration, and the ministry responsible for forestry. Weak links between the sectoral administration at the district and regional levels make the coordination of activities difficult. Central capacity to provide administrative and technical guidance is inadequate in terms of human resources, finance and materials. Technical and professional staff is inadequate at all levels and self-financing revenue sources within the administration are narrow. Coordination with other relevant sectors is poor. Current information systems and databases do not provide sufficient information for decision making. Inadequate remuneration of civil servants has resulted in low work motivation. Due to scarce resources the law enforcement function of the sectoral administration is weak.

Policy statement (29): The role of the sectoral administration will focus on policy development, regulation, monitoring and facilitation. Decentralisation of forest resource management responsibilities will be promoted. Specialist technical and training backup services as well as information dissemination and sharing will be strengthened.

DIRECTIONS:-

The structures of the forest sector administration will be developed in accordance with the civil service organisation and efficiency reform and local government reform recommendations. Links and coordination between the central and decentralised levels will be strengthened. Recruitment of specialists to the sectoral administration will be promoted. Forestry extension services will be strengthened. In order to ensure professional and technical competence of the personnel, in-service and further training programmes will be implemented. The capacity of the sectoral administration to provide legal, resource assessment and market information to regions, districts and other stakeholders will be strengthened and information sharing with other stakeholders intensified.

4.4.4 Local governments

The technical capacity of the local governments on forestry activities is weak. As the funding for natural resources management at the district level is generally inadequate, exploitation of natural resources has become the main source of revenue generation.

Policy statement (30): The capacity of the local governments to administer and manage forest resources will be strengthened and a coordination mechanism between the local and central governments established.

DIRECTIONS:-

The recruitment of qualified ad competent forestry staff for local governments will be emphasized and in-service training promoted. Sustainable direct and indirect uses of forests by local governments will be encouraged.

4.4.5 Other government institutions

The capacity of most government agencies responsible for natural resources to respond to future challenges is weak. Coordination between different government agencies involved in natural resources management and conservation is poor. Some policies are outdated and new ones are under formulation or in the process of approval. Frequent changes in the responsibilities and structures of various sector ministries have not been followed by revision in the respective sectoral legal framework.

Policy statement (31): Cross-sectoral coordination between the forest administration and other government institutions will be promoted at all levels.

DIRECTIONS:-

Cross-sectoral coordination on forest-related issues in environment and natural resources management and conservation at the central and decentralised levels will be promoted. Cross-sectoral collaboration and coordination in the formulation of relevant policies and action plans, based on identification of the roles of the various stakeholders, will be promoted. Collaboration and coordination will also be emphasised and promoted for the establishment of an integrated extension system for natural resources management including agriculture. Formal sectoral coordination between wildlife and forest authorities will also be promoted, particularly in the management of wildlife in forest reserves and where game controlled areas or game reserves and forest reserves overlap. Cross-sectoral coordination when carrying out environmental impact assessments required for investments in forest areas will be promoted.

4.4.6 Forestry research

National Forest Research Master Plan was prepared in 1991-92. However, research programmes in areas such as indigenous forest management and species have not been initiated as recommended. Inadequate human resource capacity and low priority in terms of funding and infrastructure development have hindered the implementation of all research programmes. Forestry research has not been demand-driven because of poor links between the research institutions and users.

Policy statement (32): Forestry research and development will be promoted and strengthened as the basis for sustainable development and management of the forest sector. Financial resources for problem-oriented research and development programmes will be provided through cost-sharing mechanisms and establishment of research funds.

DIRECTIONS:-

Forestry research and development priorities will be reviewed based on the demand-driven research principle. Research and development focusing on improved forest and tree management especially indigenous species will be promoted. Collaboration between the national research institutions will be promoted. Close linkages between the research institutions and users will be developed through information exchange, symposia and seminars, and joint development of research plans. International and regional cooperation in forestry research will be promoted.

4.4.7 Forestry training

Information on labour market for forestry is lacking and the overall manpower and training plan has not been adequately prepared. Professional and specialist training is inadequate and training curricula have not been updated to meet the needs of multiple-use forestry. Practical aspects of training are weak and curricula do not provide sufficient possibilities for specialisation. The links between the forest sector training institutions including vocational training centres and those of Research and development on forestry will be promoted and sufficient financial resources provided through cost-sharing mechanisms and research funds. The National Forest Research Master Plan will be revised in collaboration with stakeholders. The plan will set out priority areas for forest research. Due to inadequate funding the training institutions are under-utilised at present.

