



UNITED REPUBLIC OF TANZANIA
MINISTRY OF NATURAL RESOURCES AND
TOURISM

NATIONAL BEEKEEPING POLICY
IMPLEMENTATION STRATEGY (2021-2031)

MAY 2021





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ABBREVIATIONS AND ACRONYMS

AAP	Africa Apiculture Platform
ADAP	Association for the Development of Protected Areas
BDF	Beekeeping Development Fund
BTC	Belgium Technical Cooperation
BTI	Beekeeping Training Institute
DAPOTA	Disaster Awareness and Preparedness Organisation in Tanzania
CBOs	Community Based Organizations
DBO	District Beekeeping Officer
DP	Development Partners
EAMCEF	Eastern Arc Mountains Conservation Endowment Fund
EIA	Environmental Impact Assessment
FAO	Food and Agriculture Organization of the United Nations
FBD	Forestry and Beekeeping Division
FORVAC	Forest and Value Chain Development Programme
FTI	Forestry Training Institute
GDP	Gross Domestic Product
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
IBRA	International Bee Research Association
IPM	Integrated Pest Management
ITO	International Trade Organisation
JFM	Joint Forest Management
LGAs	Local Government Authorities
MAI	Ministry of Agriculture and Irrigation
MDA	Ministry, Department and Agencies
M & E	Monitoring & Evaluation
MNRT	Ministry of Natural Resources and Tourism
MoHCDEC	Ministry of Health, Community Development, Gender, Elderly and Children
MLHSD	Ministry of Lands and Human Settlements Development
NBKP	National Beekeeping Programme
NBP	National Beekeeping Policy

NBRC	Njiro Beekeeping Research Centre
NBAP	National Beekeeping Action Plan
NBPIS	National Beekeeping Policy Implementation Strategy
NCD	Non-Communicable Diseases
NFBKP	National Forest and Beekeeping Programme
NGO	Non-Governmental Organisation
NFP	National Forest Programme
NORAD	Norwegian Agency for Development Cooperation
NWRC	Njiro Wildlife Research Centre
SUA	Sokoine University of Agriculture
PO-RALGs	President's Office Regional Administration and Local Government Authorities
HIV/AIDS	Human Immunodeficiency Virus/ Acquired Immune Deficiency Syndrome
RALG	Regional Administration and Local Government
RECO	Registrar of Cooperatives
UDSM	University of Dar es salaam
UDOM	University of Dodoma
TaFF	Tanzania Forest Fund
TABEDO	Tanzania Beekeeping Development Organization
TAFORI	Tanzania Forestry Research Institute
THC	Tanzania Honey Council
TFS	Tanzania Forest Services Agency
TBS	Tanzania Bureau of Standards
WWF	World Wildlife Fund

DEFINITION OF KEY TERMS

Agroforestry	- is a practice where agricultural crops and trees are intercropped on one farmland.
Api-Agroforestry	- is a practice where beekeeping is carried out on the same land with Agro-Forestry so that bees collect nectar and pollen from the cultivars and natural flora and in return render pollination to flora
Apiary	- is a bee farm which contains several honey bee colonies kept in hives.
Bee reserve	- is a land area administered and managed for the purpose of sustainable development of bee and bee fodder resources.
Beekeeping administration	- entails how beekeeping sector is administered under the Government of Tanzania.
Beekeeping equipment	- includes hives, hive tool, bee protective, bee smoker, honey and beeswax strainers, honey extractors; honey and beeswax storage facilities; other honey and beeswax processing and grading equipment.
Beekeeping products	- include honey, beeswax, pollen, propolis, royal jelly, brood, live bees, and pollination services
Beekeeping sector	- is a sector responsible for matters pertaining to beekeeping, which comprises of apiculture (stinging) and meliponiculture (stingless beekeeping).
Beekeeping zone	- means an area of land within a national or local authority forest reserve in which the keeping of bees and management of apiaries in accordance with an approved management scheme is permitted.
Colony	- is the society of honey bees composed of one queen, thousands of worker bees and a few tens or hundreds of drones capable of reproducing itself as a biological unit.

**Executive
Agency**

- is a semi-autonomous agency owned by the government and established for the specific purpose. The staff are government employees, but with specific terms and conditions defined for employment by the agency.

**Melliferous
plants**

- refer to nectar-producing plants which are sometimes called “bee folder” or “bee forage” i.e., plants from which bees collect nectar and or pollen.

FOREWORD

Management of the beekeeping sector is guided by the National Beekeeping Policy (NBP) of 1998. The NBP has been implemented for 23 years now, and during this period, there has been a number of institutional and policy reforms aimed at stimulating growth of the national economy. However, the reforms are known to have changed the macro-economic and environmental frameworks significantly, which in turn have affected the implementation of the NBP of 1998 either positively or negatively.

In 2019, the Ministry of Natural Resource and Tourism (MNRT) undertook an evaluation to establish the implementation status of the NBP since its endorsement in 1998. The evaluation was meant to check as to whether the current policy is still effective, efficient and relevant to address the challenges facing the sector and hence contribute to the socio-economic development of the present and future generations. The outcome of the review work indicated that, the NBP of 1998 is still valid, effective, efficient and relevant to address challenges facing the sector. However, lack of implementation strategy was noted to be among serious challenges that saddles development of the beekeeping sector in the country. This led to the recommendation that the National Beekeeping Policy Implementation Strategy (NBPIIS) be developed to guide the implementation of NBP (1998).

The National Beekeeping Policy Implementation Strategy, an instrument for implementing the NBP of 1998, has been prepared following the recommendations from the evaluation report and expiry of the National Beekeeping Programme (NBKP) in 2010. The preparation of the NBPIIS has taken into consideration macro-economic and social policy development and other related policies such as land, agriculture, forest, wildlife and environment.

In addition, NBPIS has been prepared through broad based consultations at local and national levels with key stakeholders of related sectors and institutions. It should be stressed that the success of the implementation of this strategy depends on active participation of all stakeholders both local and international community. In view of this, MNRT calls upon all stakeholders and development partners to provide necessary support and cooperation to ensure achievement of the goals, objectives and targets of this Strategy.



Dr. Allan H. J. Kijazi

PERMANENT SECRETARY

ACKNOWLEDGEMENT

The development of the National Beekeeping Policy Implementation Strategy (NBPIS) (2021-2031) document is an outcome of the consultative process undertaken by the Ministry of Natural Resource and Tourism (MNRT) in 2020, to find a new framework that would guide the implementation of the National Beekeeping Policy (NBP) of 1998 after the expiry of the National Beekeeping Programme (NBKP) in 2010. This process started by a review work which was undertaken by a special Task Force that was appointed by the Permanent Secretary in 2019. The Task Force under the coordination of the Ministry of Natural Resources and Tourism, Forestry and Beekeeping Division, include experts from Sokoine University of Agriculture (SUA), Presidents' Office – Regional Administration and Local Government (PO-RALG), Tanzania Wildlife Research Institute, University of Dar es salaam (UDSM) and Tanzania Forest services Agency (TFS).

The second task force which was appointed by the Permanent Secretary in 2020 prepared the first draft of the document. These experts were from MNRT, SUA, UDSM and PO-RALG. In both occasions, one consultative workshop was held to allow inputs from stakeholders which came from various ministries, departments and agencies (MDAs), local government authorities (LGAs), research and academic institutions, civil society organizations, the private sector and non government organisations (NGOs). The first consultative workshop was held in Dodoma on 12-13 July, 2019 during the evaluation of the implementation status of the NBP of 1998, and the second was held in Dodoma on 18 - 19 January, 2021 to gather inputs for the improvement of the first draft of the NBPIS.

The NBPIS formulation process received technical backstopping from the National Beekeeping Advisory Committee (NABAC), and the Government of Tanzania through MNRT and FORVAC Programme, and Mpingo Conservation and

Development Initiative (MCDI) provided financial support for its development. The Ministry of Natural Resources and Tourism acknowledges the contribution of each and every one in this commendable initiative. We are grateful to all specialists who provided extra inputs during the preparation of the strategy. We appeal for continued participation and support during the implementation.



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DIRECTOR OF FORESTRY AND BEEKEEPING DIVISION

CHAPTER ONE

1.0 INTRODUCTION

1.1 Rationale for Policy Implementation Strategy

The National Beekeeping Policy (NBP) was instituted in 1998 to guide development of beekeeping sector in Tanzania. The National Beekeeping Programme (NBKP) (2001-2010) was formulated in 2001 as a strategic programme to facilitate implementation of NBP and stakeholders' forum on issues related to beekeeping development in the sector. In 2002, the legal framework for beekeeping was enacted through the establishment of the Beekeeping Act, Cap 224. Consequently, implementation of the Policy has been through the National Beekeeping Programme (NBKP) up to 2010 when the programme ended. Following the expiry of NBKP in 2010, implementation of NBP was carried out through other instruments including strategic plans, projects and guidelines.

In 2019, the Ministry of Natural Resources and Tourism (MNRT) conducted an evaluation on NBP implementation. The evaluation concluded that lack of implementation strategy was among the key challenges that saddles development of the beekeeping sector. This led to the recommendation that the National Beekeeping Policy Implementation Strategy (NBPIS) be developed to guide the implementation of NBP (1998).

The NBPIS will spearhead the implementation of the Policy for the period of 10 years (2021/22 – 2031/32). The preparation of the strategy has taken into consideration among others new emerging issues in the sector noted in the Tanzania Development Vision of 2025; CCM Manifesto of 2020; the Third National Five Years Development Plan (2021/22 – 2025/26); and Sustainable Development Goals (2030). This Strategy has considered the current sector development issues, outlined implementation plan, resources and means to mobilise resources that will enable proper policy implementation. Further, the Strategy will guide preparation of beekeeping plans, projects and programmes in order to achieve sectoral objectives and targets.

