



THE UNITED REPUBLIC OF TANZANIA

MINISTRY OF NATURAL RESOURCES AND TOURISM

**NATIONAL BAMBOO DEVELOPMENT
STRATEGY AND ACTION PLAN
2023 – 2031**

**AUGUST 2023
DODOMA**

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LIST OF ACRONYMS AND ABBREVIATIONS

AIDS	Acquired Immunodeficiency Syndrome
CBOs	Community Based Organizations
CCBs	Community Climate Biodiversity Standards
CO ₂	Carbon dioxide
CSOs	Civil Society Organizations
CTI	Confederation of Tanzania Industries
DPs	Development Partners
FBD	Forestry and Beekeeping Division
FBOs	Faith Based Organizations
FITI	Forest Industries Training Institute
FTI	Forestry Training Institute
FFPOs	Farm Forest Producer Organizations
FYDP III	Third Five Year Development Plan
HIV	Human Immunodeficiency Virus
INBAR	International Network on Bamboo and Rattan
LGAs	Local Government Authorities
MCDGWSG	Ministry of Community Development, Gender, Women and Special Groups
MEST	Ministry of Education Science and Technology
MH	Ministry of Health
M&E	Monitoring and Evaluation
MSMEs	Micro Small and Medium Enterprises
MLHSD	Ministry of Land Housing and Human Settlement Development
MNRT	Ministry of Natural Resources and Tourism
MoFP	Ministry of Finance and Planning
MITI	Ministry of Industry, Trade and Investment
NBDSAP	National Bamboo Development Strategy and Action Plan

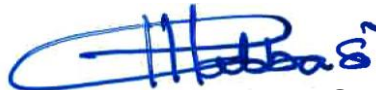
NCDs	Non Communicable Diseases
NCMC	National Carbon Monitoring Centre
NFPIS	National Forest Policy Implementation Strategy
NGOs	Non-Governmental Organizations
PO – RALG	President Office Regional Administration and Local Government
PO – PSM	President Office Public Service Management
PPP	Public Private Partnership
SHIMIVITA	Shirikisho la Viwanda vya Misitu Tanzania (Tanzania Forest Industries Federation)
SOs	Strategic Objectives
SUA	Sokoine University of Agriculture
TaFF	Tanzania Forest Fund
TANTRADE	Tanzania Trade Development Authority
TAFORI	Tanzania Forestry Research Institute
TARI	Tanzania Agricultural Research Institute
TCCIA	Tanzania Chamber of Commerce, Industry and Agriculture
TF	Task Force
TFS	Tanzania Forest Services Agency
TIC	Tanzania Investments Centre
TPHPA	Tanzania Plant Health and Pesticides Authority
	TPSF Tanzania Private Sector Foundation
TTB	Tanzania Tourist Board
TTGAU	Tanzania Tree Growers Association Union
TZS	Tanzania Shillings
UDSM	University of Dar es Salaam

PREFACE

The total coverage area of Bamboo in Tanzania is estimated at 1,025,033 ha. Bamboo naturally occurs in low altitude and mountainous areas. These resources if well managed, can contribute substantially to socio-economic development, environmental conservation and the national economy. The country is a founding member of International Organization for Bamboos and Rattan (INBAR) since 1997 and is eager to participate in the expanding global initiatives to develop bamboo resources. There has been a growing demand for bamboo products and services in rural, urban and peri-urban areas as well as in international markets, and yet, minimal efforts have been deployed to replenish the natural stocks and/or grow bamboos to complement natural sources in the country. The existing potential remains largely un-tapped.

Lack of vibrant bamboo industry has been primarily attributed to the absence of a framework to sufficiently guide development of the industry. Nevertheless, the National Forest Policy of 1998 and its implementation Strategy 2021-2031 recognize bamboo as important contributor to achieving the forestry sectoral goals. Therefore, this National Bamboo Development Strategy and its Action Plan (2023 – 2031) have been developed to provide focus areas and guidance to solve the challenges and highlights opportunities for the development of a strong bamboo industry. This Strategy is centred on transforming sustainable management of bamboo resources to foster the green industries, livelihood promotion and strengthen production of high-value products and ecosystem services for domestic, regional and international markets. It is also consistent with the National Development Vision 2025 and associated with the Third National Five-Year Development Plan (FYDP III; 2021/22 – 2025/26) relating to competitiveness and industrialization for human development.

The Bamboo Strategy has been jointly developed and agreed with key stakeholders. It is our sincere hope that the Strategy will address the challenges and accelerates growth of the industry, and that by the end of 2031 Tanzania will be one of the leading producers and suppliers of high value bamboo products and services in the globe. To achieve this vision, all stakeholders need to work together to sustainably manage the bamboo resources and promote bamboo industries by adequately implementing the Strategy. I would therefore like to call upon all actors to join hands in implementing this Strategy and Action Plan, and contribute in realization of the forest sectoral objectives.



Dr. Hassan Abbasi Said

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ACKNOWLEDGEMENTS

The Ministry of Natural Resources and Tourism (MNRT) through Forestry and Beekeeping Division (FBD) has taken a bold step to develop the National Bamboo Development Strategy and Action Plan (2023-2031) to catalyze the growth of a strong and vibrant bamboo sub-sector. The Strategy and Action Plan have been developed through a consultative process involving various key stakeholders to bring a sense of ownership and commitment towards implementation. Technical inputs from various experts and ground staff with vast field experience are highly appreciated.

The first draft of the Strategy and Action Plan was developed by FBD in 2019 through the support of the International Network for Bamboo and Rattan (INBAR), East Africa Regional Office in Addis Ababa under the South-South phase-II project. Dr. Felician B. Kilahama (the former Director of Forestry and Beekeeping Division) who served as a Consultant, Dr. Selim Reza and Mr. Donald D. Kibhuti who supported funding through the South-South phase-II project are acknowledged.

Tanzania Forest Services Agency (TFS) and Mpingo Conservation and Development Initiative (MCDI) are acknowledged for supporting the Strategy development. One of the Taskforce (TF) comprised of Dr. Felician B. Kilahama, Dr. Paulo Lyimo (SUA), Ms. Fortunate Senya and Mr. Someni Mteleka all from TFS and Dr. Nancy Pima from TAFORI. The Ministry through FBD commissioned the final TF in February 2022 to finalize the Strategy and Action Plan. The TF was led by Dr. Samora A. Macrice (University of Dar es Salaam); and other members were Dr. Siima Bakengesa (TAFORI); Dr. Paulo Lyimo (SUA); Ms. Fortunate Senya (TFS); and Mr.

Nssoko Edwin, James Nshare, Seleboni John and Mr. Nina Kisando all from MNRT.

Lastly, the Forestry and Beekeeping Division and the entire MNRT management acknowledge the dedication and valuable inputs received from Dr. Ezekiel E. Mwakalukwa - the former Director of Forestry and Beekeeping as well as various stakeholders for their remarkable efforts in developing this Strategy and its Action Plan. I urge all stakeholders to use this tool effectively in order to acquire desired contribution of forestry sector to the national economy.



Mr. Deusdedit K. Bwoyo

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DEFINITION OF TERMS

Bamboo	A woody plant with a hollow and ringed stem that is in the grass family (Poaceae). It includes tall treelike tropical or semitropical fast-growing grasses of the genera Bambusa, Arundinaria, Phyllostachys and Dendrocalamus (giant bamboo).
Bamboo clumps	Sympodial with shorter rhizomes that stay closer to their point of origin and do not spread so rapidly. They tend to grow outward from a central plant.
Bamboo Resources	Usable materials obtainable from bamboos, such as building poles, decoration panels, firewood, food and drink (bamboo shoots and bamboo local brew known as Ulanzi).
Ecotourism	Touristic visits to natural areas with the purpose of reinforcing nature conservation and sustaining the wellbeing of the local people. It usually includes interpreting nature and education.
Oxygen bar	A recreational place for fresh air, which is close to bamboo for health and body relaxation.
Strategy	Is an instrument prepared to guide the advancement and/or implementation of certain goals and objectives accompanied by activities and outputs in a systematic manner.

