People and Bees

A Plain Language Guide to the United Republic of Tanzania’s National Beekeeping Programme

Ministry of Natural Resources and Tourism

August 2004
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This booklet presents a short version of the ‘National Beekeeping Programme in Tanzania 2001-2010’ which was approved by the Government in November 2001.

The National Beekeeping Programme (NBKP) fits with Tanzania’s overall development plans and especially with its Poverty Reduction Strategy (PRS). The main new ideas in the NBKP are ‘Sustainable Development’ and ‘Sustainable Beekeeping Resources Management’ (SBRM). These call for all development plans to tackle environmental, social and economic issues in a coordinated way. If the economy grows but the environment is damaged and many people fall into poverty, then development is not sustainable. The NBKP therefore focuses on environmental conservation, economic growth and poverty reduction at the same time.

The NBKP approach also includes recent changes in government policies that call for involvement of local communities, the private sector, development partners, NGOs, and beekeeper groups and associations in managing beekeeping resources. The equal participation of men and women in this process will be promoted. Many income-generating activities related to beekeeping will be created and this will help to develop the economy and reduce poverty.

This is a bold and exciting vision that offers many challenges and benefits which are explained in this booklet.

The first section of this booklet describes what the NBKP is. Five questions are asked and answered to give a short summary of the main points of the programme. The second section outlines the three key programmes of the NBKP and how they will be implemented. The following sections describe the benefits of the NBKP, roles and responsibilities of stakeholders, cross-sectoral links, and the way forward.

The NBKP contains many unfamiliar words and ideas. Therefore, an alphabetical list of all the abbreviations that are used is provided at the front of the booklet and a special glossary is provided at the back.

This booklet aims to raise the awareness of civil society, the private sector, and poor people of the many ways in which beekeeping can help with national development and poverty reduction. The back cover has details about who to contact for more information about the programme.
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### Abbreviations

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<th>Description</th>
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<tr>
<td>C&amp;I</td>
<td>Criteria and Indicators</td>
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<tr>
<td>EIA</td>
<td>Environmental Impact Assessment</td>
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<td>FBD</td>
<td>Forestry and Beekeeping Division</td>
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<tr>
<td>M&amp;E</td>
<td>Monitoring &amp; Evaluation</td>
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<td>MNRT</td>
<td>Ministry of Natural Resources and Tourism</td>
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<td>NBKP</td>
<td>National Beekeeping Programme</td>
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<td>NBP</td>
<td>National Beekeeping Policy</td>
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<td>NFP</td>
<td>National Forest Programme</td>
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<tr>
<td>NGO</td>
<td>Non-governmental Organization</td>
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<td>PO-RALG</td>
<td>President’s Office-Regional Administration and Local Government</td>
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<td>SBRM</td>
<td>Sustainable Beekeeping Resources Management</td>
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<td>SFM</td>
<td>Sustainable Forest Management</td>
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1. Background: How the National Beekeeping Programme was Developed

The Tanzania Forest Action Plan (TFAP) of 1989 suggested that there should be a beekeeping programme. This led to the production of a National Beekeeping Policy (NBP). The National Beekeeping Programme (NBKP) was then developed as a tool for implementing the NBP.

The process of developing the NBKP started in January 2000. It was developed through a participatory, multi-stakeholder process. The process was implemented and coordinated by a Task Force and guided by a Steering Committee.

The process included 5 major activities:

1) A review of the beekeeping sector in Tanzania was conducted in order to understand:
   • the current situation of beekeeping
   • the future of beekeeping
   • issues, opportunities and threats
   • links between beekeeping and other sectors

2) A National Level Orientation Workshop was held in April 2000. The review of the beekeeping sector was shared with many stakeholders in order to get their comments and feedback. Stakeholders included all levels of government, international development partners, non-governmental organizations, private sector, special agencies, and research and academic institutions.

3) The issues raised at the Orientation Workshop were reviewed and prioritized according to the Government’s development plans, the mission of the Ministry of Natural Resources and Tourism, and the current local and international situation.

4) Two studies were conducted on key issues in the beekeeping sector, namely marketing of honey and beeswax, and the links between beekeeping and other sectors.

5) The last activity was to develop and implement strategies and actions on priority beekeeping issues.

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**National Beekeeping Policy**

**Overall goal:** To enhance the contribution of the beekeeping sector to the sustainable development of Tanzania and the conservation and management of her natural resources for the benefit of present and future generations.

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**The participatory process included:**

- 8 major multi-stakeholder workshops
- 6 local level consultations
- 11 special studies
- Several seminars
2. Introduction to the National Beekeeping Programme

This section answers five questions that cover the main ideas in the NBKP.
1. What are the main goals of the programme?
2. What is Sustainable Beekeeping Resource Management?
3. What beekeeping resources are available?
4. How can production and marketing of bee products be improved?
5. What challenges are facing the beekeeping sector?

2.1 What are the main goals of the programme?

The NBKP addresses beekeeping issues within the context of sustainable development.

The goals of the NBKP are:
- to promote the conservation and sustainable use of beekeeping resources to meet local, national and global needs
- to manage, protect and restore beekeeping resources through developing national and international partnerships

The main objectives of the NBKP are to ensure:
1. a sustainable supply of bee products and services to meet needs at local, national and global levels
2. an improved national capacity to manage and develop the beekeeping sector in a collaborative manner
3. an enabling legal and regulatory framework for the sector
4. increased contributions to the economy, employment and foreign exchange earnings through sustainable beekeeping-based industrial development and trade in bee products

These objectives include social, environmental, and economic issues. The NBKP works with all of them at the same time through Sustainable Beekeeping Resources Management (SBRM) programmes.

The 3 Pillars of Sustainable Development:
1. Economic growth
2. Environmental protection
3. Social equity

The NBKP is also a part of the Sector Wide Approach (SWAP). The Government is using SWAP as a new approach for developing the Beekeeping Sector.
What is SWAP? SWAP means that all funding for a sector supports a single policy and its implementation. This single policy will be implemented through programmes. The single policy for the Beekeeping Sector is the National Beekeeping Policy (NBP), which will be implemented through the National Beekeeping Programme (NBKP).