1.2 Issues for implementation

The NBPIS guides interventions that intend to address main issues under the six policy areas. These policy areas are: establishment and management of bee reserves, apiary management, beekeeping-based industries and products, beekeeping cross-sectoral areas, ecosystem conservation and management, and institutions and human resources management.

1.3 Roles and responsibilities of key stakeholders

The Ministry responsible for beekeeping will play the primary role in guiding, monitoring and evaluating implementation of the Strategy. Sector ministries will support implementation of the Strategy through provision of guidance on specific sector policy issues. Private and non-government sector actors will contribute to the Strategy implementation through building capacity of actors along the value chain, financing development initiatives and investing in improving of activities at specific points along the value chain. On the other hand, communities will have the role of implementing the Strategy through direct involvement in beekeeping development along the value chain.

1.4 Expected results

The NBPIS is expected to catalyse achievement of the policy goal. The policy goal is to increase the contribution of the sector to the economic development and enhancing environmental conservation. Effective implementation of the Strategy is anticipated to bring about improvement in six areas: (i) quantity, quality, safety of products, diversification of bee products (other than honey and beeswax) and value addition; (ii) conservation of bee resources and use of honey bees to improve crop production; (iii) data and information sharing; (iv) involvement of more stakeholders particularly women and youths; (v) research, training and extension provisioning; and (vi) health of employees and ensure good governance.

1.5 Conclusion

Implementation of the Strategy will enable the sector to increase its contribution to national economic development via improved community livelihood, increased sectoral contribution to Gross Domestic Product (GDP), increased foreign currencies and improved environmental conservation.

CHAPTER TWO

2.0 SITUATION ANALYSIS

2.1 Overview

This chapter analyses the current state in beekeeping sector to establish the extent to which policy implementation has progressed and achieved its objectives. Moreover, it identifies key challenges facing the sector, which guided to the formulation of strategies and targets. The analysis is based on six policy areas namely: establishment and management of bee reserves, apiary management, beekeeping-based industries and products, beekeeping in cross sectoral areas, beekeeping for ecosystem conservation and management as well as institutions and human resources. Detailed analysis of each policy areas is presented below.

2.2 Establishment and sustainable management of bee reserves

The policy emphasises on setting aside sufficient forest areas for the purpose of developing and managing honeybees together with maximizing production and utilisation of bee products. In achieving this objective, two policy statements specify directions on the establishment and management of bee reserves under the ownership of the central, local and village governments, and private sector. There are four main types of reserves namely: national, local authority, village and private bee reserves.

The government in collaboration with stakeholders pursued a number of interventions to conserve honeybees, bee fodder and their habitats through establishment of bee reserves. During the formulation of the Policy in 1998, there was only one (1) bee reserve owned by the central government. To date, there are nine (9) gazetted bee reserves and more than 50 forests declared as national, local authority, village and private bee reserves.

Notwithstanding these achievements, establishment and management of bee reserves are still facing challenges associated with increasing environmental degradation. Main factors of the degradation include activities such as uncontrolled pesticide application, land clearing for agriculture and settlement

expansion, industrial expansion, uncontrolled livestock grazing and bush fires. Moreover, availability of bee fodder plants is decreasing due to irrational use of resource base such as debarking, clearing of vegetation and absence of Integrated Pest Management (IPM). Further, joint management systems for the bee reserves are practiced on small scale and are not effectively functioning.

2.3 Apiary Management

Apiary management plays an important role in improving quality, quantity and ensuring sustainable supply of honey, beeswax and other bee products. Five policy statements provide directions on apiary management by encouraging management of apiaries under the ownership of executive agencies and private sector and for demonstration purposes. Furthermore, the policy encourages establishment and management beekeeping - agroforestry systems, and making beekeeping simple and attractive economic venture to women and youths.

Both the government and private sector have been establishing and managing apiaries. Four central government owned beekeeping demonstrations centres located in Monyoni, Handeni, Kondoa and Kibondo districts have been upgraded to production and/or processing centres of bee products and their apiaries improved.

Significant efforts have been employed to increase the number of apiaries, proper apiary management practices and funding. For example, the central government through Tanzania Forest Services Agency (TFS) has established 181 new apiaries in recent years in its seven beekeeping zones. Likewise, private sector and Non Governmental Organizations (NGOs) have established about 152 apiaries in the central zone only, which did not exist in 1998. The number of apiaries is obviously higher when the whole country is considered.

Equally, continued acceptance of honey and beeswax in both local and international markets indicates improvement in quality of bee products. On the other hand, to date, a total of 34 producers and processors of honey have been certified by Tanzania Bureau of Standards (TBS) across the country. Quality control and inspection mechanisms to beneficiaries including traders have been strengthened. In total, this is an indication that apiary management practices, especially those related to quality are being observed by most beekeepers.

The number of women and youths participating in beekeeping has also increased. For example, women participating in beekeeping activities in Kasulu, Kibondo, Uvinza and Mvomelo Districts ranged from 30% to 42%; and youths from 14% to 21% of the entire community. Moreover, there is a total of 104 youths and 65 women groups in the central zone. Attraction of these two groups to beekeeping activities as an economic venture is attributed by the use of simple apiary management techniques.

Although great efforts have been done, apiary management for improved production and quality of bee products is still partly undermined by some challenges. These include: inadequate financing, working facilities among beekeepers, transport, processing and storage facilities of the required qualities. Proper apiary management is also affected by degradation of beekeeping areas caused by factors such as wild fire and uncontrolled livestock grazing incidences. Poor bee health caused by pathogens and pests, and lack of early warning systems on changing of climate are among other challenges affecting production of bee products.

Currently, production is approximately 30,400 tones and 1,843 tones of honey and beeswax, which is just about 22% and 20% of the potential capacity respectively. However, as evidenced, this production of honey and beeswax is generally still low compared to existing potential. Between the year 2016/2017 and 2020/2021 total domestic and foreign sales of honey and beeswax was TZS 37,638,123,755 and 24,132,304,622 respectively.

2.4 Beekeeping-based industries and products

Beekeeping-based industries and products include beekeeping equipment, honey, beeswax, bee pollination service, other beekeeping-based products, ecotourism, and marketing of bee products and services. The objective of policy area is to enhance beekeeping-based national development and poverty alleviation through sustainable supply of bee products (honey, beeswax, royal jelly, bee venom, propolis, brood, pollen) and services. In order to achieve this objective, eight policy statements stipulate directions in line with specific policy areas including interventions implemented under beekeeping based industries and products.

The policy underlines the need to ascertain availability of beekeeping equipment, which includes those used in production, harvesting, processing, storage, packaging and quality control of bee products. Currently there are 33 producers of beekeeping equipment such as hives and protective gears. There are also 16 suppliers of hives, seven suppliers of protective gears, four packaging materials manufacturing industries and three suppliers of processing equipment across the country.

The core challenges facing the supply of beekeeping equipment include inadequate public awareness on existence of the various beekeeping equipment-based industries, shortage of capital and materials for the production of equipment, and inadequate management of resources for making hives. The practice of utilizing trees for multiple uses such as timber for hive making and other wood products is yet to be in place.

Moreover, the policy encourages establishment and development of honey-based industries and production of honey products. This includes promotion of research and development on other uses of honey. To date, there are 64 industries (28 micro, 25 small, 11 medium sized) processing and packaging honey, and two using honey for wine making. The main challenges associated with honey-based industries include: unreliable supply of honey due to poor honey marketing system and low production in the country, limited capital and/or credit facilities for potential investors especially on its operations, inadequate public awareness on diverse uses of honey and its various value-added products such as honey candies and honey-wine. There are four industries that use honey as an important ingredient in the pharmaceutical, food preservation, cosmetics, honey-beer brewing, honey-wine and confectioneries.

Kipalapala was the only industry using beeswax as raw materials for making candles during the establishment of the policy. To date there are three beeswax-based industries in the country. The main challenges facing the beeswax-based industries include unreliable supply of beeswax, inadequate statistical information to guide plans and operations, which would encourage investors. There are no industries using beeswax as an ingredient in making pharmaceutical, cosmetics, lubricants, polishes, chewing gum, textiles, beeswax candle, pulp and paper.

Crop producers are encouraged to use bees as pollinators in order to improve crop yields. Bee pollination is a popular practice in countries with developed agricultural systems as it increases quality and quantity of agricultural crops that depend on the pollination. However, very few farmers are using bees as crop pollinators to increase crop yields in their agricultural fields in Tanzania. This is due to lack of technical directives, and assistance to beekeepers and farmers on how to establish, manage and protect colonies for pollination purposes hence poor awareness among them. Consequently, there are no reliable supplies of strong and efficient colonies for pollination purposes when needed. Moreover, lack of formal cross-sectoral arrangement for coordination and cooperation between the beekeeping and agricultural sectors in planning and implementing pollination programmes and projects has caused the whole process to remain at standstill.

Other bee products including pollen, propolis, bee venom and royal jelly are important ingredients in making various industrial products such as medicine, food supplements and gums. Bee-venom, propolis and other bee products have medicinal properties thus can be used in apitherapy and some healers use them for curing different human diseases. Research institutions, the private sector and the community in general are encouraged to invest in research and development of such products in order to promote uses of these bee products.

Despite the existing great potential, the use of these bee products is still limited in Tanzania due to inadequate technical knowhow, lack of equipment needed for harvesting, processing and preserving them. In addition, slow development of these bee products is also attributed to inadequate public awareness on their potent, uses, safety and limited funding to support industrial establishment. On the other hand, lack of research and development on local products has limited their local utilization. The private sector and community in general are encouraged to promote eco-tourism based on site seeing of bee reserves, apiaries, bee products and foraging bees. Currently there are only 5 beekeeping sites in Kilimanjaro, Singida, Dodoma and Arusha that are used for ecotourism. Ecotourism in and around bee reserves and apiaries is yet to be developed despite its importance in contributing to conservation of the environment, sustaining the wellbeing and as source of education. Little development in this area has partly been due to lack of integrated approach in development and promotion

of tourism attractions in which case api-tourism is not included in the package used to promote tourism in Tanzania.