Policy statement (33): To ensure adequate professional, technical and specialist staff in the sector, forestry training institutions will be strengthened. Specialist training will be promoted.

Policy statement (34): To facilitate manpower development a regular demand-driven manpower needs assessment, curricula review and training planning will be conducted.

DIRECTIONS:-

To ensure adequate and competent professional and technical staff to manage the forest sector, sufficient resources will be provided to strengthen the existing forestry training institutions. A system for demand-driven regular manpower needs assessment, curricula review and training planning for the sector will be developed. International and regional cooperation in forestry training will be promoted.

4.4.8 Extension services

A well-functioning extension service is a prerequisite for the promotion of farm and community forestry. The extension service is, however, poorly staffed and fragmented as different sectors of natural resources management and agriculture have their own services. All these organisations lack both human and financial resources, and extension messages delivered to farmers are sometimes conflicting as the coordination between different services is inadequate. Multiple-use forestry is not adequately addressed in the extension programmes. Inadequate extension materials and facilities are hampering extension work. Moreover, the current curricula of the primary and secondary schools do not include sufficient education on natural resources management.

Policy statement (35): To ensure increased awareness and skills amongst the people on sustainable management of forest resources, the forestry extension services will be strengthened.

Policy statement (36): Forestry related extension messages delivered by different natural resources management sectors and other related sectors will be harmonised through integrated planning, research and training.

DIRECTIONS:-

To ensure increased awareness and skills amongst the people on conservation, management and utilisation of forest resources, the capability of the forestry extension service will be strengthened. Extension efforts will be directed towards private and community forestry as well as joint forest management in the government forest reserves. In order to have efficient and effective extension service cross-sectoral coordination will be promoted. This will be achieved through integrated extension planning, increased input of forestry extension in other services through in-service-training of the extension staff, coordinated on-the-spot advice, farmer-to-farmer extension and other approaches as appropriate. The extension messages will be designed in a gender sensitive manner.

Forestry extension curriculum will be reviewed towards multiple-use forestry. Extension packages for different geographical areas and ecological zones will be developed in close collaboration with the respective users. Involvement of NGOs and other institutions in forestry extension activities through coordination, training and preparation of extension materials will be further promoted. Introduction of environment and natural resources education in the primary and secondary schools will be supported.

4.4.9 Non-governmental organisations

The non-governmental organisations (NGO) in the field of forestry provide a potentially effective channel to reach farmers and communities with extension advice and other incentives. However, the NGOs lack capacity both in terms of human resources and materials. Inadequate financing is also hampering their activities. Inadequate coordination amongst NGOs has resulted in overlapping activities in some areas.

Policy statement (37): Coordination and cooperation between the forest sector and NGOs will be promoted.

DIRECTIONS:-

Coordination between the forest sector and NGOs will be promoted. Establishment of NGOs in the field of forestry will be encouraged. NGO participation in the preparation of forest-related plans and programmes will also be encouraged. Moreover, NGOs will be encouraged to increase self-financing in order to ascertain their sustainability.

4.4.10 **Private sector**

The parastatal organisations in the field of forestry have been inefficient in terms of productivity and marketing of their products and are in the process of privatisation, commercialisation or liquidation. The private sector will take a prominent role in the activities which the parastatals are currently undertaking. Private forestry enterprises are suffering from limited accessibility to credit for investments. The harvesting and processing activities are inefficient due to poor technology, obsolete equipment and lack of technical know-how. Insecure supply of suitable raw material and inadequate information on its availability have discouraged entrepreneurs to invest in the forest industry. Lack of organised marketing systems and channels have hampered sales of forest products.

Policy statement (38) An enabling environment and regulatory framework for the private sector involvement in forestry will be created through secured raw material procurement, training, research, and transfer of technology. Incentives and credit facilities for investments will be promoted and joint ventures will be encouraged.

DIRECTIONS:-

An enabling environment for the private sector involvement in forestry will be created. This involves clear ownership and tenure rights, information on forest resources and raw material, financial incentives and credit facilities, improved access to markets and market pricing of products as well as effective training and extension. Cooperation between forest administration and relevant private sector associations will be facilitated. Reliable information to private industries on forest resource base and investment opportunities will be provided. Regulatory framework enabling private investment including appropriate lease and concession arrangements will be developed. Establishment of joint ventures by the private sector will be encouraged. Credit systems and other financing mechanisms for forest industries will also be promoted. Opportunities will be provided to the private sector for training and transfer of technology.