2.2 What is Sustainable Beekeeping Resources Management?

Sustainable Beekeeping Resources Management (SBRM) is at the heart of the NBKP. SBRM takes into account the environmental, social and economic aspects of beekeeping and works cooperatively with projects aimed at Sustainable Forest Management (SFM).

**Sustainable:** Sustainable development is defined as “Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”

**Beekeeping Resources:** Bees used to be managed on a small scale to produce honey and beeswax largely for local use. The new idea is to increase the quality and quantity of apiaries and thus of honey and beeswax production. A wide range of value-added secondary products for local, national and global markets will also be produced. Beekeeping will form a key part of most SFM programmes and will therefore help to preserve biodiversity and create new livelihood and employment opportunities so as to reduce poverty.

**Management:** Management used to be controlled by a few people at the top. The new idea is that it should be participatory and involve all the relevant stakeholders. Good management involves having clear aims and objectives, well-designed plans, and clear ways of monitoring and evaluating progress. Good management also involves addressing cross-sectoral issues. This prevents waste and lack of coordination.

SBRM is defined as:

"the stewardship and use of beekeeping resources in a way and at a rate that maintains (a) biodiversity, productivity, regeneration capacity, and vitality and (b) the potential of these to fulfil, now and in the future, relevant environmental, social and economic functions".

SBRM also means that the responsibility for managing beekeeping resources is shared among a wide range of stakeholders at all levels. The idea is that local government, communities, civil society, and the private sector should play a greater role in the daily management of beekeeping resources.

Overall, the guiding principles of SBRM are to:

- build local commitment to national and international policies
- take a sector wide approach
- build cross-sectoral links and be consistent with the national development goals and global initiatives
- have an ongoing and long-term commitment to policy and institutional reform
Other principles to make sure that all development of beekeeping resources is sustainable include the need to:

- raise public awareness about sustainability issues
- encourage the participation of a wide range of stakeholders
- work in partnership with communities and the private sector
- build the capacity of stakeholders at all levels

2.3 What beekeeping resources are available?

Tanzania has a good environment for producing bee products because there are many plants that produce nectar and pollen that attract honeybees.

The main bee products in Tanzania are honey and beeswax. But a wide range of secondary products can come from both honey and beeswax.

2.3.1 Honey

Honey in Tanzania is of high quality and pure at its source, which means it can get a high price if the quality is maintained until it is used. However, the processed honey that is being sold now is of poor quality because beekeepers have low skill levels and they use poor equipment.

About 75% of honey produced in Tanzania is consumed within the country. A lot of honey is used by bakeries, confectioners and pharmaceutical industries. Honey is also sold for making honey beer and honey wine, as well as for food and medicine. There is a big potential market for honey in large towns, hotels, airlines and tourist centres if the honey is well packaged by producers. In addition, Tanzania exports about 200,000 tons of honey per year. The countries that buy honey are: Germany, Netherlands, Belgium, U.K. and Italy.
2.3.2 Beeswax

Beeswax produced in Tanzania is of high quality, good colour, natural, pure, and clean. There are many products that can be made from beeswax:

- Candles
- Cold creams and eyebrow pencils
- Lip pomades and lipsticks
- Hair creams
- Chewing gum
- Shoe polish, floor polish, etc.
- Polish for cars and tyres
- Dye-making for batiks
- Imitation fruits and flowers
- Removing feathers from poultry
- Wax putty for sealing leaks
- Wax soap
- Wax for coating string
- Coating for candies and decorating food
- Coating for containers to prevent rust
- Waterproof coating to prevent salt water corrosion

Only a small amount of beeswax is used in the country, mostly for candles and batiks. One kilogram of beeswax sells for 1,000–1,500 Tsh. Tanzania exports most of its beeswax to Japan, Europe and the Middle East. There is a demand for natural cosmetics in the world market, so the demand for pure beeswax is high. The price for beeswax on the world market is US$3-3.50 per kilogram.

2.3.3 Beekeeping-related Industries

These industries include:
- beekeeping equipment production
- honey, beeswax and other bee products based industries
- bee-pollination based industries
- ecotourism
2.4 How can production and marketing of bee products be improved?

More research is needed to find out what the main marketing and production problems are and to discover how the stakeholders think they might be solved. Present thinking about the problems and possible solutions are listed briefly here.

<table>
<thead>
<tr>
<th>Production Problems</th>
<th>Marketing Problems</th>
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<tbody>
<tr>
<td>• Lack of knowledge about, and access to, more effective</td>
<td>• Lack of reliable market information — local and international</td>
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<tr>
<td>techniques and equipment</td>
<td>• Transport problems in getting products out of remote areas</td>
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<td>• Low quality products from many beekeepers</td>
<td>• Marketing of crude honey and beeswax rather than of value added secondary</td>
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<td>• Lack of effective quality control and inspection systems</td>
<td>products</td>
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<tr>
<td>• Lack of support for beekeepers</td>
<td>• Unharmonised system of legal fees and levies due to lack of coordination between</td>
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<tr>
<td>• Lack of working capital for people in all parts of the</td>
<td>government and trade institutions</td>
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<td>industry</td>
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At present there are three main systems for production and marketing:

(1) Most beekeepers work on their own and get no assistance from outside in terms of inputs and support for getting products to markets.

(2) In some cases individual beekeepers form producer groups that join together to form a marketing cooperative society. The society provides various forms of support including transport and storage facilities.

(3) There are some large, private investors who provide everything that the beekeeper needs to produce and process good quality honey.

The production and marketing process can be improved significantly by developing systems 2 and 3.
Solutions to the problems will involve:

- Researching issues about production, processing, packaging and marketing so as to better understand what is going on and to suggest new approaches and products.
- Training to improve the efficiency of production, processing, packaging and marketing so that end products meet agreed quality standards.
- Supporting the development of beekeeping associations at village, district and national levels. The associations would develop an effective system of collection centres and possibly provide an extension service to help with inputs and training. They could also be involved in research and in collecting and distributing market information.
- Cooperating with NGOs that are directly or indirectly involved with the beekeeping sector. They offer a cost effective way of targeting advice and various kinds of support at the local level.
- Advertising Tanzanian bee products in foreign markets.
- Reducing and harmonising administrative and tax barriers to production and marketing.