Marketing of bee products and services includes production, product quality and diversification, pricing, promotion and distribution. Bee products and services offer various market opportunities in form of food, industrial raw materials and input for agriculture through pollination. Honey and beeswax form major beekeeping products in the country. Tanzania is among the best 15 honey producing countries in the world and second in Africa. However, it exports only 5% of honey it produces, which makes it to rank 71st in export of honey globally. For beeswax production, Tanzania ranks 9th globally and 17th in export. The large proportion of beeswax produced is exported. The remaining proportion of honey and beeswax is absorbed by domestic market.

Potential global market for other products such as propolis, pollen, royal jelly, bee venom exists. However, as indicated limited technology continues to hinder their production and thus marketing. Honey produced in Tanzania is mainly sold raw due to inadequate processing plants with exception of a few and small private processing plants. Fraud of bee products is among the challenges affecting marketing of bee products.

On the other hand, though exists several value added products that can be obtained from honey and beeswax, only a small proportion of beekeepers and traders can add value to the honey or beeswax. Low products diversification and value addition are explained by limited awareness among professionals and practitioners in the sector, lack of reliable technical facilities including collection centres, limited market information, lack of technical skills, and high taxation imposed on importation of technical facilities among others.

Most beekeepers harvest and store honey in containers that had previously been used for storing other industrial products like cooking oil. Improper storage negatively affects the quality of honey and therefore its marketability.

2.5 Beekeeping in cross sectoral areas

Beekeeping in cross sectoral areas comprises establishment of apiaries in public and agricultural lands, forest reserves and plantations, game reserves and

national parks. The policy aims to improve biodiversity, increase employment and foreign exchange earnings through sustainable bee products - based industrial development and trade. To attain this objective, four policy statements are stipulated to encourage and provide guidance to individual beekeepers, beekeepers' associations, cooperatives, non-governmental organisations (NGOs) and executive agencies on establishment and management of apiaries.

Good progress has been made in keeping bees in public land and partly agricultural lands although national data on this area is lacking. Data from central zone only shows that there are 210 individual beekeepers with 146 apiaries in public land and 95 apiaries on agricultural land in Dodoma Municipal. However, limited awareness on the importance of having apiaries on agricultural land, as a means of improving production of crops and bee products, has slowed down development of this important opportunity to both beekeepers and farmers. Other challenges are change of public land into other land uses, increased use of pesticides and limited use of integrated pest management (IPM) in controlling agricultural pests.

On the other hand, beekeeping in game reserves is taking place in a small scale due to lack of formal sectoral agreement between beekeeping and wildlife authorities. Beekeeping in national parks is non-existent, as the current wildlife legal frameworks do not permit. Beekeeping is taking place in natural forest reserves and plantations as the National Forest Policy and the legislation consider beekeeping as the means to enhance forest management. This has not only contributed to increased income of local beekeepers, but has also improved the friendly relationships between beekeepers and forest officers. To date, 36 apiaries have been established in 13 central government forests and plantations. Despite this opportunity, many beekeepers have not utilised the present natural forest reserves, game reserves and forest plantations for beekeeping activities.

2.6 Beekeeping for ecosystem conservation and management

The policy insists on ensuring ecosystem stability by practising Integrated Pest Management (IPM) and carrying out Environmental Impact Assessment (EIA) for investments inside or around Bee Reserves and Apiaries. As such, two policy statements are providing guidance on addressing issues related to bee safety, poisoning, IPM and EIA.

Though the application of pesticides in the environment may cause detrimental effects, its application is left in the hands of the applicators. Unfortunately, most farmers are unaware of the possible negative impacts of pesticides to non-targeted organisms including pollinators such as bees. This problem continues to exist due to lack of formal cross - sectoral coordination mechanism between beekeeping authorities, institutions governing pesticide application and the Ministry of Agriculture.

The policy underscores the importance of carrying out EIA inside or around bee reserves and apiaries for investments, which may cause potential damage to the bees, bee products and bee fodder plants. Evidence from the central zone shows a notable compliance to the requirement of carrying out EIA for investments in areas nearby bee reserves and apiaries. The Singida-Namanga Electrical Project, Upepo Energy Electrical Project, Singida-Arusha Road Project, and Zuzu Electrical Project are case examples. This cannot however be taken to indicate that all development projects now consider protection of bee resources through EIA as a pre-requisite for undertaking a development project. It is an indication that it is possible to enforce the requirement of protecting bee resources whenever planning for development projects around or near them.

2.7 Institutions and human resources

The main focus of the policy area on Institutions and human resource is on enhancing the national capacity to manage and develop beekeeping sector in collaboration with other stakeholders. Twelve specific policy areas are itemised under institutions and human resources. They include institutional framework for policy planning, implementation and coordination; legal and regulatory framework; beekeeping administration and local governments. Other areas comprise of research; training and education; extension services; beekeepers, cooperatives and associations; NGOs; financing; and International Community. Along with these specific policy areas, 22 policy statements provide directions on the ways to enhance the national capacity in the beekeeping sector.

Overall policy planning and coordination is handled at the ministerial level through the Policy and Planning Division. At the Forestry and Beekeeping Division level, policy planning, implementation and coordination is carried out through forestry and beekeeping policy section in which there are responsible

personnel assigned to handle daily duties. Other ministries, departments and agencies (MDAs), and non-state actors are involved in policy implementation. However, coordination, policy analysis and planning of beekeeping activities have relatively been weak. This is due to limited opportunity for on job training and/or recruitment of new staff in coordination, implementation, policy analysis and strategic planning.

The government enacted the Beekeeping Act Cap 224 (No. 15/2002) and its Beekeeping General Regulations in 2005. Guideline for quality control of bee products was prepared in 2007 to improve the quality of bee products. However, harmonization of beekeeping legislation with other related sectors such as wildlife and agriculture continue to be strengthened.

The beekeeping administration currently falls under two authorities: The Regional Administration and Local Government (RALG) and the Ministry responsible for beekeeping, which is currently the Ministry of Natural Resources and Tourism (MNRT). Following the Public Sector Reform Programme (2000-2014), beekeeping executive functions are performed by TFS. Under the central government set up, most districts have beekeeping managers managing bee resources under the jurisdiction of TFS apiaries or bee reserves. At local government level, decentralisation of responsibilities has been enhanced through establishment of District Beekeeping Unit in 2012. This unit is responsible for development and management of beekeeping activities at district level. Nevertheless, lack of Divisional and Ward Beekeeping Officers in most parts of the country has led to lack of coordination and consequently impairing implementation of the policy.

The Policy emphasises on promoting research and improving its funding. In this regard, the National Beekeeping Research Master Plan I (NABERM I) was established in May, 2020 to strengthen beekeeping research in Tanzania. Planning is on the way to establish Beekeeping Research Institute, Beekeeping Development Fund (BDF), manpower improvement, equipment and facilities acquisition. The current state depicts a weak beekeeping research output, which is a result of limited research capacity in terms of human resources, funding and facilities. A beekeeping laboratory was built in 2018 at Njiro Wildlife Research Centre (NWRC) but is yet to be furnished.

The Policy emphasises on ensuring adequate professional, technical and specialist staff in the sector. Training has been ongoing in different institutions including Sokoine University of Agriculture (SUA), University of Dar es Salaam (UDSM), Forest Training Institute (FTI) and Beekeeping Training Institute (BTI).

BTI, as a sole college offering certificate and diploma courses, has an annual average output of 61 and 56 graduates at certificate and diploma levels, respectively. UDSM has an average output of 37 first-degree graduates, and BTI curricula were reviewed in 2010 and 2015. UDSM offers a BSc. in Beekeeping Science and Technology, and SUA has started in 2020 to offer Bachelor of Science in Bee Resources Management with an annual intake of 100 students. The three institutions offering beekeeping training; however, they require assistance in terms of facilities and equipment in order to be able to offer quality training efficiently. This is necessary because beekeeping training requires isolation from and specialized equipment and facilities. Although, efforts have been done in this area, recruitment is still inadequate. For example, there is a deficit of 409 staff to fill the gap in 15 regions. There is also deficiency of 12 out of 17 tutors at BTI hence affecting performance in training.

Beekeeping extension services have led to an increased awareness and capacity among stakeholders on sustainable management of beekeeping resources. This is evidenced, for example by the presence of 42 beekeeping extension officers, and formulation of 317 beekeepers' groups, three (3) cooperatives and one (1) association in central zone. Of all formulated groups and cooperatives, 91% and 33%, respectively access beekeeping extension services. National Beehive Siting and World Bee Day are among events organised to share knowledge and experiences as part of extension services.

Although there is good progress in extension services, experience shows that extension is yet to be effective and efficient. Messages are not harmonised and are biased towards certain themes while leaving others such as value addition and marketing issues. Sometimes extension is being used as a promotion platform instead of a means of imparting knowledge and skills. The Training and Extension Services Guideline of 2020 has been prepared to address this gap.

The pace of increasing cooperatives and associations in the country is promising. To date there are 1,280 formal and informal groups and 59 registered

cooperatives engaged in beekeeping. There are also some functioning NGOs for example Tanzania Beekeeping Development Organisation (TABEDO), Tanzania Honey Council (THC) and Disaster Awareness and Preparedness Organisation in Tanzania (DAPOTA).

However, the capacity of these cooperatives, groups and associations is still weak as they lack extension packages, research and market information to support their activities; they lack infrastructure, which would enable them to function more efficiently and effectively. As the result of weak coordination, cooperation is still low between beekeeping sector and NGOs.

Financing in beekeeping sector involves instituting sustainable funding mechanisms to support extension services, infrastructure development, research, beekeeping operations, training and education, equipment and facilities among others. Currently, beekeeping activities are largely supported through the government budgetary allocations, Tanzania Forest Fund (TaFF), Eastern Arc Mountains Conservation Endowment Fund (EAMCEF) and other stakeholder. Nevertheless, the funding for the sector is inadequate.