4.4.11 Local communities

In many parts of Tanzania, local communities have the potential to ensure sustainable management of forest resources. However, land and tree tenure on communal and public lands is not clear, particularly for indigenous trees. The lack of incentives and any mechanism for raising funds has hampered sustainable forest management by local communities. Inadequate incentives for tree growing have resulted in poor motivation to plant and care for forests and trees. Lack of awareness on conservation needs and know-how on tree growing is common amongst local communities. Extension services have been unable to produce information on forest management practices or marketing channels for forest products. Gender inequality in land tenure has prevented women from owning land and women's involvement in formal decision making on resource management has been virtually non-existent despite the important role of women in forestry activities. Poor communication and infrastructure as well as inadequate communication channels with the government authorities have contributed to the poor state of forest management. Local level forestry by-laws and their enforcement mechanisms have not been effective.

Policy statement (39): Local communities will be encouraged to participate in forestry activities. Clearly defined forest land and tree tenure rights will be instituted for local communities, including both men and women.

DIRECTIONS:-

Clearly defined forest land and tree tenure rights for communities will be established. The establishment of village forest reserves, community-based organisations for joint forest management, exchange of information and awareness raising will be promoted. Local communities will be involved in forestry-related planning and decision making through promotion of participatory extension methods and approaches. Establishment and sustainable management of village forest reserves will be promoted. Communities will be granted rights to retain revenue from accrued products and services derived from community-managed forests. Forestry activities by local communities and farmers will be promoted through extension services, technical assistance and establishment of appropriate financial incentives. Women's involvement in forestry activities will be promoted.

4.4.12 Financing

The development of the forest sector has been dominated by a high dependence on donor and public financing, and sectoral self-financing mechanisms have remained undeveloped. Poor economy with high interest rates has also hampered domestic financing. Private sector financing has been low due to lack of appropriate financing mechanisms. Support from the donors has been gradually declining during the past few years. Moreover, some existing international financing mechanisms, e.g. "debt-for-nature-swaps", have not been easy to adopt by the government which has been unable to raise enough local funds to meet the required conditions. The same applies also to the country's limited capacity to fulfil all international obligations; conventions and other agreements. In addition, some foreign aid programmes have not had in-built sustainability to allow the government to take over the activities when donor financing ceases.

Policy statement (40): New and innovative sectoral financing mechanisms will be developed and directed to the key functions and stakeholders of the forest sector.

DIRECTIONS:-

The new policy is based on the establishment of self-financing structures, such as executive agencies and increased contribution by the private sector and local communities. National and local level financing mechanisms for private sector and local community investments in forestry activities will be developed. Public sector self-financing will also be intensified through full valuation of the resource use by product pricing based on their respective economic values and through efficient collection of royalties and other fees.

Long-term financing arrangements for forestry research in collaboration with the international community will be developed. Commercialisation of some research activities will be promoted so as to increase self-financing. New mechanisms for cost-sharing of training expenses by different users, and development of commercial activities by training institutions for increased self-financing will be promoted. Provision of training and education services at the regional level on a commercial basis on selected fields of speciality such as forest-based industries will be promoted. Cost-sharing mechanisms will also be promoted to improve the sustainability of the forestry extension services. NGOs will also be encouraged to undertake commercial activities for increased self-financing so as to ensure their sustainability.

Efficient use will be made of existing national financing, including public and private sources. The linking of donor funding to the national financing structures will be improved and donor assistance used to support private investment by creating an enabling environment. Systems for long-term external financing will be developed for projects with global dimension, such as conservation and research, e.g. in the form of conservation and research funds or other similar arrangements.

4.4.13 International community

Despite the significant role of international financing of the Tanzanian forest sector, donor coordination within the sector is still not effective. The priorities of the major development partners sometimes seem to over-shadow those of Tanzania. Many qualified personnel have left the public sector due to attractive remuneration in donor supported projects, resulting in brain drain from the public administration. The situation leads to undermining of national priorities. Some donor-financed projects have also established parallel organisations within the government structure which has caused problems and confusion in their relations with the existing government administration.