2.5 What challenges are facing the beekeeping sector?

The beekeeping sector faces challenges at the village, district, and national levels.

2.5.1 Challenges at the Village Level

- Community groups and individuals need access to capital to participate in commercial beekeeping. They also need incentives to get involved in beekeeping, especially if it is not their traditional activity.
- Expanding bee reserves in villages.
- Mobilizing beekeepers into groups.
- Lack of availability of credit facilities, training and education, and extension services.
- Beekeepers in villages have serious problems in marketing their products. If beekeepers are unable to market their products, they will not have any incentive to participate in commercial beekeeping.
- Beekeepers need to develop knowledge and skills for planning their businesses and for the production, processing and marketing of a wider range of high quality bee products.
- Beekeepers need good facilities and equipment for transport, harvesting, processing, packaging and storage of bee products.

2.5.2 Challenges at the District Level

- There is a need to build the skills and abilities of local government staff so that they can promote beekeeping at the local level.
- There is lack of awareness of national policies at the district level, so there is a lack of good implementation strategies. This means that national policies are not being implemented at the district level, even when resources are available.
• Beekeeping administration is under two different institutions: President’s Office-Regional Administration and Local Government (PO-RALG) and the Ministry of Natural Resources & Tourism (MNRT). There is a need for these two institutions to coordinate the administration of beekeeping to improve efficiency.

2.5.3 Challenges at the National Level
• Raising awareness among the public of the economic, social, and environmental benefits of beekeeping. Campaigns to raise awareness will focus on all stakeholders in order to encourage their participation and commitment.
• Resources will be required to create and implement campaigns and programmes to raise awareness, to provide training and education, to demonstrate best practices, and to provide extension services.
• Building capacity within the Forestry and Beekeeping Division (FBD) to plan, implement, coordinate, monitor and evaluate the NBKP.
• Political commitment to prioritize the beekeeping sector.
• Empowering local people to develop their abilities, make decisions, manage resources and control their own activities.
• Developing guidelines for establishing and managing bee reserves and apiaries.
• Improving extension services for beekeeping. Extension services are currently poor and there are not enough resources to build their capacity.
• Acquiring long-term funding for beekeeping development, since government funding is not adequate and donor funding is limited.
• Harmonising policies, rules and regulations within the beekeeping sector and among other related sectors.
• Improving quality assurance in the production of bee products to meet national and international standards.
• Involving the private sector and NGOs in providing services and training.
• Collecting and distributing reliable market information.
The NBKP is made up of three key development programmes and eleven development sub-programmes. They are outlined in the table below. These have been designed to make best use of beekeeping resources while tackling the challenges of poverty reduction and forest degradation.

<table>
<thead>
<tr>
<th>3 Key Development Programmes</th>
<th>11 Development Sub-programmes</th>
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<tbody>
<tr>
<td>1. Beekeeping Development</td>
<td>- Land use planning</td>
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<td></td>
<td>- Conservation of bee fodder</td>
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<td>- Improvement of quantity and quality of bee</td>
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<td>products</td>
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<tr>
<td>2. Legal and Regulatory Framework</td>
<td>- Formulation and harmonisation of laws,</td>
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<td></td>
<td>regulations and guidelines</td>
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<td></td>
<td>- Development of sector specific impact</td>
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<td>assessment guidelines</td>
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<td>3. Institutions and Human Resources Development</td>
<td>- Human resource capacity building</td>
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<td>- Strengthening extension services and awareness</td>
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<td>creation in beekeeping management</td>
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<td>- Beekeeping resources information</td>
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<td>management</td>
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<td></td>
<td>- Beekeeping research</td>
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<td></td>
<td>- Strengthening sector coordination</td>
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<td>- Beekeeping financing</td>
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These programmes are described in the following section.
3.1 Beekeeping Development

The main goal of this development programme is to develop and manage honeybees and bee fodder in general lands, agricultural lands, forest reserves and plantations. Other goals are to expand the production and use of bee products and to promote the participation of women and youth in managing beekeeping resources. There are three development sub-programmes:

3.1.1 Land Use Planning
Bee reserves and apiaries must be included in land use planning because it is important for beekeepers to have secure land tenure and ownership. This programme will help to develop land use planning at the village level so that it includes beekeeping activities. It will raise awareness of the land tenure system for bee reserves and apiaries. It will also promote gender-sensitive land use planning so that women and men have equal access to land ownership.

3.1.2 Conservation of Bee Fodder
The population of bees in many parts of the country has decreased because of the decreasing availability of bee fodder. This is caused by forest fires and clearing of trees for agriculture and industry. One way to protect bee fodder is to establish bee reserves. Another way is to establish good agro-forestry practices that manage forest plants and trees used by bees.

3.1.3 Improvement of quantity and quality of bee products
Low quantity and poor quality of bee products are caused by inappropriate production, processing, packaging and storing methods. In order to market bee products nationally and internationally, it is necessary to improve quality and quantity. The following actions will be taken:
• Establish a unit in the Forestry & Beekeeping Division to inspect bee products
• Establish quality standards for bee products
• Establish a lab for testing bee products to make sure that their quality is maintained
• Establish a sorting and grading system in order to get the best prices
• Train and educate producers and local dealers about the best ways to handle bee products

How will the Beekeeping Development programme be implemented?
It will be implemented using 4 strategies:
1. A participatory approach will be used to include beekeeping in planning and decision-making processes. There will be a need for good beekeeping management plans and for capacity building in planning and management.

2. Coordination and collaboration on beekeeping issues with other sectors is needed to:
   a. establish and develop bee reserves
   b. develop agro-forestry systems which include beekeeping
   c. develop a strategy to protect the interests of farmers, beekeepers, and honeybees when using pesticides
   d. include beekeeping activities in land use planning.
3. Establishment of bee reserves - The beekeeping sector will work with relevant authorities to initiate land use planning at all levels and to make sure that beekeeping activities are included. It will also work to create awareness of land use planning, the land tenure system, and the importance of bee reserves.