Tanzania as a member of international community has been collaborating with development partners to support beekeeping sector. Prominent development partners supporting the beekeeping sector in the country are Government of Norway through NORAD, Government of Finland via FINIDA, FORVAC Programme, Government of Belgium through BTC/ENABEL, Netherland Government through (Netherlands Development Organisation - SNV) and recently the European Union through a Beekeeping Value Chain Programme – BEVAC. Tanzania has also been cooperating with international Organizations such as International Trade Organization (ITO), the World-Wide Fund for Nature (WWF), Africare, World Vision, Heifer International, Farm Africa and Association for the Development of Protected Areas (ADAP). Moreover, Tanzania is now a member of Apitrade and Apimondia as prominent international fora for promoting trade and other beekeeping issues.

2.8 Cross cutting issues

The development of the beekeeping sector is influenced by crosscutting issues related to health, gender and governance, which were not considered during

the formulation of NBP. Main health issues are Human Immunodeficiency Virus (HIV) /Acquired Immune Deficiency Syndrome (AIDS) and the current increase of Non-Communicable Diseases (NCDs). Other crossing cutting issues emanate from governance and gender issues.

HIV/AIDS awareness programs have been carried out to reduce the HIV infections and impacts of AIDS among workforce and the surrounding communities. Beekeeping sector activities are associated with social relations and urbanization, which may contribute to the spread of HIV/AIDS among the local communities. HIV/AIDS related issues such as limited awareness, stigma and protection measures need to be considered in policy implementation. Conversely, NCDs such as diabetes, cardiovascular, cancers and chronic respiratory diseases are increasingly becoming a threat to Tanzanians and beekeeping stakeholders are not exception.

Consideration of gender issues in beekeeping activities has received attention to promote economic inclusiveness and social welfare in the sector. However, production continues to be male-dominated. Most women are mainly engaged in the processing and small-scale trade of bee products; this is due to the current production technology. Similarly, though the sector offers opportunity for self-employment, it has not attracted youths as explained by limited awareness of opportunities that exist throughout the beekeeping value chain among youths.

Maintaining culture of accountability and transparency is often insisted to prevent corruption events or incidences in the society. Accountability and transparency aspects have been promoted to enhance good governance in the sector. However, issues related to inequality and corruption continues to exist among stakeholders within the sector.

2.9 Emerging issues

These are matters that influence the development of beekeeping; either came into existence after the establishment of the policy, or was thought not to be influential by then. Climate change and climate variability negatively impact honey bees productivity as they alter flowering time, reduces nectar and pollen availability and may lead to colony starvation. Productivity of bee colonies can also be affected presence of pests and diseases as they reduce strength of the

colony. At the globe level, spread of Colony Collapse Disorder (CCD) characterized by rapid loss of adult worker bees is at increase and causes significant economic losses. Management strategies to deal with CCD are not yet clear and its cause is not yet known. On the other hand, adulteration of bee products is increasing affecting safety and quality of bee products.

Honey bee products namely honey, pollen, propolis, royal jelly and bee venom have health benefits. Globally, the use of bee products in health care is at increase due to increased awareness on use of natural products. In Tanzania however, there is low awareness on use of bee products to prevent and treat illnesses of human beings and animals and exists limited physicians, and naturopathic doctors to use such products. Similarly, the Traditional and Alternative Health Practice Council have limited capacity to use honey bee products in medicine.

CHAPTER THREE

3.0 VISION, MISSION AND OBJECTIVES

3.1 Overview

This chapter presents vision, mission and objectives of the 1998 NBP Implementation Strategy. The Vision and Mission statements have been formulated while the Implementation Strategy has adopted objectives of the NBP.

3.2 Vision and Mission

3.2.1 Vision

To be a vibrant sector that contributes significantly to socio-economic development and environmental conservation.

3.2.2 Mission

To contribute to socio-economic development and environmental conservation through sustainable management and utilization of bee resources.

3.3 Objectives

The objectives are:

- i. Ensured sustainable existence of honeybees by maintaining and effectively managing adequate area of bee reserves;
- ii. Improved quality and quantity of honey, beeswax and other bee products and ensured sustainable supply of the same;
- iii. Enhanced beekeeping-based national development and poverty alleviation through sustainable supply of bee products (honey, beeswax, royal jelly, propolis, brood, and pollen) and pollination services;
- iv. Improved biodiversity, increased employment and foreign exchange earnings through sustainable bee products-based industrial development and trade;

- v. Ensured ecosystem stability by practising Integrated Pest Management (IPM) and carrying out Environmental Impact Assessment (EIA) for investment inside or around Bee Reserves and Apiaries; and
- vi. Enhanced national capacity to manage and develop the beekeeping sector in collaboration with other stakeholders.

CHAPTER FOUR

4.0 POLICY ISSUES, OBJECTIVES, STRATEGIES AND TARGETS

4.1 Overview

This chapter presents issues, objectives, strategies and targets along with the six policy areas of the National Beekeeping Policy, 1998. The policy areas are: establishment and sustainable management of bee reserves; apiary management; beekeeping-based industries and products; beekeeping in cross sectoral areas; beekeeping for ecosystem conservation and management; and institutions and human resources.

4.2 Establishment and sustainable management of bee reserves

Issue

Inadequate establishment and management of bee reserves and beekeeping zones resulting from inadequate promotion and funding.

Objective

Ensured sustainable existence of honeybees by maintaining and effectively managing adequate area of bee reserves.

Strategies

- a. Promote establishment of bee reserves and beekeeping zones across different land uses; and
- b. Promote conservation and management of honey bees, bee fodder and their habitats.

Targets

- i. Gazetted bee reserves under government, village councils and private sector ownership increased from 11,235.96 ha to 114,000 ha by June, 2031;

- ii. 452,000 beekeepers using bark hives adopted Tanzania top-bar hive (TTBH) by June, 2031;
- iii. Queen rearing centres increased from 3 to 21 in beekeeping zones by June, 2031;
- iv. Seven beekeeping zones established by June, 2031;
- v. Apiaries in bee reserves (under government, NGOs and private sector ownership) increased from 1,533 to 4,500 by June, 2031;
- vi. Develop and disseminate Guidelines for establishment and management of bee reserves and beekeeping zones by June, 2031; and
- vii. 500 ha of area with unique vegetation (e.g. Itigi thickets) for honey production identified and protected by June, 2031.

4.3 Apiary Management

Issue

Ineffective management of apiaries.

Objective

Improved quality and quantity of honey, beeswax and other bee products and ensured sustainable supply of the same.

Strategies

- a. Promote production, quality and safety of bee products; and
- b. Strengthen stakeholders' involvement in managing apiaries.

Targets

- i. Sites with functioning Api – agro forestry increased from 56 to 170 by June, 2031;
- ii. Management plans for 181 apiaries developed and operational by June, 2031;

- iii. One hundred fifty (150) beekeepers' groups trained on best beekeeping practices annually by June, 2031;
- iv. Traceability system for bee products updated and harmonized with other information management system by June, 2025;
- v. At least two (2) Agreements between beekeeping and wildlife, and beekeeping and forest authorities on apiary establishment and management in place by June, 2025;
- vi. Certified producers, processors and traders of bee products increased from 32 to 50 by June, 2031;
- vii. Honey production increased from 30,400 tons (22% of potential) to 69,000 tons (50%) by June, 2031; and
- viii. Beeswax production increased from 1,843 tons (20% of potential) to 4,600 tons (50%) by June, 2031.

4.4 Beekeeping based industries and products

Issue

Inadequate contribution of beekeeping based industries and products to socio-economic development.

Objective

Enhanced beekeeping-based industries for national development and poverty alleviation through sustainable supply of bee products (honey; beeswax, royal jelly, propolis, brood, pollen) and services.

Strategies

- a. Encourage use of efficient technologies in beekeeping-based industries;
- b. Promote diversification of bee products and services; and
- c. Promote efficient and effective marketing system(s) of bee products and services.

Targets

- i. Beekeeping equipment industries using efficient technology increased from 33 to 48 by June, 2031;
- ii. Industries using honey, beeswax and other bee products as ingredients for making secondary products increased from 4 to 10 by June, 2031;
- iii. Processing industries for honey, beeswax and other bee products using efficient technology increased from 64 to 80 by June, 2031;
- iv. Bee products harvested increased from 2 to 6 by June, 2031;
- v. Farmers using bee pollination services in agricultural production increased from 168 to 500 June, 2031;
- vi. Bee reserves and apiaries for Api-tourism increased from 5 to 20 by June, 2031;
- vii. Working bee products collection centres increased from 19 to 60 by June, 2031;
- viii. Beekeeping information centres in 185 district councils established and operationalised by June, 2031;
- ix. Six known bee products promoted and marketed by June, 2031;
- x. Six bee products added value to commercialization level by June, 2031; and
- xi. Bee products exports increases from 5% to 10% of production by June, 2031.

4.5 Beekeeping in cross sectoral areas

Issue

Limited use of cross-sectoral areas for establishment of apiaries.

Objective

Improved biodiversity, increased employment and foreign exchange earnings through sustainable bee products - based industrial development and trade.

Strategies

- a. Encourage establishment of apiaries on agricultural, public, plantation lands, forest reserves and forest plantation; and
- b. Establish formal mechanisms for establishment of apiaries in wildlife reserved areas.

Targets

- i. Apiaries in agricultural lands increased from 670 to 1000 by June, 2031;
- ii. Apiaries in public lands increased from 1,022 to 1,300 by June, 2031;
- iii. Apiaries in forest reserves and plantations increased from 100 to 500 by June, 2031;
- iv. Apiaries in wildlife reserved areas increased from 200 to 500 by June, 2031;
- v. Regulations for management of beekeeping activities in cross sectoral areas in accordance with Beekeeping Act, National Park Act, Forest Act and Wildlife Act prepared by June, 2031; and
- vi. Employment in beekeeping sector increased from two million (2 mill.) to two million five hundred thousand (2.5 mill) persons across the value chain by June, 2031.