Policy statement (41): To avoid parallel and overlapping programmes, consultation with development partners in the context of overall sectoral coordination of projects or programmes will be strengthened.

DIRECTIONS:-

An effective donor coordination system in the context of overall sectoral coordination will be established. Integration of donor supported projects into the government institutional set-up and planning cycles will be promoted.

CHAPTER FIVE

5.0 Roles and responsibilities of main stakeholders

The roles and responsibilities of main stakeholders are summarized in the following table:

ROLES AND RESPONSIBILITIES OF MAIN STAKEHOLDERS

STAKEHOLDER/	Forest land management	Forest-based industry	Ecosystem conservation
ROLE IN:	6	and products	and management
Local communities	 Conservation and management of village forest reserves and trees on farms Participation in joint management of forest reserves Production of subsistence forest products; fuelwood and poles Establishment and management of village forest reserves Farmer-to-farmer advice Formulation and enforcement of by-laws Employment in forest management and utilisation 	 Production of subsistence and commercial forest products Employment in forest-based industry 	 Conservation and management of village forest reserves and trees on farms Participation in joint management of conservation areas
NGOs	Awareness raising and extension services	Awareness raising and extension services	Awareness raising and extension services
	 Capacity building Training and technical assistance Eigeneing of forestry 	 Capacity building Training and technical assistance Einensing of forestry 	 Capacity building Training and technical assistance Einensing of forestry
	• Financing of forestry and environment activities	• Financing of forestry and environment activities	• Financing of forestry and environment activities
	• Promote gender roles, women empowerment	Promote gender roles, women empowerment	Promote gender roles, women empowerment

STAKEHOLDER/	Forest land management	Forest-based industry	Ecosystem conservation
ROLE IN:	C C	and products	and management
Private sector and/or specialised executive agencies	• Joint management of forest reserves	Provision of employment	• Application of bio- diversity guidelines in forest management
	Provision of employment	Production of wood and non-wood products	• Application of EIA in forestry investments
	 Sustainable harvesting and utilisation Awareness and extension services 	 Marketing of products Investment in environmentally sound production technology 	• Joint management of conservation areas
	• Financing of investments in forestry	 Awareness and extension services Financing of forest industry investments Eco-tourism development 	
Local government	• Coordination of extension services	Regulation	• Regulation
	Revenue collection	Revenue collection	• Management of local government forest reserves of conservation and biodiversity values
	Law enforcement		
	Management of local government forest reserves		
	• Creation of new forest		
	reserves		
	• Promotion of tree planting and seedling production		

STAKEHOLDER/	Forest land management	Forest-based industry	Ecosystem conservation
ROLE IN: Forestry and Beekeeping	Policy formulation	and productsPolicy formulation	and managementPolicy formulation
authorities	 Sectoral planning and budgeting Legislation Law enforcement Revenue collection Management of strategic forests Monitoring and evaluation Information systems Manpower planning and human resources development Extension services Research and research coordination Training and curricula development Coordination of other stakeholders International cooperation 	 Sectoral planning and budgeting Legislation Law enforcement Revenue collection Monitoring and evaluation Information systems Extension services Research and research coordination Training and curricula development Coordination of other stakeholders International cooperation 	 Sectoral planning and budgeting Legislation Law enforcement Revenue collection Monitoring and evaluation Information systems Manpower planning and human resources development Extension services Research and research coordination Training and curricula development Coordination of other stakeholders International cooperation
Other government institutions	 Coordination and collaboration in extension, training and research Law enforcement Assist in monitoring and evaluation Support in conservation and management Support in collection and dissemination of information Land use monitoring 	 Coordination and collaboration in extension, training and research Law enforcement Assist in monitoring and evaluation Assist in licensing of industries and trade Support in conservation and management Support in collection and dissemination of information 	 Coordination and collaboration in extension, training and research Law enforcement Assist in monitoring and evaluation Support in conservation and management Support in collection and dissemination of information

STAKEHOLDER/ ROLE IN: International community	 Forest land management Partners in sustainable development Financial assistance Capacity building through technical assistance, training and transfer of technology Facilitation of implementation of international obligations 	 Forest-based industry and products Partners in sustainable development Financial assistance Capacity building through technical assistance, training and transfer of technology Facilitation of implementation of international obligations 	 Ecosystem conservation and management Partners in sustainable development Financial assistance Capacity building through technical assistance, training and transfer of technology Facilitation of implementation of international obligations
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