4. To ensure good quality of bee products, the Government will work with exporters of bee products and NGOs to:
   a. provide training to beekeepers and dealers who sell bee products
   b. make facilities available for harvesting, processing, packaging, storage, and transportation
   c. make sure that standards for all bee products are being applied

3.2 Legal and Regulatory Framework

This development programme aims to develop and establish legal processes such as a Beekeeping Act, and rules, regulations and guidelines to support beekeeping operations. These regulations will work to protect bee habitats, honeybee colonies and bee resources. There are two development sub-programmes:

3.2.1 Formulation and harmonisation of laws, regulations and guidelines

Laws, regulations and guidelines for managing the beekeeping sector are outdated and inadequate. This means that:
- beekeeping laws and regulations are not harmonised with other related sectors
- there are no legal guidelines
- there are no legal regulations on importing and exporting bee products and equipment
- there are no criteria and indicators for sustainable management of bee resources

Because of this situation, it is difficult to make management plans for bee reserves and apiaries and to protect bees and bee resources.

The following actions will be taken to improve this situation:
- Creating broad legislation that will provide a legal framework to protect and regulate the use of bee resources.
- Simplifying procedures for the collection of revenue from bee products and fees for beekeeping services.
- Strengthening of regulations and guidelines for export of bee products.
- Designing of management plans for apiaries on different types of land (e.g. bee reserves, general lands, agricultural lands, wildlife protected areas, and plantations).

Developments in Beekeeping Laws and Regulations:
Since the NBKP was produced in 2001, new laws and regulations have been developed to address legal issues in the beekeeping sector. These new laws and regulations are as follows:
- Beekeeping Act No. 15 of 2002
- Beekeeping Regulations 2004 have been prepared. The final draft has been submitted to the Director of Forestry and Beekeeping for review. It will be then be submitted to the Minister of Natural Resources and Tourism for approval.
3.2.2 Development of sector specific impact assessment guidelines

Development activities in other sectors can cause damage to bees, bee fodder, and bee products in bee reserves and apiaries. These activities include mining, road construction, pesticide use, clearing land, bush fires and industries. These activities need to be evaluated to measure their impact on the environment and beekeeping. Environmental Impact Assessment (EIA) will be used as a tool to evaluate these activities. Decision-makers in other sectors will use the EIA when planning activities in order to avoid damage to the environment and beekeeping.

In order to implement this programme, guidelines for evaluating the environmental impact of development activities on beekeeping will be designed and disseminated. This will include guidelines for the use of pesticides.

How will the Legal and Regulatory Framework programme be implemented?

It will be implemented using 6 strategies:

1. An enabling environment for implementing the beekeeping policy through the NBKP will be created. Strong administration of the NBKP is required, especially in the areas of strategic planning, analysis and coordination of cross-sectoral issues.

2. Integrated Pest Management (IPM) agreements between pesticide users and beekeepers will be established and implemented to control the harmful effects of pesticides on beekeeping. These agreements will include procedures for coordination among related institutions, e.g. agriculture and beekeeping authorities.

3. Guidelines for Environmental Impact Assessments (EIA) will be developed for the beekeeping sector. These will ensure that development activities cause little or no harm to honeybees.

4. Communities will be encouraged to create sustainable natural resource management plans that include establishment of apiaries.

5. A system will be established to coordinate different government sectors in order to harmonise laws, regulations, and guidelines.

6. Effective beekeeping legislation has already been created. This legislation is based on social, ecological, economic and scientific ideas. It is enforceable and will be reviewed when necessary.
3.3 Institutions and Human Resources Development

The main goal of this development programme is to strengthen institutions and improve the coordination of beekeeping. Other goals are to establish reliable funding for the beekeeping sector, to strengthen the capacity of human resources and to improve beekeeping research and extension services. There are six development sub-programmes:

3.3.1 Human resource capacity building
At both the local and national levels, government staff do not have adequate capacity to carry out beekeeping programmes. This is because civil servants have low salaries, poor working facilities, and inadequate training. In order to improve this situation, the following actions will be taken:

- Evaluation of current staff and recruitment of new staff
- Provision of training, especially “on-the-job” training
- Establishment of beekeeping degree programme at Sokoine University of Agriculture (SUA)
- Recruitment of well-qualified beekeeping staff for local governments

3.3.2 Strengthening extension services and awareness creation in beekeeping management
Beekeepers and others in the beekeeping sector do not have access to good extension services. As a result, goods and services in the beekeeping sector are low in quality and quantity. There is very little participation of women and youth in beekeeping, because they have inadequate knowledge and awareness of beekeeping and are unaware of the income-generating opportunities it provides. Also, beekeepers have little access to appropriate technology.

Extension services currently have conflicting messages, because there is poor communication and coordination. Extension workers do not have adequate capacity or facilities to deliver effective beekeeping services. The sharing of beekeeping management
among local governments, communities, and the private sector requires technical supervision through good extension services.

Adequate extension services will be provided to all stakeholders so that they can practice sustainable beekeeping management. There will be campaigns to create awareness of the potential of beekeeping as an income-generating activity. Also, all stakeholders will be involved in looking at gender issues in beekeeping programmes.

3.3.3 Beekeeping resources information management
Good data and information is required for making strategies and plans for developing the beekeeping sector. Good statistical information is needed to attract investors and credit services for beekeeping projects.

The following information is important for planning, but difficult to access:

• The bee resources and bee fodder that are available in various ecological areas
• Productivity per season of different types of bee hives
• Prices of bee products in local and world markets
• Prices of beekeeping equipment in various beekeeping areas
• Annual national production and export statistics on bee products
• Contribution of the beekeeping sector to the national economy

This development sub-programme will identify important information, especially on markets and marketing of bee products, and establish a database. This information will be distributed to stakeholders through awareness creation campaigns and extension services.

3.3.4 Beekeeping research
Good research is necessary for developing the beekeeping sector. Currently, there is no master plan for beekeeping research and research priorities have not been identified. As a result, beekeeping research does not fully address the needs of beekeepers and other stakeholders, because there are weak links between research institutions, local communities, and the private sector. Beekeeping stakeholders include:

• producers of bee products
• makers of beekeeping equipment
• traders of bee products and equipment
• owners of industries based on bee products (e.g. pharmaceuticals, cosmetics, candle-making, etc.).