4.6 Beekeeping for ecosystem conservation and management

Issue

Uncontrolled land use practices and application of pesticides in and around bee reserves and apiaries

Objective

Ensured ecosystem stability by practicing integrated pest management and carrying out environmental impact assessment for investments inside or around Bee Reserves and Apiaries.

Strategies

- a. Encourage proper land use practices.
- b. Control application of pesticides in and around bee reserves and apiaries.

Targets

- i. Cross-sectoral coordination forum on IPM issues established and operationalised annually by June, 2031;
- ii. At least 150 famers and beekeepers adopted IPM practices by June, 2031; and
- iii. A system for annual chemical and pesticides analysis of bee products put in place by June, 2031.

4.7 Institutions and human resources

Issue

Limited institutional capacity to coordinate and implement the national beekeeping policy.

Objective

Enhanced national capacity to manage and develop the beekeeping sector in collaboration with other stakeholders.

Strategies

- a. Strengthen capacity for sectoral and cross-sectoral coordination;
- b. Enhance capacity for training, research and extension services;
- c. Encourage involvement of groups, cooperatives and associations in beekeeping; and
- d. Enhance sustainable financing mechanism(s) for sector development.

Targets

- i. Functioning information management systems established by June, 2024;

- ii. Three (3) stakeholders' fora on regional and international beekeeping strengthened by June, 2031;
- iii. Staff with capacity to carry out research increased from 7 to 50 by June, 2031;
- iv. Beekeeping extension staff increased from 285 to 1,008 by June, 2031;
- v. At least 15 Beekeeping research projects funded by 2031;
- vi. Beekeeping extension and training manual established and operationalised by June, 2022;
- vii. Capacity for three (3) accredited training institutions in beekeeping training strengthened by June, 2031;
- viii. A functional beekeeping research institution established by June, 2026;
- ix. At least two (2) institutions providing elementary beekeeping training registered by June, 2031;
- x. Groups, cooperatives and associations increased from 1,280 to 4,000 by June, 2031;
- xi. Groups, cooperatives, associations and traders accessing extension services increased from 1,280 to 4,000 by June, 2031;
- xii. Beekeeping awareness programme for at least 50% of secondary schools and higher learning institutions established and put in place by June, 2031.
- xiii. Beekeeping development fund established and functioning by June, 2031;
- xiv. Mechanism of self-financing to 15% (600) of the existing 4,000 beekeeping groups, cooperatives and associations established and put in place by June, 2031;
- xv. At least 10% (400) of the existing 4,000 beekeeping groups, cooperatives and associations have access to loans/grants from financial institutions and government scheme by June, 2031; and
- xvi. Six beekeeping projects implemented in collaboration with development partners by June, 2031.

4.8 HIV/AIDS

Issue

Limited awareness, stigma and protection measures on HIV/AIDS.

Objective

Reduced new infections, impacts of HIV/AIDS and NCD.

Strategies

- a. Mainstream HIV/AIDS prevention and supportive measures in beekeeping activities; and
- b. Advocate for Non-Communicable Diseases (NCD) prevention and control.

Targets

- i. Staff living with HIV/AIDS supported by 100 percent by June, 2031;
- ii. Prevention outreach programmes to 100 beekeeping groups conducted by June, 2031; and
- iii. Twenty (20) sensitization programmes on NCDs completed by June, 2031.

4.9 Gender

Issue

Limited involvement of women and youths in beekeeping activities.

Objective

Enhanced women and youth's involvement in beekeeping activities

Strategies

- a. Encourage participation of women and youths in beekeeping activities.

Targets

- i. Women and youths-beekeeping groups increased from 581 to 1,200 by June, 2031;

- ii. Women and youths-beekeeping groups receiving training on appropriate beekeeping technologies scaled up from 280 to 600 by June, 2031; and
- iii. 225 women and youths-beekeeping groups have access to funds from sectoral initiatives by June, 2031.

4.10 Good governance

Issue

Inadequate practices of good governance in beekeeping sector.

Objective

Enhanced good governance in the beekeeping sector.

Strategies

- a. Mainstream good governance principles in beekeeping decision making processes.

Targets

- i. A functional Beekeeping Professional Association (BPA) established to oversee professional matters by June, 2025; and
- ii. Twenty (20) awareness programmes on good governance for beekeeping stakeholders completed by June, 2031.

4.11 Emerging issues

Issue

Limited consideration of Climate change, bee products fraud, bee health and apitherapy in beekeeping development.

Objective

Enhanced integration of Climate change, bee products fraud, bee health and apitherapy in beekeeping.

Strategies

- a. Promote coping, adaptation and mitigation measures to climate change impacts;
- b. Strengthen adulteration control measures;
- c. Maintain bee health for efficient productivity; and
- d. Promote use of bee products for diseases prevention and treatments.

Targets

- i. Climate change adaptation and mitigation measures developed for beekeeping activities by June, 2025;
- ii. At least 50% of beekeeping extension officers trained on climate change June, 2031;
- iii. Incidences of bee products adulteration decreased to 100% by June, 2031;
- iv. Bee pests control measures implemented by June, 2031;
- v. Reduce occurrence and effects of colony collapse disorder by 50% by June, 2031;
- vi. Bee diseases control measures implemented to 100% by June, 2031;
- vii. At least one (1) registered apitherapy centre established and functioning by June, 2031; and
- viii. Thirty (30) members of Traditional and Alternative Health Practice Council adopted use of apitherapy by June, 2031.

CHAPTER FIVE

5.0 A LOGFRAME FOR POLICY IMPLEMENTATION STRATEGY

5.1 Overview

This chapter shows the logical link of the policy objectives with strategies and targets. The log frame includes estimated financial resources, timeframe and responsible institutions to implement this Strategy. The total estimated budget for implementing the Strategy for ten (10) years is TZS 425,610,000,000. TZS 11,290 million will be used for establishment and management of bee reserves, TZS 6,060 million for apiary management, TZS 380,700 million for beekeeping-based industries and products, TZS 5,400 million for beekeeping in cross sectoral areas, TZS 2,030 million for beekeeping for ecosystem conservation and management and TZS 14,060 million for institutions and human resources. Budget for cross-cutting issues on HIV/AIDS, gender and governance is estimated to be TZS 4,840 million while TZS 1,230 million will be spent on emerging issues.

5.2 Log frame for NBP implementation strategy

The log frame of the NBP Implementation Strategy is presented in **Table 1**.

Table 1. Log Frame for NBP Implementation Strategy

Strategies	Targets	Resources (TZS) *one million	Time frame (Years)	Responsible
Objective 1: Ensured sustainable existence of honey bees by maintaining and effectively managing adequate area of bee reserves				
1. Promote establishment of bee reserves and beekeeping zones across different land uses	Gazetted bee reserves under government, village councils and private sector ownership increased from 11,235.96 ha to 114,000 ha by June, 2031.	1,440	10	MNRT, TFS, PO-RALGAs, DPs, Private sector

Strategies	Targets	Resources (TZS) *one million	Time frame (Years)	Responsible
	Seven beekeeping zones established by June, 2031.	1,400	10	MNRT, TFS, MLF, MLHSD PO-RALGAs, DPs
	Develop and disseminate Guidelines for establishment and management of bee reserves and beekeeping zones by June 2023.	100	2	MNRT, TFS, PO-RALGAs, DPs, Private sector
	500 ha of area with unique vegetation (e.g. Itigi thickets) for honey production identified and protected by June 2031.	100	10	MNRT, TFS, PO-RALGAs, DPs, Private sector
2. Promote conservation and management of honey bees, bee fodder and their habitats	Use of bark hives decreased from 452,000 to zero by June, 2031.	450	10	MNRT, TFS, PO-RALGAs
	Apiaries in bee reserves (under government, NGOs and private sector ownership) increased from 1,533 to 4,500 by June, 2031.	6,000	10	MNRT, TFS, PO-RALGAs, DPs, NGOs, Private sector
	Queen rearing centres increased from 3 to 21 in beekeeping zones by June, 2031.	1,800	10	MNRT, TFS, PO-RALGAs, DPs, Private sector
	Subtotal	11,290		
Objective 2. Improved quality and quantity of honey, beeswax and other bee products and ensured sustainable supply of the same				
1. Promote production, quality and safety of bee products	Honey production increased from 30,400 tons (22%) to 69,000 tons (50%) of the production potential by June, 2031.	1,500	10	MNRT, TFS, PO-RALGAs, DPs, Private sector

Strategies	Targets	Resources (TZS) *one million	Time frame (Years)	Responsible
	Beeswax production increased from 1,843 tons (20%) to 4,600 tons (50%) of the production potential by June, 2031.	1,000	10	MNRT, TFS, PO-RALGAs, DPs, Private sector
	Certified producers, processors and traders of bee products increased from 32 to 50 by June, 2031.	50	10	MNRT, TFS, PO-RALGAs, DPs, Private sector, TBS
	Traceability system for bee products updated and harmonized with other information management system by June, 2025.	550	4	MNRT, TFS, PO-RALGAs, DPs, Private sector, TBS
2. Strengthen stakeholder's involvement in managing apiaries.	One hundred fifty (150) beekeepers' groups trained on best beekeeping practices annually by June, 2031.	1,500	10	MNRT, TFS, PO-RALGAs, DPs, Private sector
	Sites with functioning Api – agroforestry increased from 56 to 170 by June, 2031.	360	10	MNRT, TFS, PO-RALGAs, MAI, DPs, NGOs, Private sector
	Management plans for 181 apiaries developed and operational by June, 2031.	1,000	10	MNRT, TFS, PO-RALGAs, DPs, NGOs, Private sector
	At least two (2) Agreements between beekeeping and wildlife, and beekeeping and forest authorities on apiary establishment and management in place by June, 2025.	100	4	MNRT, TFS, PO-RALGAs, DPs, Private sector
	Subtotal	6,060		