Development Implies the process through which someone or something gets advanced or growing and changes into something valuable or becoming more advanced with notable improvements or attaining higher standards in terms of living conditions.

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background Information

Bamboo is a fast-growing woody grass in the family Poaceae. It comprises over 1,642 species belonging to 91 genera worldwide. Some of its members are giants, forming by far the largest members of the grass family. It is naturally distributed in the tropical and subtropical belts, between approximately 46° North and 47° South latitudes. Globally, the total area covered by bamboo resources is estimated to be about 31.5 million ha. Experiences show that for the past three decades or so, knowledge about bamboos had been growing particularly in Asia and the Pacific region including India and China.

It is further acknowledged that there has been increasing demand for bamboo products especially in China. About 2.5 billion people in Asia, Africa and South America are using bamboo materials to manufacture products valued at US\$ 7 billion annually. Therefore, bamboo resources are contributing to high-technology industrial raw materials and thus becoming an important substitute for ordinary wood.

Bamboo resources are estimated to cover about 3.6 million ha in Africa. The continent has 15 genera and more than 20 species of bamboo that grow naturally. They include *Yushania alpina*, *Hickelia africana*, *Oxytenanthera abyssinica*, *Oreobambos buchwaldii* and *Thamnocalamus tessellatus*. Additionally, *Bambusa balcooa* and *Bambusa vulgaris* have been naturalized in Africa. Bamboo grows well on the slopes of major mountains and highlands of East African countries such as Ethiopia, Kenya, Tanzania, Uganda and Madagascar.

These bamboo resources support livelihoods and contribute to socio-economic development.

Tanzania has four native bamboo species namely *Yushania alpina*, *Hickea africana*, *Oxytenathera abyssinica* and *Oreobambos buchwaldii*. Other exotic species include *Bambusa bambos*, *Bambusa multiplex*, *Bambusa nutans*, *Bambusa vulgaris*, *Dendrocalamus strictus*, *Dendrocalamus nutans* and *Bamboo* spp. Based on available data Bamboo species cover about 1,025,033 ha in Tanzania Mainland and are distributed in at least 11 administrative regions of Arusha, Tanga, Morogoro, Lindi, Mtwara, Ruvuma, Njombe, Iringa, Mbeya, Katavi and Kigoma. About 62% (636,545 ha) of bamboos are found in the Southern zone in Lindi, Mtwara and Ruvuma regions. There is less abundance of bamboos in Arusha, Mbeya, Katavi and Tanga that constitutes to only 7.9% of the total available population. Most bamboo species are distributed in low altitudes compared to high altitude, and about 85.2% of bamboos are distributed below 1,500 meters above sea level.

Commercial farming of bamboo in large scale plantations has not been realized in Tanzania. However, TFS has initiated bamboo plantations in North Ruvu, Sao Hill, Korogwe, Rondo, Ukaguru, Mtibwa and Wino. It is anticipated that bamboo planting in large-scale plantations will benefit the government, private sector as well as individual farmers including in carbon trading to mitigate climate change.

Planting bamboos in form of woodlots/ plantations or in agroforestry systems in various landscapes will definitely supplement supplies of forest products and increase availability of raw materials for wood-based industries in Tanzania. Thus, the National Bamboo Development Strategy and Action Plan (NBDSAP) are meant to increase as well as

effectively utilize the un-tapped potentials of bamboo resources such as eco-tourism, bioenergy and Carbon markets, and for environmental conservation and socio-economic development in Tanzanian.

Currently, there are about 10 stakeholders owning small bamboo processing industries in Dar es Salaam, Iringa, Mbeya, Coast, Mtwara and Morogoro. Bamboo resources play an important role in the development of enterprises as well as transformation in rural development. The products include bamboo poles, mats, crafts, ornaments and basketry, furniture, construction materials, industrial products (bamboo sticks), bamboo bioenergy, bicycles, feed and fodder, source of food for human and households' clean energy. Expanding green markets offer new opportunities for the promotion of bamboo products. Additionally, economic empowerment through employment and income generation, different types of cottage and small-scale industries can be set up based on different forms and application of bamboo resources.

1.1 Justification for Developing the Strategy

The current annual deforestation rate in Tanzania is estimated at 469,420 ha. Total wood volume is estimated at 3.3 billion m³. Demand for wood is estimated at 62 mill m³ while the supply is estimated at 42.8 million m³ resulting in a deficit of 19.5 million m³. The main reasons for deforestation include clearing of natural forests for agricultural expansion and over exploitation of wood for various demands mainly for timber and cooking energy. Thus, it is anticipated that embarking on developing the bamboo subsector will provide a sustainable mechanism for reducing deforestation and help to cover the existing wood deficit in the country.

Empirical evidence shows that bamboo harvesting can take

place from 3 to 7 years depending on the growth rate. The life span of a bamboo clump ranges from 50 to 150 years at the end of which they flower and die off. Bamboo clumps have the potential to be harvested over the lifetime without replanting as compared to tree species, but also is a self-regenerating plant. When harvested, new shoots emerge which ensures a continuous and sustainable supply of bamboo resources unlike timber species where the crop rotation occurs only over several years.

Bamboo has many benefits including rapid biomass accumulation, nutrient cycling, CO₂ sequestration that aimed to mitigate climate change, absorption and sequestration of heavy metals and suitability for rapid regeneration/restoration of degraded landscapes just to mention few. Bamboos fast growth and short annual harvest cycle can speed up carbon sequestration at a rate of 4.5 and 6 times than other plant species. Deliberate efforts are needed to ensure sustainability in supply of propagation planting materials including high quality seeds, vegetative and tissue culture materials.

It is further anticipated that increased bamboo production will enhance biodiversity conservation by reducing human pressure on the remaining natural forests and woodlands. Ecosystem services will also be secured including contributing to climate change adaptation and mitigation.

Few studies on important aspects of bamboo such as on market system analysis, distribution, population structure and uses have been conducted. Consequently, little is known on the, production, productivity, propagation materials and techniques for raising bamboo. However, available evidence reveals that the country has the potential for a vibrant bamboo industry within the foreseeable future. Also, the bamboo industry is a potentially viable option in the context of

increasing income generating activities for local communities and as a nation as whole. However, promotion of bamboo-based industries needs sustainable supply of bamboo raw materials. Thus, the demand for bamboo resources for industrial-based economy cannot be met under the current scenario. Hence, the importance and need for further promotion including research about bamboo industry cannot be overemphasized. Therefore, this Strategy intends to address bottlenecks in the entire bamboo value chains.

1.2 Linkages with National and International Frameworks

Implementation of the NBDSAP will focus on addressing issues that require attention in the bamboo sub sector. These issues include; inadequate production, productivity and utilization, deforestation and forest degradation, low private sector involvement in bamboo industrial development, limited research on bamboo species in different agro- ecological zones, inadequate institutional and human resource capacity, low awareness of the potential of bamboo for eco – tourism and carbon trading, limited market environment (including standards and certification) and inadequate sustainable financial mechanisms to support bamboo value chains development. Relevant targets and actions are also elaborated in this strategy.

The contribution of the bamboo to the conservation, management and sustainable development of these resources is clearly stipulated in the National Forest Policy Implementation Strategy (NFPIS) of 2021. The National Bamboo Development Strategy and Action Plan (NBDSAP) have close linkages with the NFPIS and serves as implementation tool for the NFPIS. The NFPIS takes cognizance of bamboo as an important resource to fill in

wood deficit despite the little on-going improvements in bamboo through establishment of bamboo seed orchards and biotechnology to boost productivity. The NFPIS noted many uses of bamboo such as construction materials, furniture and artisanal products, restoration of degraded landscapes and mitigating climate change through carbon sequestration. Despite these uses, there are inadequate mechanisms to promote large-scale production of bamboo products and the associated services. In this case, a target of developing promotion mechanisms for production and utilization promotion is set by 2026. Also, two bamboo plantations are set to be established by 2031 in NFPIS.