This situation can be improved by:
• preparing a Beekeeping Research Master Plan with the participation of all stakeholders
• disseminating research findings to all stakeholders
3.3.5 Strengthening sector coordination
There is a need to establish formal coordination across sectors because other sectors have an impact on beekeeping. In particular, the forestry, wildlife, agricultural, and beekeeping sectors are related. For example, the coordination across agricultural, forestry and beekeeping sectors is required to deal with the following issues:

- scarcity of bee fodder plants because of land clearing for farming, logging, and charcoal-production
- development of agro-forestry systems which include beekeeping
- management of agricultural chemicals in beekeeping areas

This sub-programme will establish a process for coordinating different government sectors, agencies, and other stakeholders to make sure that policies and implementation methods are harmonised. This is especially important for land use issues.

3.3.6 Beekeeping financing
There is not enough funding to support the development of the beekeeping sector. It will be necessary to develop methods for increasing investment in beekeeping-based industries. The private sector and international institutions will be involved in this process. Local revenue collection will be improved and new types of funding strategies will be established, such as “basket funding” and the “Beekeeping Development Fund”.

How will the Institutions and Human Resources programme be implemented?
It will be implemented using the following six strategies:

1. **Improvement of Beekeeping Administration**
   Strong administration is important for increasing the participation of local communities in management of beekeeping resources and for the building of capacity at all levels. Capacity building in terms of training programmes will be developed and implemented. Methods will be established to enable national level institutions to work closely with regional, district, and local governments.

2. **Capacity Building of Local Governments**
   The Ministry of Natural Resources and Tourism (MNRT), in collaboration with the President’s Office-Regional Administration and Local Governments (PO-RALG), will develop the capacity of local governments to administer and manage beekeeping resources. This will be done by recruiting qualified beekeeping staff and harmonising local revenues for financing beekeeping management.

3. **Participation of other Government Institutions, NGOs and the Private Sector**
   Formal methods will be set up to encourage cross-sectoral coordination between the beekeeping administration and other government institutions at all levels. This is important for establishing bee reserves and developing agro-forestry systems which include beekeeping.

   Coordination and cooperation with NGOs will help to develop the beekeeping sector. NGOs can assist with creating plans for sustainable management of beekeeping resources, financing, and supporting communities and the private sector.

   In order to promote the participation of the _private sector_ in beekeeping development, the government will provide clear land ownership and tenure laws, information on the potential of beekeeping resources, and investment opportunities. The government will also collaborate with the private sector to provide credit services and appropriate technology.

4. **Improving the Information System**
   A good institutional framework is necessary for improving the beekeeping information system. This framework will identify tasks for collection, analysis, and dissemination of information to the public. An Information and Planning Unit in the beekeeping section will be established to develop this system. This Unit will supervise and coordinate information collection and analysis in the beekeeping sector. Also, a network of key agencies will be created to share the work of information collection and analysis.

   The beekeeping administration will work to link Regional and District offices to the Internet for the purpose of information sharing. A website will be created to provide important information on beekeeping, bee products, and marketing. Staff will receive training on how to use information technology and how to interpret information.
5. Enhancing Beekeeping Research, Training and Extension Services

Beekeeping research will focus on basic development needs and sustainable management of beekeeping resources. It will address the problems and demands of stakeholders in the beekeeping sector. This type of useful research will attract cost-sharing, revenue generation and collaborative research with local and international organizations.

A comprehensive training plan will be developed in order to build professional and technical capacity in the beekeeping sector. Training institutions will provide training based on the needs of beekeeping stakeholders. The government will work with international organizations to provide specialized training.

Beekeeping extension messages will be harmonised through coordination across sectors, especially at the local level. Harmonisation of extension messages will ensure effective management and use of beekeeping resources and efficient use of human and financial resources. The establishment of beekeepers’ cooperatives and associations will be promoted, because it is more effective for extension workers to provide services to groups than to individuals.

Extension services will be developed according to the socio-economic needs of communities in different ecological zones. These services will also take into account gender issues. The beekeeping sector will collaborate with NGOs and other sectors to provide effective extension services.

6. Improving Financing Methods

New financing methods will be developed with the participation of key stakeholders. Self-financing methods will be improved by:

- Introducing charges for various bee products and services
- Improving revenue collection
- Pricing bee products based on their economic value

The national government will work with local governments to harmonise collection of royalties and fees. The private sector and local communities will be encouraged to invest in beekeeping activities. Funding opportunities that are available under various international conventions and agreements will be used.

<table>
<thead>
<tr>
<th>How will these Development Programmes be financed?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Establishing beekeeping development funds for private sector &amp; community investment</td>
</tr>
<tr>
<td>2. Pricing bee products based on their full economic value</td>
</tr>
<tr>
<td>3. Promoting income-generating beekeeping activities</td>
</tr>
<tr>
<td>4. Sharing costs of training expenses</td>
</tr>
<tr>
<td>5. Developing commercial activities by training institutions</td>
</tr>
<tr>
<td>6. Improving revenue collection in the beekeeping sector</td>
</tr>
<tr>
<td>7. Using existing donor funds efficiently</td>
</tr>
<tr>
<td>8. Involving private sector</td>
</tr>
</tbody>
</table>
4. Expected Benefits of the National Beekeeping Programme

Development of the beekeeping sector in Tanzania will bring a range of benefits. Beekeeping can generate revenue, employment opportunities and income through the production and sale of honey, beeswax and pollination services. The income from beekeeping can be used to pay for education, health, transport and housing. Honey also serves as a source of food and medicine. Beekeeping can improve the welfare of people by reducing poverty, improving food security, and enhancing the environment.

The economic, environmental and social benefits of beekeeping are explained below.

4.1 Economic Benefits

The economic potential of the beekeeping sector is large. The table below compares the amounts of honey and beeswax that were produced in 2000 and the amounts that could be produced if the beekeeping sector was well developed.