Strategies	Targets	Resources (TZS) *one million	Time frame (Years)	Responsible
Objective 3. Enhanced beekeeping-based (national) development and poverty alleviation through sustainable supply of bee products (honey; beeswax, royal jelly, propolis, brood, pollen) and services				
1. Encourage use of efficient technologies in beekeeping-based industries.	Beekeeping equipment industries using efficient technology increased from 33 to 48 by June, 2031.	3,000	10	MNRT, TFS, PO-RALGAs, DPs, NGOs, Private sector
	Industries using honey, beeswax, other bee products as an ingredients for making value addition increased from 4 to 10 by June, 2031.	4,000	10	MNRT, TFS, PO-RALGAs, DPs, NGOs, Private sector
	Processing industries for honey, beeswax, other bee products using efficient technology increased from 64 to 80 by June, 2031.	15,000	10	MNRT, TFS, PO-RALGAs, DPs, NGOs, Private sector
2. Promote diversification of bee products and services.	Bee products harvested increased from 2 to 6 by June, 2031.	1,500	10	MNRT, TFS, PO-RALGAs, DPs, NGOs, Private sector
	Bee reserves and apiaries for Api-tourism increased from 5 to 20 by June, 2031.	5,000	10	MNRT, TFS, PO-RALGAs, DPs, NGOs, Private sector
	Farmers using bee pollination services in agricultural production increased from 168 to 500 June, 2031.	2,000	10	MNRT, TFS, PO-RALGAs, MAI, DPs, NGOs, Private sector
3. Promote efficient and effective marketing system(s) of bee products and services.	Working bee products collection and processing centres increased from 19 to 60 by June, 2031.	163,000	10	MNRT, TFS, PO-RALGAs, DPs, NGOs, Private sector

Strategies	Targets	Resources (TZS) *one million	Time frame (Years)	Responsible
	Beekeeping information centres in 185 district councils established and operationalised by June, 2031.	186,000	10	MNRT, TFS, PO-RALGAs, DPs, NGOs, Private sector
	Six known bee products promoted and marketed by June, 2031.	500	10	MNRT, TFS, PO-RALGAs, DPs, NGOs, Private sector
	Six bee products added value to commercialization level by June, 2031.	650	10	MNRT, TFS, PO-RALGAs, DPs, NGOs, Private sector
	Bee products exports increases from 5% to 10% of production by June, 2031.	50	10	MNRT, TFS, PO-RALGAs, DPs, NGOs, Private sector
	Subtotal	380,700		

Objective 4. Improved biodiversity, increased employment and foreign exchange earnings through sustainable bee products - based industrial development and trade

1. Encourage establishment of apiaries on agricultural, public, plantation lands; forest reserves and forest plantation.	Apiaries in agricultural lands increased from 670 to 1,000 by June, 2031.	500	10	MNRT, TFS, PO-RALGAs, MAI, DPs, NGOs, Private sector
	Apiaries in public lands increased from 1,022 to 1,300 by June, 2031.	550	10	MNRT, TFS, PO-RALGAs, DPs, NGOs, Private sector
	Apiaries in forest reserves and plantations increased from 100 to 500 by June, 2031.	3,000	10	MNRT, TFS, PO-RALGAs, DPs, NGOs, Private sector
	Employment in beekeeping sector increased from 2million to 2.5million across the value chain by June, 2031.	500	10	MNRT, TFS, PO-RALGAs, DPs, NGOs, Private sector

Strategies	Targets	Resources (TZS) *one million	Time frame (Years)	Responsible
2. Establish formal mechanisms for establishment of apiaries in wildlife reserved areas.	Apiaries in wildlife reserved areas increased from 200 to 500 by June, 2031.	350	10	MNRT, TFS, PO-RALGAs, DPs, NGOs, Private sector
	Regulations for management of beekeeping activities in cross sectoral areas in accordance with Beekeeping Act, National Park Act, Forest Act and Wildlife Act prepared by June, 2031.	500	10	MNRT, TFS, PO-RALGAs, DPs, NGOs, Private sector
	Subtotal	5,400		
Objective 5. Ensured ecosystem stability by practicing integrated pest management and carrying out environmental impact assessment for investments inside or around Bee Reserves and Apiaries.				
1. Promote integrated pest management (IPM) approaches among farmers.	Cross-sectoral coordination forum on IPM issues established and operationalized annually by June, 2031.	750	10	MNRT, TFS, PO-RALGAs, MAI, DPs, NGOs, Private sector
	At least 150 Farmers and beekeepers practicing IPM by June, 2031.	780	10	MNRT, TFS, PO-RALGAs, MAI, DPs, NGOs, Private sector
	A system for annual chemical and pesticides analysis of bee products put in place by June, 2031.	500	10	MNRT, TFS, PO-RALGAs, MAI, DPs, NGOs, Private sector
	Subtotal	2,030		

Strategies	Targets	Resources (TZS) *one million	Time frame (Years)	Responsible
Objective 6. Enhanced national capacity to manage and develop the beekeeping sector in collaboration with other stakeholders				
1. Strengthen capacity for sectoral and cross-sectoral coordination.	Functioning information management systems established by June, 2024.	820	3	MNRT, TFS, PO-RALGAs, DPs,
	Three (3) stakeholders' fora on regional and international beekeeping strengthened by June, 2031.	600	10	MNRT, TFS, PO-RALGAs, MAI, DPs, NGOs, Private sector
2.Enhance capacity for training, research and extension services.	Staff with capacity to carry out research increased from 7 to 50 by June, 2031.	1,100	10	MNRT, TFS, PO-RALGAs, TAFORI, SUA, UDSM, UDOM DPs.
	At least 15 Beekeeping research projects funded by June, 2031.	900	10	TAFORI, UDSM, SUA, UDOM, TAWIRI
	Beekeeping extension staff increased from 285 to 1,008 by June, 2031.	1,000	10	MNRT, TFS, PO-RALGAs, SUA, UDSM, UDOM DPs.
	Beekeeping extension and training manual established and operationalised by June, 2022.	570	1	MNRT,PO-RALGAs, DPs.
	Capacity for three (3) accredited training institutions in beekeeping training strengthened by June, 2031.	3,000	10	MNRT, SUA, UDSM, BTI, DPs.
	Functional beekeeping research institution established by June 2026.	2,000	5	MNRT, TAFORI, DPs.

National Beekeeping Policy Implementation Strategy (2021-2031)

Strategies	Targets	Resources (TZS) *one million	Time frame (Years)	Responsible
	At least two (2) institutions providing elementary beekeeping training registered by June, 2031.	100	10	MNRT, TFS, PO-RALGAs, TCDC, DPs, NGOs, VETA, SIDO, Private sector.
3. Encourage involvement of groups, cooperatives and associations in beekeeping.	Groups, cooperatives and associations increased from 1,280 to 4,000 by June, 2031.	1,150	10	MNRT, TFS, PO-RALGAs, TCDC, DPs, NGOs, Private sector.
	Groups, cooperatives, associations and traders accessing extension services increased from 1,280 to 4,000 by June, 2031.	400	10	MNRT, TFS, PO-RALGAs, TCDC, DPs, NGOs, Private sector.
	Beekeeping awareness programme for at least 50% of secondary schools and higher learning institutions established and put in place by June, 2031.	400	10	
4. Enhance sustainable financing mechanism(s) for sector development.	Beekeeping development fund established and functioning by June, 2031.	200	10	MNRT, TFS, PO-RALGAs, DPs, NGOs, Private sector.
	Mechanism of self-financing to 15% (600) of the existing 4,000 beekeeping groups, cooperatives and associations established and put in place by June, 2031.	1,200	10	MNRT, TFS, PO-RALGAs, RECO, DPs, NGOs, Private sector.

Strategies	Targets	Resources (TZS) *one million	Time frame (Years)	Responsible
	At least 10% (400) of the existing 4,000 beekeeping groups, cooperatives and associations have access to loans/grants from financial institutions and government scheme by June, 2031.	320	10	MNRT, TFS, PO-RALGAs, RECO, DPs, NGOs, Fls, Private sector.
	Six beekeeping projects implemented in collaboration with development partners by June, 2031.	1,200	10	MNRT, TFS, PO-RALGAs, DPs.
	Subtotal	14,060		
Objective 7. Reduced new infections and impacts of HIV/AIDS and NCDs				
1. Mainstream HIV/AIDS prevention and supportive measures in beekeeping activities.	100% staff affected by HIV/AIDS supported by June, 2031.	130	10	MNRT, PO-RALGAs, TFS.
	Prevention outreach programmes to 100 beekeeping groups conducted by June, 2031.	100	10	MNRT, PO-RALGAs, TFS, NGOs
2. Advocate for NCDs prevention and control.	Twenty (20) awareness programmes on NCDs completed by June, 2031.	50	10	MNRT, PO-RALGAs, TFS, NGOs
3. Encourage participation of women and youths in beekeeping activities.	Women and youth beekeeping groups increased from 581 to 1,200 by June, 2031.	850	10	MNRT, PO-RALGAs, TFS, DPs, NGOs, Private sector.
	Women and youth groups receiving training on appropriate beekeeping technologies scaled up from 280 to 600 by June, 2031.	1,300	10	MNRT, PO-RALGAs, TFS, DPs, NGOs, Private sector.