Additionally, use of bamboo resources can contribute to achievement of six of the 17 Sustainable Development Goals namely SDG 1: End poverty in all its forms everywhere; SDG 7: Ensure access to affordable, reliable, sustainable and modern energy for all; SDG 11: Make cities and human settlements inclusive, safe, resilient and sustainable; SDG 12: Ensure sustainable consumption and production patterns; SDG 13: Take urgent action to combat climate change and its impacts; and SDG 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

The development of this strategy is an implementation of the Ministry of Natural Resources and Tourism Medium Term Strategic Plan that aims to develop and operationalize the National Bamboo Development Strategy by June, 2026. Moreover, the Third five years Development Plan (FYDP III) has specific interventions geared towards the realization of the targets of which bamboo can be used for promotion of renewable green energy technologies, Climate change adaptation and mitigation, natural resources conservations

and strengthening contribution of natural resources and products. Promoting bamboo will reduce the deforestation rate and protect biodiversity and environment. Also, bamboo can be useful to balance and fasten/ensure/enhance? the restoration of ecosystem services in terms of wildlife habitats, biodiversity, water regulation, carbon storage, and other services and support for the productive functions of the land for agricultural and other uses. AFR100 (African Forest Landscape Restoration Initiative) can opt to use `bamboo to restore degraded and deforested landscapes of Tanzania. Bamboo contributes to implementation of Convention of Biological Diversity (CBD).

1.3 Roles and Responsibilities of Key Stakeholders

The main stakeholders of the bamboo sub-sector include the Government, private sector, academic and research institutions, media, non-governmental organizations (NGOs), local communities, community-based organizations (CBOs), and bamboo international based organization) and private individuals. The Central Government develops frameworks including policies, strategies, laws and regulations to effectively and efficiently manage the bamboo value chains as well as oversees their implementation.

Private sector and local communities and private individuals will participate in the bamboo value chains as producers, traders, consumers, and are required to comply with laws and regulations governing the chain. Academic and research institutions produce skilled human resources and provide evidence-based interventions and knowledge for the sustainable development of bamboo value chains. Media, NGOs, FFPOs, CBOs and Faith Based Organizations (FBOs) provide supporting functions including extension services, networking, financing, awareness raising and capacity

building. Successful implementation of the NBDSAP depends on commitment of the key stakeholders in undertaking their roles and responsibilities.

Monitoring and evaluation of the implementation of the NBDSAP will be done by the responsible Ministry through dedicated office/unit. Sectoral ministries are also important and will be engaged through joint interventions that require specific policy directives.

Non-state actors and development partners will play role of capacity building in value chain interventions, and financing of sector development initiatives. Local communities and private individuals will be involved directly in bamboo development and conservation activities while the private sector is expected to play a significant role in enhancing sustainably the economic contribution of the sub-sector.

1.4 Expected Results

Implementation of the NBDSAP will result to positive outcomes in bamboo value chains including well-coordinated bamboo business; adequate formalization of the bamboo value chains; increased market access and foreign exchange earnings; increased revenue collection; increased investments on bamboo for climate change adaptation and mitigation; sustainable bamboo production and improved technologies for production of various bamboo products and services for enhanced contribution of the bamboo in national economy.

1.5 Methodology

A desk work was conducted to review in-country relevant documents to establish gaps that justify the preparation of the

NBDSAP. The reviewed documents included the National Forest Policy and its Act, National Agricultural Policy and its Acts, National Forest Policy Implementation Strategy, Ministerial Strategic Plan, The Third Five Years Development Plan and Sustainable Development Goals (SDGs). Similarly, such documents from other African and global countries leading in bamboo development and with likewise ecological and economic settings were also reviewed. Reports from previous works and publications on bamboo value chains were instrumental as important inputs into the Strategy and Action Plan. Working sessions aimed to develop the content of the NBDSAP were organized and executed at different times. This was done to ensure that the developed Strategy improves bamboo business along the entire value chains. The Strategy focuses on strategic objectives, strategies and targets while Action Plan outlines activities needed to achieve targets set by the Strategy. Draft NBDSAP was shared during a validation workshop to capture inputs and buy-in ownership from diverse stakeholders including state and non-state actors. Stakeholders' opinions were incorporated into the document to capture recent developments in the bamboo sub-sector.

1.6 Layout of the National Bamboo Development Strategy and Action Plan

The NBDSAP is organized into seven chapters. Chapter one gives an account of introduction including background information about significance of bamboo sub-sector, justification for the NBDSAP, issues for implementation, roles and responsibilities of key stakeholders, expected results, linkages to National Forest Policy Implementation Strategy (NFPIS) and methodology used in preparing this Strategy and Action Plan. The second chapter outlines the situation analysis with information on strengths, weaknesses, opportunities and threats. Chapter three states the vision,

mission, objectives, and guiding principles. Chapter four depicts the Strategy.

It presents the strategic actions from issues raised in the situational analysis and targets. Chapter five summarizes roles and responsibilities of stakeholders including the responsible ministries, sector ministries, forest sector authorities, local government authorities and private sector. Chapter six demonstrates a framework for monitoring and evaluation of the Strategy while Chapter seven contains the Action Plan for implementing the Strategy.

CHAPTER TWO

2.0 SITUATIONAL ANALYSIS

2.1 Overview

The development of the bamboo subsector is currently in its early stages, indicating significant room for growth and advancement. Bamboo is primarily utilized for sustenance purposes and the production of low-quality items, including fences, traditional houses, rudimentary furniture, mats, and household utensils. Unfortunately, the economic returns for farmers and other stakeholders involved in the bamboo value chains remain low. However, despite these challenges, bamboo subsector holds immense potential for expansion and improvement. With strategic interventions and concerted efforts, the subsector can undergo transformation and contribute to sustainable development.

2.2 Strength

Tanzania possesses several strengths that contribute to the development of the bamboo subsector:

- (i) The country has a favourable climatic condition for growing bamboo. These ideal site conditions result in high productivity and growth rates of bamboo plantations.
- (ii) The government is fully committed to advancing the bamboo subsector, with a focus on poverty alleviation and environmental conservation. This dedicated support from the government provides a solid foundation for the sector's development and ensures the implementation of policies and initiatives that promote its growth.

- (iii) The abundant availability of skilled and unskilled labour within the bamboo subsector. This provides a valuable resource for the industry, as the availability of skilled workers contributes to efficient production, processes and the development of high-quality bamboo products.
- (iv) Bamboo covers an estimated area of 1,025,033 ha which comprises native and exotic species. Also, there is a more abundant area that can be utilized for planting bamboo.
- (v) The presence of academic and research institutions which deal with bamboo development. Also, other organization such as TaFF, INBAR, NGOs, CBOs and private sector provides some support on research including bamboo and other timber and non-timber forest products.
- (vi) Bamboo has the capacity to conserve soils, biodiversity and water resources.
- (vii) The presence of a potential domestic market, coupled with opportunities for export, presents a promising avenue for the bamboo products from the country
- (viii) The existence of supportive legal and regulatory frameworks that can support the development and management of the bamboo industry.
 - These are: National Forest Policy of 1998, The National Environmental Policy of 2021, Forest Act of 2002, National Forest Policy Implementation Strategy (2021 – 2031), National Climate Change Strategy 2021-2026, Tanzania Climate Smart

Agriculture Program 2015 – 2025, Tanzania Development Vision of 2025, CCM Manifesto of 2020, the Third National Five Years Development Plan (2021/22 – 2025/26), Environmental Management Act of 2004, National Investment Policy (1996), Small and Medium Enterprise Development Policy 2003, National Economic Empowerment Policy of 2004, the Small and Medium Enterprise Development Policy 2003, the National Energy Policy of 2015, National Land Policy of 1995, Village Land Act of 1999 and Sustainable Industrial Development Policy, 1996.

- Various international obligations include the Sustainable Development Goals (SDGs); the United Nations Framework Convention on Climate Change (UNFCCC); the United Nations Convention to Combat Desertification (UNCCD) and the Convention on Biological Diversity (CBD).