<table>
<thead>
<tr>
<th>PRODUCTS</th>
<th>2000 Production</th>
<th>Potential Production</th>
</tr>
</thead>
<tbody>
<tr>
<td>Honey</td>
<td>4,860 tons</td>
<td>138,000 tons</td>
</tr>
<tr>
<td>Beeswax</td>
<td>324 tons</td>
<td>9,200 tons</td>
</tr>
</tbody>
</table>

In 2000 the amount of honey produced was worth 4.9 billion shillings and the amount of beeswax produced was worth 648 million shillings. However, it is estimated that the country can support almost 10 million productive bee colonies in its forests, woodlands and farm areas. Each year these bee colonies could provide 9,200 tons of beeswax and 138,000 tons of honey. This means that only 3.5% of the existing potential of the beekeeping industry is being used. The number of income-generating opportunities that could be provided by the beekeeping sector is therefore huge.
Note also that potential for expanding the export of honey, beeswax and related products is enormous, especially if the quality and quantity of these products are improved.

4.2 Environmental Benefits

Bees are important for the environment, sustainable agriculture and biodiversity conservation. Bees can be used as a cheap and natural way to protect ecological resources. It will be important to develop agro-forestry systems that include beekeeping since beekeeping can improve the quality and quantity of fruits and seeds. Honeybees are free “inputs” on farms and in forests because they increase cross-pollination in both cultivated and wild plants. Honeybees help to conserve wild plants and flowers and to feed wildlife.

4.3 Social Benefits

The social benefits of developing the beekeeping sector come from raising public awareness about its potential. Many new livelihood possibilities will be created. This will include jobs related to the production, processing, storing, transport and marketing of good quality honey and beeswax. There will also be more jobs in value-added activities such as (a) honey based foods, beer, wines and medicines and (b) many new ways of using beeswax (eg for making candles, batiks, chewing gum, hair cream etc). Many of these new jobs will go to women and youth and this will help to reduce poverty.
5. Roles and Responsibilities of Stakeholders

One of the goals of the NBKP is to involve local communities in the management of beekeeping resources and to promote the participation of both women and men in decision-making and implementation of the development programmes. This requires the participation of all stakeholders. These stakeholders include:

- government institutions at all levels
- local communities
- non-governmental organizations
- private sector and executive agencies
- the international community

These different groups have specific roles and responsibilities. The new stakeholder roles reflect participatory management that includes all levels of government, local communities, civil society and the private sector. Note that in future the central government will concentrate more on facilitating this process and creating a favourable environment for participatory management in the beekeeping sector.

The private sector will play an important role in beekeeping-based industries. It will help to address current problems which limit profitability such as poor technology, out-of-date equipment, not enough capital, lack of technical skills, and the lack of organized marketing systems. Joint ventures between the private sector, local government and communities will be encouraged.
Other stakeholders in the NBKP are people

- involved in research
- who are coordinating beekeeping management
- who manage beekeeping resources for direct use and conservation
- whose activities have a big effect on beekeeping resources and beekeeping

The roles of these stakeholders include creating policy, planning the use of bee products at the household level, and management, among others.

The process of involving all stakeholders will include the following activities:

- participation of local government and communities in management of beekeeping resources
- clear and collaborative planning using a transparent process
- coordination of management among different institutions
- improvement of laws and management guidelines
- establishment of clear roles, interests and benefits
- capacity building
- financing
- inclusion of gender aspects

The table on the next page summarizes the roles and responsibilities of stakeholders.
## Roles and Responsibilities of Government and Non-government Stakeholders

<table>
<thead>
<tr>
<th>Roles and Responsibilities</th>
<th>Government Stakeholders</th>
<th>Non-government Stakeholders</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Central Government</td>
<td>Local Government</td>
</tr>
<tr>
<td>Policy &amp; legislation</td>
<td>✔</td>
<td>✓</td>
</tr>
<tr>
<td>Law enforcement</td>
<td>✔</td>
<td>✓</td>
</tr>
<tr>
<td>Revenue collection</td>
<td>✔</td>
<td>✓</td>
</tr>
<tr>
<td>Planning &amp; budgeting</td>
<td>✔</td>
<td>✓</td>
</tr>
<tr>
<td>Sector financing</td>
<td>✔</td>
<td>✓</td>
</tr>
<tr>
<td>Management of bee reserves and apiaries</td>
<td>✔</td>
<td>✓</td>
</tr>
<tr>
<td>Monitoring and Evaluation</td>
<td>✔</td>
<td>✓</td>
</tr>
<tr>
<td>Research</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Management of information systems</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Human resources development</td>
<td>✔</td>
<td>✓</td>
</tr>
<tr>
<td>Extension services</td>
<td>✔</td>
<td>✓</td>
</tr>
<tr>
<td>Stakeholder coordination/international cooperation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Note: The Forestry and Beekeeping Division will become an Executive Agency called Tanzania Forest Service (TFS).
Beekeeping has strong links with other sectors, especially on the issue of land and resource use in Forest/Game Reserves, Game Controlled Areas, General Lands and Agricultural Lands. The following activities in other sectors have negative effects on beekeeping:

- timber harvesting
- game hunting
- slash and burn method of clearing land
- clearing land for tobacco growing
- use of pesticides

Beekeeping is at risk more on General Lands and Agricultural Lands because these areas lack proper management and land use planning. Other sectors need to support the implementation of the NBKP in order to tackle these issues. The following actions should be taken across sectors to support beekeeping:

**General Lands** – Beekeepers must have proper title deeds for land in order to protect their owner rights. This will help beekeepers to establish bee reserves.

**Agricultural Lands** – In order to protect bees, farmers will be encouraged to apply pesticides when bees are not actively pollinating their crops. The Ministry of Agriculture will be required to work with farmers to educate them about good practices for applying pesticides so that bees will not be harmed.
**Forest and Plantation Reserves** – Studies need to be carried out in forest reserves before apiaries are established. These studies will help decide the number of trees that may be used for making hives. Live trees in these areas should not be used for making beehives. Extension workers and forest workers should cooperate to supervise beekeeping arrangements including establishment of beekeeping zones in these areas.