Strategies	Targets	Resources (TZS) *one million	Time frame (Years)	Responsible
	225 women and youth groups have access to funds from sectoral initiatives by June, 2031.	1,550	10	MNRT, PO-RALGAs, TFS, DPs, NGOs, FIs, Private sector.
	Subtotal	3,980		
Objective 9. Enhanced Good governance in beekeeping sector				
1. Mainstream good governance attributes in beekeeping decision making processes.	A functional Beekeeping Professional Association (BPA) established to oversee professional matters by June, 2025.	460	4	MNRT, PO-RALGAs, TFS, RECO, TAFORI, DPs, NGOs, Private sector.
	Twenty awareness programmes on good governance completed to beekeeping stakeholders by June, 2031.	400	10	MNRT, PO-RALGAs, PO-PSMGG, TFS, RECO, DPs, NGOs, Private sector.
	Subtotal	860		
Objective 10. Enhanced integration of Climate change, bee products fraud, bee health and apitherapy in beekeeping				
1. Promote coping, adaptation and mitigation measures to climate change impacts.	Climate change adaptation and mitigation measures developed for beekeeping activities by June, 2025.	90	5	MNRT, PO-RALGAs, VPO - Environment, TFS
	At least 50% of beekeeping extension officers trained on climate change June, 2031.	200	10	MNRT, PO-RALGAs, VPO - Environment, TFS
2. Strengthen adulteration control measures.	Incidences of bee products adulteration decreased to 100% by June, 2031.	100	10	MNRT, PO-RALGAs, VPO - Environment, TFS, TBS

Strategies	Targets	Resources (TZS) *one million	Time frame (Years)	Responsible
3. Maintain bee health for efficient productivity.	Bee pests control measures implemented by June, 2031.	150	10	MNRT, PO-RALGAs, VPO - Environment, TFS,
	Reduce occurrence and effects of colony collapse disorder by 50% by June, 2031.	90	10	MNRT, PO-RALGAs, VPO - Environment, TFS
	Bee diseases control measures implemented to 100% by June, 2031.	200	10	MNRT, PO-RALGAs, VPO - Environment, TFS
4. Promote use of bee products for diseases prevention and treatments.	At least one (1) registered apitherapy centre established and functioning by June, 2031.	300	10	MNRT, PO-RALGAs, MoHCDEC
	Thirty (30) members of Traditional and Alternative Health Practice Council adopted use of apitherapy by June, 2031.	100	10	MNRT, PO-RALGAs, VPO - Environment, MoHCDEC
	Subtotal	1,230		
	Grand Total	425,610		

CHAPTER SIX

6.0 ROLES AND RESPONSIBILITIES OF STAKEHOLDERS

6.1 Ministry responsible for beekeeping

The Ministry has the overall coordination of the beekeeping sector. Specifically, the Ministry will undertake the following functions:

- i. Policy, strategy, legislation and guidelines formulation and law enforcement;
- ii. Sectoral-planning, budgeting, monitoring and evaluation;
- iii. Facilitate national capacity building in beekeeping education, research, marketing and extension services;
- iv. Encourage effective participation of stakeholders in beekeeping and beekeeping industries development;
- v. Promote Public-Private Partnership in beekeeping sector;
- vi. Establish entities and mechanisms that streamline beekeeping and beekeeping industry management;
- vii. Create enabling environment and mechanisms for collaboration with National, Regional and International institutions in beekeeping development;
- viii. Ensure compliance with international standards and guidelines; and
- ix. Ensure fulfilment of commitments made at regional and international protocols and agreements.

6.2 Key sector ministries

These Ministries perform activities, which have direct impact to the sector. They will participate in:

- i. Coordination and collaboration in extension, training, research and marketing;
- ii. Collection and dissemination of beekeeping information;

- iii. Enforcing beekeeping laws;
- iv. Preparation of proper land use management plans;
- v. Monitoring and evaluation in beekeeping;
- vi. Promoting sustainable agricultural practices; and
- vii. Conserving bees and bee fodder plants.

6.3 Authorities and executive agencies in the beekeeping sector

The functions of the Authorities and Executive Agencies are:

- i. Establishing and managing of apiaries and bee reserves;
- ii. Developing institutional capacity to support beekeeping activities;
- iii. Issuing licences, permits and certificates on bee products and research;
- iv. Enforcing the beekeeping law;
- v. Conducting monitoring and evaluation;
- vi. Collecting revenues;
- vii. Ensuring harvesting and utilization of bee resources sustainably;
- viii. Conducting beekeeping extension services;
- ix. Financing of investment in beekeeping sector;
- x. Marketing of bee products;
- xi. Production of value-added bee products such as candles, honey-beer, honey-wine, confectionery products, cosmetics, polishes and lubricants;
- xii. Establish queen rearing centers; and
- xiii. Eco-tourism development in beekeeping.

6.4 Local Governments

As a player in beekeeping management, PO-RALG will:

- i. Undertake revenue collection;
- ii. Establish and manage local government bee reserves and apiaries;
- iii. Enforce law;
- iv. Formulate and enforce bylaws
- v. Support communities in establishment and management of bee reserves;
- vi. Undertake monitoring and evaluation;

- vii. Marketing of bee products;
- viii. Financing of investment in beekeeping sector;
- ix. Conducting beekeeping extension services;
- x. Ensuring harvesting and utilization of bee resources sustainably;
- xi. Production of value-added bee products such as candles, honey-beer, honey-wine, confectionery products, cosmetics, polishes and lubricants;
- xii. Establish queen rearing centers;
- xiii. Eco-tourism development in beekeeping;
- xiv. Ensure capacity building and awareness for staff and local communities; and
- xv. Promote partnership with private sector.

6.5 Other Government Institutions

Other government institutions will participate in:

- i. Coordination and collaboration in extension, training, research and marketing;
- ii. Law enforcement;
- iii. Collection and dissemination of information;
- iv. Licensing of beekeeping-based industries and trade;
- v. Financing of investment in beekeeping sector;
- vi. Developing quality standards for different bee products;
- vii. Providing support in bee resources conservation and management; and
- viii. Creating enabling environment for beekeeping investments.

6.6 Village government

- i. Formulate and enforce by-laws;
- ii. Establish and manage village bee reserves and apiaries;
- iii. Undertake revenue collection;
- iv. Supervise and monitor beekeeping activities; and
- v. Support communities in establishment and management of bee reserves.

6.7 Local Communities

Local communities will:

- i. Provide beekeeper-to-beekeeper advice;
- ii. Produce and process bee products for both local and export markets;
- iii. Production of subsistence and commercial bee products and value added products;
- iv. Be employed in apiaries and beekeeping-based industries;
- v. Maintain high quality standards for the bee products in order to be competitive in local and international markets;
- vi. Plant bee fodder plants ("planting for bees"); and
- vii. Establish and manage Api-Agro-Forestry systems and Meliponiculture Agro-Forestry systems.

6.8 NGOs, CBOs, faith-based Institutions, mass media and political parties

NGOs, CBO, Faith-based Institutions, Media and Political Parties will implement policy by:

- i. Awareness raising and beekeeping extension services;
- ii. Capacity building;
- iii. Facilitate technical assistance, training, research and technology transfer;
- iv. Financing beekeeping and environment conservation;
- v. Promote gender participation and youth involvement in beekeeping; and
- vi. Sensitize investment in beekeeping industry and trade.

6.9 Private sector

The Private sector will participate by:

- i. Investing in beekeeping sector;
- ii. Conduct market research of bee products and services;
- iii. Production of value-added bee products; and

- iv. Eco-tourism development in beekeeping.

6.10 International Community

The International Community will:

- i. Collaborate in financial and technical assistance;
- ii. Facilitate capacity building in beekeeping industry; and
- iii. Facilitation of implementation of international obligations and linkages.

CHAPTER SEVEN

7.0 MONITORING AND EVALUATION

7.1 Monitoring and evaluation framework

Monitoring and Evaluation (M&E) system is a tool to monitor progress and assess the level of attainment of set objectives. The proper functioning of M&E system depends on a well-coordinated and functioning of all components of the system, from data collection to the highest level of analysis and reporting to stakeholders.

The overall responsibility for the M&E of the Policy implementation lies within the Ministry responsible for beekeeping. The Ministry will play key roles in coordination, implementation, monitoring and evaluation of the Strategy. For effective M&E, each stakeholder will have to establish a reliable internal monitoring system and ensure capacity is available to assess efficiency and effectiveness of their respective organizations in relation to the National Beekeeping Policy of 1998.

The M&E will involve, among other things conducting baseline survey, establishing performance indicators, and setting M&E framework. Progress on implementation of the milestones and targets will be tracked periodically. Moreover, annual reviews will be conducted to assess whether the planned activities lead to the achievements of set targets. In addition, case studies, diagnostic studies, surveys and beneficiary assessments will be undertaken to track any changes in terms of outputs realized over the period under review.

7.2 Objectives and guiding principles of National Beekeeping Policy Monitoring and Evaluation framework

7.2.1 Overall and specific objectives

The overall objective of M&E Framework is to guide implementation of the National Beekeeping Policy through its Strategy. Specifically, the M&E framework intends to:

- i. Establish benchmark of indicators for policy implementation;

- ii. Set targets and standards for policy implementation;
- iii. Guide actors' participation in implementation and monitoring activities;
and
- iv. Control use of resources during implementation.

7.2.2 Guiding principles

The intention of having M&E system is basically to enable stakeholders in the sector to vividly trace the progress made towards attainment of the Policy objectives. Key guiding principles are:

- i. Development of capacity on M&E activities;
- ii. Harmonization and alignment of the framework with other government M&E systems;
- iii. Adoption of result-based-approach;
- iv. Flexibility in reversing the M&E framework; and
- v. Start from the current situation.

7.3 Scope of monitoring and evaluation framework

The M&E framework provides overall Beekeeping development trends. The framework covers but is not limited to the following:

- i. Assessment of inputs, processes, outputs, outcomes and impacts of the National Beekeeping Policy Implementation Strategy; and
- ii. Databases and reporting framework for the National Beekeeping Policy Implementation strategy.

7.4 Performance indicators

The matrix of performance indicators is shown in Table 2 presents the alignment of objectives with output and outcome indicators; baseline and source of information.