2.3 Weakness

The country faces several weaknesses in the development of the bamboo subsector, including:

- (i) Inadequate funding for research, development, and logistics hampers the operational activities related to bamboo. Such situation restricts the ability to conduct necessary research, develop new technologies, and establish efficient logistics systems, hindering overall progress.
- (ii) Insufficient access to advanced machinery, processing techniques, and skilled personnel limits the efficiency and productivity of the sector, impeding its growth and competitiveness.

- (iii) Inadequate awareness among stakeholders regarding the possibilities and potential of bamboo for socio-economic and environmental conservation.
- (iv) The presence of relatively large unmanaged natural stands of bamboo poses limitations to commercial or industrial processing.
- (v) Insufficient germplasm diversity hampers the diversification of bamboo products. Limited access to a wide range of bamboo species and varieties restricts the ability to develop innovative products and meet diverse market demands.
- (vi) The private sector has yet to fully recognize the profit potential of investing in the bamboo business. Limited awareness of the economic opportunities associated with bamboo hinders private sector engagement and investment, slowing down the sector's growth.
- (vii) The sustainable management of bamboo is inadequate, leading to poor quality bamboo. Bamboo is primarily extracted from natural bamboo forests without proper care or management, resulting in suboptimal quality and limiting its potential for value-added products.
- (viii) Mass production of bamboo seedlings is still restricted due to inadequate application of tissue culture technology.
- (ix) Low level of acceptance by stakeholders to test for HIV/AIDS as well as inadequate funding for HIV/AIDS and NCDs programmes.

- (x) Gender disparity within bamboo value chains.

2.4 Opportunities

The country presents several opportunities for the development of the bamboo subsector, including:-

- (i) Favourable international relations with countries such as China, Korea, Japan, India, Ghana, and Ethiopia foster knowledge exchange and expertise for bamboo development, opening avenues for collaboration and learning from successful bamboo industries.
- (ii) The global bamboo economy, valued at USD 59.30 billion in 2021, offers the country the potential to generate income for rural communities and contribute to the national economy. Emerging bamboo markets, particularly in timber substitutes such as flooring, panels, and non-traditional furniture, provide opportunities for growth and market diversification.
- (iii) The existing vibrant wood processing industry can be adaptable to integrate bamboo-based products processing, allowing for the expansion and diversification of the sector.
- (iv) Tanzania's climatic conditions and soil properties are conducive to the growth of various bamboo species, both indigenous and exotic. This makes the establishment of bamboo plantations highly viable, offering prospects for sustainable resource management and increased production.

- (v) There is untapped potential in both local and international markets for raw bamboo culms and processed bamboo products. Exploiting these markets can lead to increased economic opportunities and revenue generation, benefiting local communities and the national economy.
- (vi) Bamboo is an ideal material for pulp and paper production, presenting opportunities for the establishment of bamboo-based paper industries. This can contribute to the growth of the pulp and paper sector while promoting sustainable resource utilization.
- (vii) Due to its versatility, rapid growth, and dense canopy, bamboo holds great potential to tap into the carbon market. By sequestering carbon dioxide, bamboo cultivation can contribute to carbon offset initiatives, supporting Tanzania's green growth agenda and creating additional income streams.
- (viii) The relative short gestation period of bamboo resource coupled with their multipurpose uses make them suitable for wood products.
- (ix) Availability of local and international markets which are yet to be fully exploited.

2.5 Threats

The bamboo subsector of the country faces several challenges and threats, including:

- (i) Deforestation and degradation pose a significant threat to bamboo planting material (germplasm), impacting the availability and sustainability of bamboo resources.

- (ii) There is stiff competition in international markets, which presents a challenge for Tanzanian bamboo products to establish a strong foothold and remain competitive.
- (iii) The importation of bamboo-based products poses a threat to the domestic industry, as it can potentially displace local production and hinder market growth.
- (iv) The level of social acceptance of bamboo as wood is currently low, which can limit its demand and utilization in various sectors.
- (v) Illegal exploitation of bamboo resources poses a threat to their long-term sustainability, as improper harvesting practices may lead to resource depletion and ecological imbalances.
- (vi) The influx of cheaper and environmentally unfriendly materials, such as rubber and plastic products, which serve as substitutes for bamboo products, can pose challenges to market demand and the adoption of bamboo as a sustainable alternative.
- (vii) Best practices need to be considered in the expansion of bamboo in the farming systems due to its creeping rhizome.
- (viii) Some bamboo are considered invasive, as they can grow quickly and difficult to eradicate.

After thorough analysis of the strength, weakness, opportunities and threats, the following were key issues raised- Unsustainable bamboo production and utilization, limited market environment, limited research and innovation

in bamboo value chains, Inadequate institutional, human resource capacity and coordination on bamboo sub-sector development, Inadequate sustainable investment and financial mechanism to support bamboo value chains development and inadequate measures to address good governance, HIV/AIDS and gender in the bamboo subsector.

CHAPTER THREE

3.0 VISION, MISSION, OBJECTIVES AND GUIDING PRINCIPLES

3.1 Vision

Ensured coordinated development of bamboo subsector for significant contribution in to socio-economic development and environmental conservation.

3.2 Mission

Effectively manage and enhance utilization of bamboo resources for sustainable supply of bamboo products and environmental services to meet national and global needs.

3.3 Objectives

- i. Enhanced sustainable bamboo production and utilization;
- ii. Increased markets niches for sustainable bamboo products and services;
- iii. Promoted research and innovations on bamboos value chains;
- iv. Enhanced human and institutional operational capacities and coordination;
- v. Enhanced sustainable investment and financing for bamboo value chains development;
- vi. Promoted good governance, reduction in HIV/AIDS and gender mainstreaming in bamboo sub-sector.

3.4 Guiding Principles

The following guiding principles underpin this strategy:

3.4.1 Reducing pressure on natural forests

The annual demand of wood exceeds the supply by far

causing deforestation and land degradation and the government has targeted to reduce this wood deficit by promoting bamboo resources. Compared with tree species, bamboo has unique biological and ecological features, a wide value-addition possibility and high economic potential. It makes the ideal alternative to timber. This is because, once planted, it takes three to seven years for clumps to mature. Thereafter, annually selective harvesting is undertaken without degradation and deforestation. Bamboo can be promoted to enhance energy security of rural and urban households. It can also be promoted as a timber substitute for producing furniture, panels and boards for domestic consumption and exports.

3.1.1 Enhancing community livelihood security

The majority of the population of Tanzania depends on agriculture as its primary source of livelihood and income. Bamboo, with its annual harvesting cycle, labour-intensive production, potentially diverse products and value addition, can become one of the main economic resources for smallholder farmers.

3.1.2 Job creation

The bamboo industry is labour intensive, with a long supply-chain ranging from primary to secondary and tertiary value addition. Bamboo can be promoted to provide jobs and income for rural youth and women by promoting Micro, Small and Medium Enterprises (MSMEs) and high-end value addition.

3.1.3 Enhancing ecosystem services

Bamboo forests have been intimately associated with human wellbeing for thousands of years. Various goods and services provided by bamboo forests that promote human well-being are regarded as ecosystem services. These provide

landscape restoration, prevention of soil and sediment loss, food supply, domestic and industrial raw materials, and carbon sequestration.

3.1.4 Market driven

The bamboo market has a fundamental role in driving the forestry sector. However, necessary support shall be given by the government to promote bamboo clusters, upgrade product quality and market competitiveness of the bamboo products.

3.1.5 Climate resilient green economy

Bamboo is a significant resource, but its economic and ecological potential in the country remain underutilized. Bamboo can play an important role in poverty alleviation, employment generation, economy development and environmental and forest protection (bamboo forests contribute to soil and water conservation). Being a renewable resource, bamboo is a perfect raw material for producing low-carbon, circular and environmentally friendly and resource-efficient products.

3.1.6 Gender and equity

Bamboo contributes to gender and equity, with the participation of vulnerable communities aimed at equitable distribution of benefits derived from the sustainable management and value addition of bamboo.