In order to improve beekeeping among the different sectors, the following actions should be taken:

**Create Joint Management Plans** – Land and resource use plans for general lands need to be harmonized in order to include the interests of different sectors. This will give the beekeeping industry an equal opportunity for development. A system of providing permits for use of different resources is a way to manage resources among different sectors. According to past experience, beekeeping fits well with other forms of land and resource use.

**Improve the ability of the Forestry and Beekeeping Division (FBD) to coordinate Stakeholders** – The Beekeeping Administration in the FBD must establish a method to identify all stakeholders involved in beekeeping and to facilitate continuous participation of these stakeholders. The courses for beekeeping extension workers should be reviewed regularly by relevant stakeholders and should focus on multiple-use beekeeping.

**Review of Beekeeping Legislation** – Beekeeping legislation will be reviewed regularly as needs arise and harmonized with legislation in other related sectors.
The five key steps that need to be taken in the near future to implement the NBKP are explained below.

7.1 Setting up a Management Information System
Currently, there is no system for collecting data and managing information on the beekeeping sector. This has made planning and monitoring difficult. The NBKP must build a system within the FBD for effective planning, implementation, and monitoring. Implementing and monitoring the NBKP will be a continuous process in which actions will be taken to correct problems along the way. A Management Information System (MIS) is required for making informed decisions on a daily basis.

7.2 Developing Criteria & Indicators (C&I)
There is a need to develop criteria and indicators (C&I) for sustainable beekeeping management. Criteria are standards that are used to evaluate something, and indicators are signs which show what a situation is. C&I will be used as tools for monitoring SBRM at the national and local levels. C&I will help to identify problems that are affecting SBRM so that actions can be taken to correct the problems.

7.3 Setting up a Monitoring & Evaluation (M&E) System
Monitoring and evaluation (M&E) will involve all stakeholders from the village to the national level. M&E will be used to measure the implementation of the NBKP and to see if it is effective. The Beekeeping Administration under the FBD will be the main authority for monitoring and evaluating the NBKPA system will be set up within the FBD to carry out and coordinate monitoring and evaluation. This system will be based on the criteria & indicators for SBRM.
7.4 Strengthening the National Forest Programme (NFP) Coordinating Unit

The NFP Coordinating Unit will be managing both the NFP and the NBKP. In order to strengthen the Coordinating Unit, a National Coordinator has been assigned on a permanent basis to manage the implementation process. Also, the composition and number of members in the NFP Coordination Unit will be increased and gender-balanced. This is necessary to build the capacity of the Unit to properly address the implementation and monitoring of the NFP and NBKP.

7.5 Strengthening the Steering Committee

The membership of the Steering Committee has been broadened to include a wider range of stakeholders in order to strengthen links among sectors. This is important for the NBKP implementation process. Representatives on the committee are:

- President’s Office-Regional Administration and Local Government
- National Land Use Planning Commission
- Division of Environment of the Vice President’s Office
- Sokoine University of Agriculture-Faculty of Forestry and Nature Conservation
- Tanzania Forest Research Institute
- Tanzania Chamber of Commerce, Agriculture and Industries
- Private Sector Foundation
- Ministry of Finance
- President’s Office-Planning and Privatization
- President’s Office-Public Service Management
- Ministry of Justice and Constitutional Affairs
- Ministry of Lands and Human Settlements Development
- Ministry of Natural Resources and Tourism-Policy and Planning Division
- Ministry of Natural Resources and Tourism-Forestry and Beekeeping Division
- Government of Finland
Glossary

**Administration** The day-to-day running and control of an organisation or project.

**Awareness creation/raising** Making sure that people know about something by using good, multi-media communication strategies.

**Basket funding** When all the funds for a project or programme are joined together in one account rather than being managed separately.

**Biodiversity** The variety of different animals (including honeybees) and plants which live in a certain environment.

**Budgeting** Gathering information about income and spending needs, and deciding on the best way to spend funds.

**Capacity Building** Increasing the ability of individuals, organisations or communities to meet their own needs. This includes confidence building, training, and the supply of materials and equipment.

**Capital** The wealth owned by a person or organisation. It can be invested, lent or borrowed.

**Collaborate** To work together with others on a common goal.

**Conservation** The preservation and protection of the environment.

**Consultation** If you consult someone you, ask for their opinion or advice. If you ask many people you will get many different ideas which can be discussed. [see also - multi-stakeholder process]

**Convention** An international agreement, especially one concerned with people’s rights.

**Credit** Loans that are given to people or businesses so they can buy goods or services in advance if they don’t have enough money at that time.

**Criteria** Standards by which you judge or decide something. Most criteria have indicators that are used to measure them.

**Design** To make a plan which sets out the details of how something (eg a policy, programme or project) should be developed.

**Development** A process for improving social, technical, environmental, economic, and political conditions within a country. Goals of development are to: reduce poverty, promote human prosperity and increase the quality of life of people. [see also – sustainable development]
**Development Partners** Are stakeholders in the development process, especially foreign organisations that provide loans, grants, investments and other forms of support. These include developed countries, international agencies, NGOs and private sector organisations.

**Economy** The economy of a country or region is the system it uses to organise and manage its money, industry and trade and the wealth it obtains from business and industry.

**Ecotourism** Tourism in natural habitats that is done in a way that minimizes impact on the environment.

**Environment** The natural surroundings that people, animals (including honeybees), and plants live in and depend on. The environment can be conserved, developed or damaged.

**Environmental Impact Assessment (EIA)** Environmental assessment is a process that makes sure that the effects of development activities on the environment are understood before projects and programmes are implemented. EIA is used by decision-makers and leaders when they are planning projects and programmes.

**Executive Agencies** These agencies will be set up by the government, but they will be public-private institutions. There will be Executive Agencies in the Forest & Beekeeping Sectors (e.g., TFS). These will deal with all aspects of Sustainable Forest Management (SFM) and Sustainable Beekeeping Resources Management (SBRM). They will play a key role in the implementation of Forest Management Plans.

**Extension service** An organisation or system which provides information, advice and other forms of support for the public, for example, agricultural extension services, beekeeping extension services, etc.

**Facilitate** To make it easier to do something. This can involve providing training, information, encouragement and/or physical, financial or human resources.