Table 2. Performance Indicators for National Beekeeping Policy Monitoring and Evaluation Framework

Output Indicators	Outcome Indicators	Baseline	Source
<i>Strategic Objective 1. Ensured sustainable existence of honeybees by maintaining and effectively managing adequate area of bee reserves</i>			
i. Area of gazetted bee reserves under all ownership. ii. Number of Tanzania top-bar hives. iii. Number of Queen rearing centres. iv. Number of beekeeping zones. v. Number of apiaries in bee reserves. vi. Number of Guidelines for establishment and management of bee reserves and beekeeping zones. vii. Area with unique vegetation.	Honey bee colonies	9,200,000	Survey report
<i>Strategic Objective 2. Improved quality and quantity of honey, beeswax and other bee products and ensured sustainable supply of the same</i>			
i) Number of sites with functioning Api-agro forestry. ii) Number of apiaries with operational management plans. iii) Number of beekeepers' groups trained on best beekeeping practices annually. iv) Presence of updated and harmonized traceability system.	i) Quantity of Honey ii) Quantity of Beeswax iii) Number of Actors with bee products quality certificates.	i. 30,400 Tonnes of honey. ii. 1,843 Tonnes of beeswax. iii. 34 quality certificates.	Annual progress reports

Output Indicators	Outcome Indicators	Baseline	Source
v) Number of agreements between beekeeping, forest and wildlife authorities. vi) Quantity of honey produced. vii) Quantity of beeswax produced.			
<i>Strategic Objective 3. Enhanced beekeeping-based national development and poverty alleviation through sustainable supply of bee products (honey, beeswax, royal jelly, propolis, brood, and pollen) and pollination services</i>			
i. Number of beekeeping equipment industries using efficient technology. ii. Number of beekeeping information centres in council districts. iii. Number of working bee products collection and processing centres. iv. Number of processing industries for honey, beeswax and other bee products. v. Number of industries using bee products as ingredients. vi. Number of varieties of bee products harvested. vii. Number of farmers using bee pollination services in agricultural production. viii. Number of bee reserves and apiaries for Api-tourism. ix. Number of types of less-known bee products promoted.	i. Quantity of bee products other than honey and beeswax. ii. Number of Api-tourists. iii. Quantity of honey export (%). iv. Types of value-added bee products. v. Extent of use of technological beekeeping equipments.	Propolis 6 kg; Pollen 240 kg; Bee venom 6 kg. 40 tourists. 5% of current production of honey. 16 types of value-added products. N/A.	Annual progress reports; Export report Tourist survey reports

Output Indicators	Outcome Indicators	Baseline	Source
x. Number of bee products added value and commercialized. xi. Types of bee products promoted and marketed.			
<i>Strategic Objective 4. Improved biodiversity, increased employment and foreign exchange earnings through sustainable bee products - based industrial development and trade.</i>			
i. Number of Apiaries in agricultural lands. ii. Number of Apiaries in public lands. iii. Number of Apiaries in forest reserves and plantations. iv. Number of Apiaries in wildlife reserved areas. v. Number of regulations for management of beekeeping in cross sectoral areas. vi. Number of individuals employed in beekeeping sector.	Number of households benefiting from apiary management on cross sectoral areas.	2,000,000 households	Annual progress reports
<i>Strategic Objective 5. Ensured ecosystem stability by practising Integrated Pest Management (IPM) and carrying out Environmental Impact Assessment (EIA) for investment inside or around Bee Reserves and Apiaries</i>			
i. Establishment and operationalization of cross-sectoral coordination forum on IPM issues. ii. Number of Farmers and beekeepers practicing IPM. iii. Number of laboratory analysis report on bee products chemical and pesticides.	Number of honey samples with unacceptable levels of pesticides residues.	3 samples	Chemical residues monitoring plan report.

Output Indicators	Outcome Indicators	Baseline	Source
<i>Strategic Objective 6. Enhanced national capacity to manage and develop the beekeeping sector in collaboration with other stakeholders</i>			
i) Presence of functioning information management systems. ii) Presence of functioning stakeholders' forum meeting annually. iii) Number of Staff with capacity to carry out research. iv) Number of training institutions capacitated to offer beekeeping training. v) Functioning beekeeping research institution. vi) Number of Staff with capacity to offer extension services. vii) Existence of working beekeeping extension manual . viii) Number of groups cooperatives and associations . ix) Presence of Beekeeping development fund. x) Number of Beekeeping groups, cooperatives and associations with self-financing mechanism. xi) Number of beekeeping groups, cooperatives and association accessing loans from financial institutions and government scheme.	i. Improved collaboration among stakeholders. ii. Reliable information and data. iii. Extent of beekeepers' institutions to manage activities. iv. Improved financing support among stakeholders. v. Extent of beekeeping awareness within community.	NA	Annual progress reports

Output Indicators	Outcome Indicators	Baseline	Source
xii) Number of Beekeepers group, cooperatives, associations and traders accessing extension services. xiii) Percentage of secondary schools with beekeeping awareness. xiv) Number of Beekeeping projects supported by development partners. xv) Number of strengthened stakeholder forum for reviewing regional and international beekeeping issues. xvi) Number of registered institutions providing elementary beekeeping training.			
<i>Strategic Objective 7. Reduced new infections, impacts of HIV/AIDS and NCDs</i>			
i. Support staffs affected by HIV/AIDS. ii. Prevention outreach programmes. iii. Number of Sensitization sessions on NCD.	New HIV/AIDS infections cases. Impact of HIV/AIDS & NCD.	N/A	Annual progress report
<i>Strategic Objective 8. Enhanced women and youth's involvement in beekeeping activities</i>			
i. Number of women and youth beekeeping groups. ii. Number of women and youth groups receiving training on appropriate beekeeping technologies. iii. Number of women and youth groups accessed funds from sectoral initiatives.	Increased women and youth households benefiting economically from beekeeping activities.	5810	Annual progress reports

Output Indicators	Outcome Indicators	Baseline	Source
<i>Strategic Objective 9. Enhanced good governance in beekeeping sector</i>			
i. Existence of Beekeeping Professional Association (BPA). ii. Number of awareness programmes on good governance.	Number of stakeholders complains.	20	Annual progress reports
<i>Strategic Objective 10. Enhanced integration of Climate change, bee products fraud, bee health and apitherapy in beekeeping</i>			
i. Number and occurrence of bee diseases. ii. Existence of booklet on Climate change adaptation and mitigation measures for Beekeeping. iii. Percentage of beekeeping extension officers capacitated with climate change skills. iv. Percentage decrease of bee products adulteration. v. Existence of functioning mechanism on bee pest and diseases control measures. vi. Percentage of CCD occurrence and effects. vii. Number of registered apitherapy centres. viii. Number of Traditional and Alternative Health Practitioner adopting use of apitherapy.	Extent of adverse impact on bee colonies and bee products. Extent of use of bee products on human health improvement.	N/A	Implementation Annual report

7.5 Data collection and analysis

The main methods for data collection will be review of existing reports, field visits, fora and surveys. The data will be analysed and fed into the national beekeeping database.

7.6 Monitoring and evaluation reports

7.6.1 Types of monitoring and evaluation reports

The following are the main M&E reports to be generated:

- i. Performance/Progress;
- ii. Reviews;
- iii. Evaluation reports;
- iv. Studies and surveys; and
- v. Policy review.

7.6.2 Reporting schedule

The reporting schedule is presented in Table 3.

Table 3. Reporting schedule

Types of reports	Contents	Frequency
Performance reports	Consolidated reports covering progress on the utilization of resources and implementation of activities	Quarterly, semi- and annually.
Reviews	Report covering the progress made towards achieving milestones and targets	Semi-annual and annually
Evaluation reports	Reports including achievement of the Policy objectives, challenges, lessons learnt and recommendation for improvement.	Twice (Mid-term in 2026 and Final evaluation in 2031)
Studies and survey reports	Findings and recommendations for improvement on specific issues.	As per need
Policy Review	Report showing overall achievements of the National Beekeeping Policy objectives, challenges, lessons learnt and recommendation for improvement in next version of the Strategy.	After 10 Years

7.6.3 Reporting Flows

Reports on achievement of targets and milestones will be prepared by responsible institutions and forwarded to the responsible Ministry for consolidation and preparation of performance reports on quarterly, semi-annual and annual bases. These reports will be disseminated to stakeholders for records keeping and necessary actions. They will be various internal meetings for the planned interventions to discuss the progress made towards achieving policy objectives. Also, meetings involving external stakeholders will be held. Table 4 presents the schedule of meetings to track the implementation progress.

Table 4. Planned meetings

S/N	Type of meeting	Frequency	Chairperson	Participants
1	Division Meetings	Monthly	Director of Forestry and Beekeeping	All staff of the Division at headquarters
2	Quarterly performance review meetings	Quarterly	Permanent Secretary	All Heads of Divisions and Sections
3	National Beekeeping Advisory Committee	Quarterly	Selected Chairperson among members	Committee members
4	Annual review meetings	Annually	Permanent Secretary	Representative of all key stakeholders
5	Mid review	After five years	Permanent Secretary	Representative of all key stakeholders
6	End review	After ten years	Permanent Secretary	Representative of all key stakeholders

7.6.4 Feedback Mechanism

A feedback mechanism will provide a two-way flow of information between report producers and users. This will be incorporated in the sideways linkages among stakeholders to improve the quality of reports and report submission.

7.7 Use of Monitoring and Evaluation Information

Stakeholders will use M&E reports for:

- i. Decision making;
- ii. Better services delivery;
- iii. Improvement in policy implementation;
- iv. Demonstrating results as part of accountability; and
- v. Planning.

7.8 Action Plan

A National Beekeeping Action Plan (NBAP) covering all seven policy areas will be developed in a participatory manner after the approval of the Policy Implementation Strategy. The outlined broad strategic actions of the Strategy will be cascaded into interventions and activities with estimated costs. Through this plan, all key implementers will be bound and thus providing the basis for a common results framework that assist to achieve Beekeeping goal of enhancing the Beekeeping Sector to contribute to country development and environmental conservation.

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