3.1.7 Private sector-led and market-driven industry

The private sector is expected to lead the development of the bamboo industry. This will be coordinated by government institutions, which shall provide the necessary support and regulatory frameworks. Since Tanzania is following a market-driven economy, every effort will be put in place to provide a level playing field for bamboo products.

3.1.8 Holistic and integrated development

Bamboo growing and management shall be done in a sustainable manner with a focus on livelihood, economy and environmental development.

CHAPTER FOUR

4.0 BAMBOO DEVELOPMENT STRATEGY

4.1 Overview

The National Bamboo Development Strategy contains sub-sections that closely follow the identified strategic objectives from issues raised in the situational analysis. Under each sub-section several strategies, targets and outcome indicators for improving bamboo value chains in the country are presented.

4.2 Bamboo Production and Utilization

Issue: Unsustainable bamboo production and utilization

Objective: Enhanced sustainable bamboo production and utilization.

Strategies

- i. Raise awareness and build capacity on bamboo nursery, plantations and woodlots establishment and management.
- ii. Promote sustainable and appropriate sources of bamboo planting materials.
- iii. Promote and undertake end use specific and ecologically suitable bamboo plantations
- iv. Promote diversification, value addition and utilization of bamboo products.

Targets

- i. 10,000 ha of bamboo plantations and woodlots established by June 2031.
- ii. Two (2) bamboo seed orchards established;
- iii. Eight (8) existing laboratories (1 at TAFORI and SUA, and 2 at TFS, TARI, and TPHPA) to produce bamboo planting materials equipped by June 2031;

- iv. 200 personnel trained on establishment and management of nursery, woodlots and plantations by June, 2026;
- v. A tissue culture protocol for mass production of bamboo seedlings developed by June, 2025;
- vi. Seven (7) gene pool conservation site in forest zones established by June, 2031;
- vii. A national inventory of bamboo resources conducted by June, 2027;
- viii. A national database for bamboo resources developed and functional by June 2031;
- ix. Two (2) advanced technologies for efficient production innovated by June 2031;
- x. Forty percent (40) bamboo farmers adopted site species matching tool for bamboo plantation and woodlots establishment by June 2031;
- xi. Number of bamboo products increased from 10 to 50 by June 2031;
- xii. Twenty (20) bamboo processing industries developed by June 2031;
- xiii. Two (2) bamboo ecotourist attraction sites established by June 2031;
- xiv. National Guideline for sustainable utilization of bamboo products developed by June, 2031;
- xv. At least 30 percent of stakeholders aware on production and utilization of bamboo products by June, 2031;
- xvi. Number of bamboo species increased from 11 to 18 by June, 2031.

Outcome Indicators

- i. Level of production of bamboo products;
- ii. Bamboo forest cover; and utilization level;
- iii. Revenues collected from bamboo plantation.

4.3 Market for Bamboo Products and Services

Limited market environment

Objective: Increased market niche for sustainable bamboo products and services

Strategies

- i. Promote the use of sustainable bamboo products in the domestic market;
- ii. Develop quality and certification standards for bamboo products;
- iii. Develop market infrastructure for sustainable bamboo products;
- iv. Encourage diversification of sustainable bamboo products export markets.

Targets

- i. A guideline for promoting sustainable bamboo products consumption developed;
- ii. Five (5) Promotion materials for marketing of bamboo utilization developed by June 2024;
- iii. Five (5) bamboo products external markets established by June 2031;
- iv. A bamboo products quality assurance and certification standard developed by June 2025;
- v. Two (2) registered bamboo projects for carbon credits in the international standards by June, 2026;
- vi. A bamboo products marketing information system established by June 2025;
- vii. A bamboo products trading centres in seven (7) forest zones established by June 2026; and
- viii. 20 products and 5 bamboo branded services developed by June, 2031.

Outcome indicators

Level of production of bamboo products.

4.4 Research and innovation on Bamboo Resource Issue

Limited research and innovation in bamboo value chains

Objective: Promote research and innovation on bamboo value chains

Strategies

- i. Promote bamboo species and provenance trials;
- ii. Enhance genetic improvement of bamboo species;
- iii. Promote awareness on bamboo researched information;
- iv. Promote innovation and efficient technologies on bamboo products.

Targets

- i. Twenty (20) provenances species and provenances trials established by June, 2028;
- ii. A national protocol for bamboo resources assessment developed by June, 2025;
- iii. Five (5) Permanent Sample Plots established in each forest zone by June,2028;
- iv. Three (3) studies on impact of bamboos on climate change (carbon credit), ecosystems, water use and biodiversity conducted by June, 2028;
- v. Two (2) priority bamboo species genetically improved by 2031;
- vi. Two (2) studies on anatomical, physical, mechanical and chemical properties of indigenous and exotic bamboo species conducted annually;

- vii. A study on value chain analysis of bamboo products conducted by 2031;
- viii. Five (5) innovations and technologies on bamboo processing developed by June, 2031;
- ix. Establish bamboo value chain clusters in 8 regions.

Outcome Indicators

- i. Level of production of bamboo products; and
- ii. Bamboo forest cover.

4.5 Institutions, Human Resources and Coordination

Issue: Inadequate institutional, human resource capacity and coordination on bamboo sub-sector development.

Objective: Enhance human and institutional operational capacities and coordination.

Strategies

- i. Strengthen and promote bamboo based institutions;
- ii. Enhance human resource capacity in the bamboo sub-sector;
- iii. Strengthen coordination between public, local communities and private sector.

Targets

- i. Ten (10) public and 50 private institutions have access to financial resources by June, 2031;
- ii. Functional coordination desk office established at FBD by June, 2024;
- iii. A bamboo information management system developed by June, 2025;
- iv. Fifty (50) persons from public and 50 from private sector trained on production, processing and

- marketing annually by June, 2031;
- v. A national consultative forum involving local and international investors convened every two years from June, 2024;
 - vi. 300 stakeholders trained on bamboo education and tailor-made training on bamboo production, processing technologies and marketing by June, 2027;
 - vii. Five (5) bamboo-based institutions strengthened in technology by June, 2031;
 - viii. An active PPP and joint venture between domestic and foreign investors established by June, 2031.

Outcome Indicators

- i. Level of production of bamboo products;
- ii. Level of employment in forest sector; and
- iii. Customer satisfaction level.

4.6 Sustainable Investment and Financing Mechanism

Issue: Inadequate sustainable investment and financial mechanism to support bamboo value chains development.

Objective: Enhance sustainable investment and financing for bamboo value chains development.

Strategies

- i. Promote bamboo export compensation scheme;
- ii. Promote forest landscape restoration through bamboo;
- iii. Mobilize funding from the government, development partners, multi-lateral agreement and private investors;

- iv. Review legal frameworks to attract investors; and
- v. Promote public- private partnerships investments (PPP).

Targets

- i. One export compensation scheme established by June, 2031;
- ii. Five (5) projects on carbon credit developed and operational by June, 2031;
- iii. Twenty percent (20) of degraded forests restored through bamboo by June,2031;
- iv. Five (5) projects funded by the government, development partners and private sector by June, 2031;
- v. A fund-raising committee to mobilize funding created and operational by June, 2026;
- vi. Five (5) legislations reviewed and amended by June, 2031;
- vii. One regulation on investments enacted by June, 2027;
- viii. Two (2) national bamboo industrial parks established by June, 2027.

Outcome Indicator

- i. Level of investment in bamboo sub – sector.
- ii. Revenue collected from forest sector; and
- iii. Audit opinion.

4.7 Good Governance, HIV& AIDS, NCDS Prevention and Gender Mainstreaming

Issue: Inadequate measures to address good governance, HIV/AIDS, NCDs and gender in the bamboo subsector.

4.7.1 Governance

Objective: Enhanced good governance in the bamboo sub sector

Strategy

Strengthen transparency, accountability and rule of law in the bamboo sub-sector.

Targets

- i. Two (2) awareness programs conducted annually; and
- ii. Anti-corruption strategies for bamboo subsector customized by June 2025.

Outcome Indicator

Incidences of corruption.