**Fodder** Food for animals and insects, such as cows, goats, sheep and honeybees.

**Framework** The underlying structure and set of rules which explains how the parts of a system or an idea fit together.

**Gender** The word gender has two meanings: 1) The differences between the sexes; 2) The social relationships between
women and men. The differences between
the sexes are created through social
processes and change over time and
across cultures. Gender depends on the
circumstances in which women and men
live and includes economic, cultural,
historical, and religious factors. Relations
between men and women also differ
according to the economic and social
conditions of the society and differ
between social and ethnic groups.

**Guidelines** Rules, regulations, principles
and/or advice about how something
should be done.

**Harmonise** To arrange different parts of
something (for example, laws and
regulations) so that they are in agreement
with each other and they work well
together.

**Human Resources** People; in particular,
workers and employees. Healthy,
educated, and skilled people who are
creative and hard-working can help plan
and implement effective development in a
country.

**Implement** To put a plan into action.

**Indicator** Something which acts as a sign
telling you if a situation or condition as
improved, stayed the same, or gotten
worse. Usually linked to criteria.

**Institution** An institution is an official
organisation which does an important job
in a country.

**Investment** To put money, time and/or
energy into an activity from which you
expect to get a good return.

**Issue** An important topic for discussion and
debate.

**Legislation** (a) All of the laws of a country
(b) The process of making new laws.

**Livelihood** The work that people do to
support themselves and their families.

**Market information** Current facts about
what people and organisations are buying
and selling at the local, national and global
levels. This is needed for making effective
business plans.

**Monitoring and evaluation** Monitoring of
a programme involves checking the
implementation process to make sure that
everything is being done properly.
Evaluation involves reviewing the progress
of a programme from time to time in
order to determine whether there are
problems that need to be addressed. Both processes should include clear aims and objectives with clear criteria and indicators.

**Multi-stakeholder process** Is a consultation process that (a) aims to bring together all stakeholders to communicate and make decisions on particular issues; (b) recognises the importance of equity and accountability among stakeholders; (c) involves equal representation of three or more stakeholder groups and their views; (d) is based on democratic principles of transparency and participation; and (e) aims to develop partnerships and strong networks among stakeholders.

**Natural resources** Resources that come from the natural environment which are the basis of a nation’s wealth. A few examples of natural resources are honeybees (beekeeping resources), fish, forests, coal, and oil. Some resources renew themselves (e.g. honeybees, fish and forests) while others cannot (e.g. coal and oil). Pollution and overuse can destroy the ability of natural resources to renew themselves.

**Partnership** Where individuals or organisations join with others to achieve a common goal and to share costs and benefits.

**Planning** Planning is a four step process. (1) Study a situation to identify problems and possible solutions. (2) Make action plans with clear goals and objectives. (3) Put the plan into action and check it along the way to make sure it is implemented properly. (4) Study the new situation and decide whether the plan or project worked out as expected and whether it was a good thing.

**Policy** An overall plan that explains what actions should be taken to address a particular issue or problem and which guides decision-making.

**Pollination** The transfer of male plant sex cells to female plant sex cells so that seeds and fruits can be produced. Bees are the main pollinators of many types of plants.

**Poverty** There is income and non-income poverty. Income poverty is when people earn less than one US dollar a day. This means that they will not have enough food or medicine and they will have poor clothes and houses. Non-income poverty is when people do not have (a) a fair share of education, health care and other social services, (b) respect and status in
their community, (c) some power over what happens in their life and (d) hope for the future.

**Prioritize** To rearrange a list of items so that the most important and/or urgent items are at the top.

**Privatization** The transfer of a business, industry or service from government to private ownership.

**Programme** A series of linked actions, events or projects that are planned to meet a goal and to take place over a certain period of time.

**Regulations** Rules made and maintained by an authority to control the activities of companies and organisations.

**Research** The study of a particular subject for the purpose of better understanding and learning new facts and information.

**Resources** The resources of a country, organisation or person are the things available for their use, for example money, materials and staff. [see also natural resources]

**Revenue** The money received by a company, organisation or government which comes from collecting taxes, fees, subscriptions, royalties, etc.

**Sector** A section of society or government. Three main economic sectors are (a) public sector, (b) private sector and (c) civil society or community sector. Also, the government is divided in sectors, for example, Agriculture, Health, Forest, etc.

**Sector Wide Approach (SWAp)** This is a new idea which involves a participatory, multi-stakeholder process to build (a) an understanding of the problems facing a sector and (b) a complete and coordinated set of responses to those problems.

**Stakeholders** All the people who have an interest in the success of a policy, programme or project.

**Standard** Something set up and established by an authority as a rule for measuring of quantity, value, or quality. Standards are used to measure the quality and value of products (e.g. honey, beeswax).

**Steering committee** A group of people appointed to advise on the development of a policy or programme.

**Strategy** A long-term plan which outlines the best way to achieve a particular goal.

**Sustainable development** This is defined in as “Development that meets the needs of the present without compromising the ability of future generations to
meet their own needs.” This means that development should bring about prosperity without causing damage to people and the environment. All sustainable development plans should tackle environmental, social and economic issues at the same time.

**Sustainable Forest Management (SFM)**
SFM looks at forests as complex ecosystems rather than just as a source of wood. SFM means that forests will be managed for both conservation and development purposes. SFM will support poverty reduction and protection of the environment at the same time. This type of management involves the participation of all stakeholders: government, private sector, communities, and civil society.

**Tenure** The conditions under which land or buildings are held or occupied.

**Value-added** Value-added products have had something added at some stage of their production or processing. Customers will pay more for the additions. For example, when beeswax is processed to become a candle.
Annex 1: Organizational Structure for Implementation of NBKP
The National Beekeeping Programme (NBKP) fits with Tanzania’s overall development plans and especially with its Poverty Reduction Strategy (PRS). It is built around the concept of ‘Sustainable Beekeeping Resources Management’ (SBRM). This means the NBKP focuses on environmental conservation, economic growth and poverty reduction at the same time.

The NBKP approach also calls for the involvement of local communities, the private sector, development partners, and civil society in managing beekeeping resources. This programme will create income-generating activities in the beekeeping sector which will help to develop the economy and reduce poverty.