4.7.2 HIV/AIDS and non-communicable diseases (NCDs) Objective:

Objective: Reduced Impact of HIV/AIDS and NCDs in the bamboo subsector

Strategy

Mainstream HIV/AIDS and NCDs supportive measures in the sustainable bamboo valuechains.

Targets

- i. HIV/AIDS and NCDs awareness programs increased from 10 to 30 by June 2031; and
- ii. Eighty percent (80%) persons living with HIV/AIDS in the bamboo sub-sector supported by June, 2031.

Outcome Indicators

- i. HIV/AIDS infection rate; and
- ii. HIV/AIDS Mortality rate.

4.7.3 Gender

Objective: Mainstreamed gender equity and equality in the bamboo sub-sector

Strategy

Encourage and support women, youth and people with disabilities to participate in all aspects of bamboo subsector development.

Targets

- i. A programme supporting women in the bamboo subsector established by June, 2031; and
- ii. Women, youth and people with disabilities participation in the bamboo value chains increased by 30% by June, 2031.

Outcome Indicators

Proportion of women, youth and people with disabilities in the bamboo subsector valuechain.

CHAPTER FIVE

5.0 ROLES AND RESPONSIBILITIES OF STAKEHOLDERS

5.1 Overview

For effective implementation of this strategy, coordination and knowledge of specific roles and responsibilities among stakeholders is important. This chapter therefore outlines key stakeholders and their specific roles and responsibilities. It enables effective communications among the various groups and facilitates full integration of the stakeholders into bamboo value chains development. The key stakeholders include state actors including key ministries, research institutions and local government authorities while non-state actors include private sector and development partners. MNRT through Forestry and Beekeeping Division (FBD) will have an overall monitoring role in the implementation of this Strategy. Sector Ministries will be engaged through joint implementation of interventions that require specific sector policy directives. Non-state actors and development partners will be engaged in building capacity in value chain interventions, financing and investing in bamboo plantation development initiatives. Local communities will be involved in plantation development activities and establishment of bamboo woodlots and small to medium processing industries. Private sector will play a significant role in enhancing the economic contribution of the wood-based products and services through value addition and trade. Roles and responsibilities of each stakeholder are presented in Table 1.

Table 1: Roles and responsibilities of key stakeholders in the development of bamboo sub-sector

S/N	Stakeholder	Responsibilities
1	FBD	<ul style="list-style-type: none"> • Develop policies, strategies, legislations and guidelines formulation; • Coordinate issues related to bamboo subsector • Create enabling environment and mechanisms for collaboration with National, Regional and International institutions in bamboo development; • Conducting monitoring, evaluation and reporting; • Promote public private partnership and encourage effective participation of stakeholders in bamboo industries development ; • Ensure compliance with international standards and guidelines; and • Ensure fulfilment of commitments made at regional and international protocols and agreements related to forest.
2	TFS	<ul style="list-style-type: none"> • Law enforcement; • Establishing and managing high quality bambooplantations; • Issuing licenses, permits and certificates onproducts and research; • Developing institutional capacity to supportbamboo plantation activities; • Collecting bamboo revenues; and • Conducting extension services
3	Other key sector Ministries	<ul style="list-style-type: none"> • Creating enabling environment for investmentsand trade; • Collaboration in extension, training, research andmarketing;

S/N	Stakeholder	Responsibilities
		<ul style="list-style-type: none"> • Developing standards for different products; • Collection and dissemination of information; • Preparation of land use management plans including setting aside bamboo development areas for e.g. plantations, woodlots and industries; • Technical and financial support; • Licensing of bamboo-based industries and trade; and • Providing support in plantation establishment and management.
4	International Organizations and Development Partners	<ul style="list-style-type: none"> • Cooperation in development of programmes and projects; • Support in identification of appropriate and reliable funding sources; • Financial and technical support as well as technology transfer; and • Promote direct investments.
5	Financial Agencies	<ul style="list-style-type: none"> • Concessional loans/grants and special financing window for growers, MSME's and investors.
6	Local Government Authorities	<ul style="list-style-type: none"> • Collaboration on establishment and management of plantations and woodlots; • Support establishment of industries for processing of value-added products. • Ensure capacity building and awareness for the private sector, staff and local communities.

S/N	Stakeholder	Responsibilities
7	Local Communities	<ul style="list-style-type: none"> • Establish community and private bamboowoodlots • Participate in plantation establishment • Preparation and enforcement of by-laws; • Promote partnership with the Private sector; and • Provide labour in plantations and bamboo-based industries.
8	Forest Based Industries	<ul style="list-style-type: none"> • Provide information needed for future investment opportunities; • Processing and adding value to raw materials and sell to Traders
9	Traders of	<p>Marketing of bamboo products and services produced in the plantations and woodlots; and</p> <ul style="list-style-type: none"> • Transport bamboo-based products from plantations and industries to consumers.
10	Non Governmental Organizations, Farm Forest Producer Organizations, Civil Society Organizations	<ul style="list-style-type: none"> • Awareness raising and extension services; • Facilitate technical assistance, training, research and technology transfer; • Financing bamboo research; and • Sensitize investment in bamboo industry and trade.
11	Academic and Research Institutions	<ul style="list-style-type: none"> • Conduct research, innovation and share technical expertise and information; • Participate in policy and legal processes; • Produce qualified personnel/ human resource • Provide consultancy services.
12	Private Sector	<ul style="list-style-type: none"> • Mobilize resources • Participate in bamboo development activities • Technology and new investment

S/N	Stakeholder	Responsibilities
		opportunities <ul style="list-style-type: none"> • Transfer of technical and managerial expertise
13	Media	<ul style="list-style-type: none"> • Awareness creation • Provision of education

CHAPTER SIX

6.0 MONITORING AND EVALUATION OF THE STRATEGY

6.1 Monitoring and Evaluation Framework

This framework shows how objectives are intended to make bamboo value chains sustainable, economically viable, and environmentally sound while improving the livelihoods. The strategy simplifies the overall monitoring and evaluation (M&E) system that can be adopted by key bamboo stakeholders to achieve the intended outcomes.

The Ministry in collaboration with relevant stakeholders will have an overall responsibility for implementation of the strategy. Each stakeholder will have to establish a reliable internal monitoring system. Monitoring and evaluation will involve, among other things, establishing baselines, indicators and sources of information. Periodic tracking of progress on implementation of the milestones and targets will be done. In addition, there will be a mid-term review, which will focus on assessing whether the planned activities are in line with the achievement of set targets. Moreover, the review will involve conducting case studies, diagnostic studies, surveys, and beneficiary assessments to track any changes in terms of outputs realized over the period under review.

6.1.1 Overall and specific objectives

The overall objective of M&E framework is to guide implementation of this Strategy. Specifically, it intends to:

- (i) Establish benchmark of indicators;
- (ii) Set targets and standards to guide implementation;
- (iii) Guide actors' participation in implementation and

- monitoring activities; and
- (iv) Control use of resources during implementation.

6.1.2 Guiding values

The primary goal of this M&E system is to enable stakeholders in the bamboo subsector appreciate the progress made towards attainment of the intended objectives.

Key guiding principles are:

- (i) Build capacity for M&E;
- (ii) Harmonization and alignment of the framework with other existing M&E systems;
- (iii) Adoption of Result-Based- Management approach; and
- (iv) Flexibility in applying the M&E framework.

6.1.3 Scope of M&E framework

M & E framework provides overall bamboo sub sector development trends. The framework covers but is not limited to the following:-

- (i) Assessment of inputs, processes, outputs, outcomes and impacts of the Strategy; and
- (ii) Databases and reporting schedules used for the Strategy M&E framework.

6.1.4 6.1.3 Performance indicators

The matrix of performance indicators is shown in Table 2.

Table 2: Performance indicators for the Strategy M&E Framework

Objective	Output Indicators	Outcome Indicators	Baseline Year	Source	Frequency of reporting	Means of verification
Enhanced sustainable bamboo production and utilization	Number of state-owned forest plantations for sustainable bamboo production	Level of Production of bamboo products; Bamboo forest cover; and	2023	MNRT	Annually	Forest assessment reports Forest management reports
	Number of bamboo farmers adopted sitespecies matching tool for bamboo plantation and woodlots				After Three years	
	Number of new and advanced and technologies for efficient production					
	Number of woodlots for bamboo production	Annually			Financial reports	
	Number of plantations for sustainable bamboo under public-private partnership					
	Number of tree seeds orchards for sustainable bamboo production					Revenues collected from bamboo plantation.
	Number of germplasm centres producing seeds for sustainable bambooproduction					

Objective	Output Indicators	Outcome Indicators	Baseline Year	Source	Frequency of reporting	Means of verification
	Size of community-owned forestplantation/woodlots for sustainable charcoal bamboo production Number of gene pool conservation site in forest zones Number and Size of private forest plantations for sustainable bambooproduction Number of certified forests/woodlots forsustainable bamboo production Number of designated sustainable					
	bamboo production areas Number of tree seed banks for sustainable bamboo production Number of personnel trained on management of bamboo value chain Size of bamboo plantations Number of bamboo products Number of industries producing bambooproducts					

Objective	Output Indicators	Outcome Indicators	Baseline Year	Source	Frequency of reporting	Means of verification
	Number of institutions equipped.					
Increased market niche for sustainable bamboo products and services	Number of stakeholders' alternative bamboo promotion forum on	Level of Production of bamboo products	2023	MNRT	Annually	Market Assessment reports
	Number of private sectors stakeholders involved in bamboo production and business					
	Number sustainable bamboo export markets					
	Number of registered bamboo projects for carbon credits in the international standards					
	Number of bamboo branded products and services					
	Number of bamboo products trading centre at the district level					

Objective	Output Indicators	Outcome Indicators	Baseline Year	Source	Frequency of reporting	Means of verification
Promote research and innovation on bamboo value chains	Size (ha) of land restored by bamboo resources	Level of Production of bamboo products	2023	MNRT	Annually	Forest assessment
	Number of studies on anatomical, physical, mechanical and chemical properties of indigenous and exotic bamboo species					
	Number of innovations and technologies on bamboo processing					
	Number of studies on impact of bamboos on ecosystems and biodiversity					
	Number of priority bamboo genetically improved					
	Number of provenance species and provenances trials					
	Number of Permanent Sample Plots in forest zones.					
	Type of species used to rehabilitate and restoration of degraded land					

Objective	Output Indicators	Outcome Indicators	Baseline Year	Source	Frequency of reporting	Means of verification
	Guidelines document for sustainable bamboo harvesting techniques					
Enhanced human and institutional operational capacities and coordination	Functional coordination desk place	Level of Production of bamboo products. Level of employment in forest sector. Customer satisfaction level.	2023	MNRT	Annually	Annualreports
	Number of bamboo based institutions strengthened					
	Number of consultative forums involving local and international investors					
	Number of people from public trained on production, processing and marketing					
	Number of people from private sector trained on production, processing and marketing					
	Number of training institutions teaching sustainable bamboo production and					
	utilization					
	Number of operational informal skills development guidelines for sustainable production and utilization					

Objective	Output Indicators	Outcome Indicators	Baseline Year	Source	Frequency of reporting	Means of verification
	Number of public financial resources Institutions accessed					
	Number of private institutions accessed financial resources					
Enhanced sustainable investments and financing for bamboo value chains development	Number of export compensation scheme	Level of Investment in bamboo sub – sector	2023	MNRT	Annually	Financial reports Audit reports
	Number of projects on carbon credits					
	Percentage of degraded forests restored through bamboo	Revenue collected from forest sector				
	Number of projects funded by development partners, multi-lateral agreements and private sector					
	Number of legislations reviewed and amended					
	Number of regulations enacted	Audit opinion				
	Memorandum of agreement					
	Standards and codes of practice for bamboo products in place					
	Functional national bamboo industrial park					
Enhanced	Number of awareness	Incidences	2023	MNRT	Annually	Annual

Objective	Output Indicators	Outcome Indicators	Baseline Year	Source	Frequency of reporting	Means of verification
good governance in the bamboo sub sector	programmes	of corruption				reports
Reduced	Number of HIV/AIDS and awareness programs	HIV/AIDS infection rate.	2023	MNRT	Annually	HIV/AIDS reports
Impact of HIV/AIDS and NCDs in the bamboo subsector	Percentage of support to persons livingwith HIV/AIDS in the bamboo sub-sector	HIV/AIDS Mortality rate.				reports
Mainstreamed gender equity and equality in the bamboo subsector Strategy	Number of women programmes supportedin the bamboo subsector	Proportion of females, youth and peoplewith disabilitiesin the bamboo subsector value chain.	2023		Annually	Annualreports
	Percentage participation by women, youth and people with disabilities in the bamboo value chains.					

6.2 Data Collection and Analysis

The main methods for data collection will be surveys, review of reports, field visits and institutional records. Data will be analyzed and disseminated to the relevant stakeholders for implementation.

6.3 Monitoring and Evaluation Reports

6.3.1 Types of M & E reports

The following are the main M&E reports:

- (i) Performance reports;
- (ii) Evaluation reports;
- (iii) Various reviews, studies, and survey reports; and
- (iv) Beneficiaries' assessment.

6.3.2 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 implementation of activities	Quarterly, semi- and annual reports
Evaluation reports	Achievement of the Policy objectives, challenges and lessons learnt including Relevance, effectiveness, efficiency, impact/outcome and sustainability of interventions.	Twice (Mid-term in 2026 and Final evaluation in 2031)
Various reviews, Studies and survey reports	Findings and recommendations on specific issues	As per need.
Policy review	Overall achievements of the National Forest Policy objectives, challenges and lessons learnt.	After 10 Years

6.3.3 Reporting Flows

Reports on achievement of targets and milestones will be prepared by responsible institutions and forwarded to the Ministry responsible for forestry to produce consolidated performance reports on quarterly, semi-annual and annual basis. These reports will be disseminated to stakeholders for record and necessary actions. There will also be various meetings to discuss successes and challenges of the planned interventions. There will also be meetings involving external stakeholders. The schedule of meetings to track the implementation progress is indicated in Table 4.

Table 4: Planned meetings

S/N	Type of meeting	Frequency	Chairperson	Participants
1	Division meetings	Weekly	Director of Forestry and Beekeeping	All staff of the Division
2	MNRT management meetings	Twice a month	Permanent Secretary	All Heads of Division and Units
3	MNRT pre Management meeting	Twice a month	Assistant Director M & E	Assistant Directors and Assistant Head of Units
4	Performance review meetings	Quarterly	Permanent Secretary	All Heads of Divisions and Units
5	Steering committee meetings	Quarterly	Co-chaired by PS MNRT and PO - RALG	MNRT, MDAs, NSAs and DPs
6	National Forest Advisory Committee	Quarterly	Selected Chairperson among members	Retired forestry officers, private sector, PO RALG,
7	Mid-year review meetings	Twice per annum	Permanent Secretary	All Heads of Division and Sections
8	Annual review meetings	Annually	Permanent Secretary	All Heads of Division and Sections

9	Performance Assessment Framework (PAF) meetings	Annually	Co-Chaired between Government and Private Sector	Forestry, MDAs, NSAs and DPs
10	Joint annual review meetings	Annually	DPP MNRT	MNRT, MDAs, NSAs and DPs

6.3.4 Feedback Mechanism

A feedback mechanism will provide a two-way flow of information between report producers and users. The system will also incorporate stakeholders' views in order to improve the reports and their submission.

6.4 Use of Monitoring and Evaluation Information

Stakeholders will use M & E reports for:-

- i. Informed decision making;
- ii. Improving services delivery;
- iii. Demonstrated results as part of accountability; and
- iv. Planning.

CHAPTER SEVEN

7.0 THE ACTION PLAN TO IMPLEMENT THE STRATEGY

7.1 Overview

This Strategy covering all the eight (8) objectives has been developed in a participatory manner. The action plan seeks to address the eight (8) critical issues raised in this Strategy. The Plan will outline the steps and provide guidance on how to achieve the Strategy's objectives, targets, and outcomes through a series of activities. Specific activities to achieve each of the targets in this Strategy are identified and presented in the action plan (Table 5). The action plan matrix identifies and summarizes the implementation timetable, required budget, and responsible institutions for each activity. This Action Plan will be implemented with estimated cost of TZS 53,060,000,000.

Table 5: Results based action plan matrix for implementation of National Bamboo Development Strategy 2023-2031

Objective	Strategies	Targets	Activities	Outcome indicator	Financial Resource (TZS) Million	Time frame	Responsible
Enhanced sustainable bamboo production and utilization.	Raise awareness and build capacity on bamboo nursery, plantations and woodlots establishment and management	10,000 ha of bamboo plantations and woodlots established by June 2031.	<ul style="list-style-type: none"> i. To acquire land for establishing bamboo woodlots and plantations. ii. To establish and manage 9,000,000 seedlings of bamboo nursery. iii. To plant and manage bamboo woodlots and plantations. 	<ul style="list-style-type: none"> i. Level of production of bamboo products ii. Bamboo forest cover iii. Revenues collected from bamboo plantation 	800	June, 2031	PO – RALG, MLHS, FBD, TFS, TAFORI, Private sector, Communities and CSOs.
		Two (2) bamboo seed orchards established.	<ul style="list-style-type: none"> i. To establish and manage nursery of 200,000 improved bamboo seedlings. ii. To establish and manage 200 ha of bamboo seed orchards 		300	June, 2031	TFS, Private Sector and Communities.

Objective	Strategies	Targets	Activities	Outcome indicator	Financial Resource (TZS) Million	Time frame	Responsible
		Eight (8) existing laboratories (1 at TAFORI and SUA, and 2 at	i. To rehabilitate eight (8) laboratories. ii. To equip eight (8) laboratories with modern facilities.		1500	June 2031	TFS, SUA, TARI, TPHPA, UDSM and TAFORI
		TFS, TARI, and TPHPA) to produce bamboo planting materials equipped.					
		200 personnel trained on establishment and management of nursery, woodlots and plantations.	i. To prepare training program. ii. To facilitate training by involving 200 personnel.		1000	June, 2025	FBD, TFS, TAFORI, SUA, UDSM, Private sector, Communities, Media and CSOs

Objective	Strategies	Targets	Activities	Outcome indicator	Financial Resource (TZS) Million	Time frame	Responsible
	Promote sustainable and appropriate sources of bamboo planting materials	At least 30 percent of stakeholders aware on production and utilization of bamboo products.	<ul style="list-style-type: none"> i. To conduct awareness raising meetings. ii. To develop and disseminate awareness raising programmes using popular radios and televisions. iii. Produce and distribute extension materials (e.g. leaflets, brochures, briefs). 		200	June, 2031	FBD, TFS, PO – RALG, Private sector, Communities, Media and CSOs

Objective	Strategies	Targets	Activities	Outcome indicator	Financial Resource (TZS) Million	Time frame	Responsible
		A tissue culture protocol for mass production of bamboo seedlings developed.	i. To collect sample of high quality genetic materials. To develop tissue culture protocol for mass production of bamboo seedlings.		250	June, 2025	TFS, SUA, TARI, World Vegetables, and TAFORI
	Promote and undertake end-use-specific and ecologically suitable bamboo plantation;	Seven (7) gene pool conservation sites in forest zones established.	i. To identify and map the gene pool conservation sites. To establish gene pools in seven (7) forest zones.		1000	June, 2031	FBD, TFS, TAFORI, SUA and UDSM, INBAR.

Objective	Strategies	Targets	Activities	Outcome indicator	Financial Resource (TZS) Million	Time frame	Responsible
		A national inventory of bamboo resources conducted.	<ul style="list-style-type: none"> i. To facilitate training of 50 experts on inventory ii. To conduct assessment of bamboo resources 		3000	June, 2027	TFS, SUA, INBAR, UDSM, TAFORI and Private sector
		Number of bamboo species increased from 11 to 18.	<ul style="list-style-type: none"> i. Germplasm transfer ii. To establish provenance trials iii. To identify lesser known indigenous bamboo species and propagate them. 		200	June, 2031	TAFORI, TFS, SUA,
		A national database for bamboo resources developed and functional.	<ul style="list-style-type: none"> i. Mobilization of bamboo data. 		3500	June, 2031	FBD, TFS, SUA, UDSM and TAFORI

Objective	Strategies	Targets	Activities	Outcome indicator	Financial Resource (TZS) Million	Time frame	Responsible
			<ul style="list-style-type: none"> ii. To conduct training on bamboo database management ii. To develop bamboo data standard template. 				
		Two (2) advanced technologies for efficient production innovated.	<ul style="list-style-type: none"> i. To convene four (4) awareness meetings on Bamboo modern production technologies. ii. To conduct five (5) investors fora on Bamboo modern production technologies. 		2000	June, 2031	CSOs, Private Sector, Media and SHIMIVITA FBD, TFS, TIC, TPSF and TTGAU

Objective	Strategies	Targets	Activities	Outcome indicator	Financial Resource (TZS) Million	Time frame	Responsible
		Forty percent (40) bamboo farmers adopted sitespecies matching Tool for bamboo plantation and woodlots establishment.	<ul style="list-style-type: none"> i. To develop bamboo site species matching tool. ii. To facilitate training on use of the tool by involving 500 bamboo farmers. 		3000	June, 2031	FBD, TFS, TAFORI, SUA, UDSM, INBAR, Private sector, Communities andCSOs.
	Promote diversification and utilization of bamboo products	Number of bamboo products increased from 10 to 50.	<ul style="list-style-type: none"> i. To facilitate training of 100 stakeholders on diversification of Bamboo products processing and utilization. ii. To develop 10 new bamboo products. 		2800	June, 2031	CSOs, FBD, TFS, TAFORI, SUA, UDSM, INBAR, Communities andPrivate sector.

Objective	Strategies	Targets	Activities	Outcome indicator	Financial Resource (TZS) Million	Time frame	Responsible
		Twenty (20) bamboo processing industries developed.	<ul style="list-style-type: none"> i. Mapping of existing bamboo industries. ii. Identification of bamboo industrial parks. ii. To convene workshop with potential investors in bamboo sub sector. 		6000	June, 2031	PO – RALG, MITI, TIC, TANTRADE, CTI, TCCIA, FBD, TFS and Private Sector.
		Two (2) bamboo tourist attraction sites established.	<ul style="list-style-type: none"> i. Identification of tourist attraction sites ii. To construct tourist infrastructure and facilities in the attraction sites. iii. Advertisement of tourist attraction sites. 		1500	June, 2031	TFS, TTB and Private Sector.

Objective	Strategies	Targets	Activities	Outcome indicator	Financial Resource (TZS) Million	Time frame	Responsible
		National guidelines for utilisation of sustainable bamboo products developed.	i. To prepare ii. To conduct a stakeholders validation workshop.		120	June, 2023	FBD, Private Sector and Communities.
Increased market niche for sustainable bamboo products and services	Promote the use of sustainable bamboo products in the domestic market.	A guideline for promoting sustainable bamboo products consumption developed.	i. To prepare a guideline ii. To conduct a stakeholders validation workshop	i. Level of production of bamboo products and ii. Bamboo forest cover	120	June, 2024	FBD, Private Sector and Communities.
	Develop quality and certification standards for bamboo products.	A bamboo products quality assurance and certification standard developed.	i. To prepare assurance and ii. To conduct stakeholders validation workshop.		800	June, 2025	FBD, TFS, Private Sector and CSOs FBD, TFS and Private Sector

Objective	Strategies	Targets	Activities	Outcome indicator	Financial Resource (TZS) Million	Time frame	Responsible
	Develop market infrastructure for sustainable bamboo products	Two (2) registered bamboo projects for carbon credits in the international standards (e.g. Verified Carbon Standards or Community Climate Biodiversity Standard)	i. To prepare bamboo projects description documents for carbon credits To register two (2) projects in voluntary carbon market.		900	June, 2024	FBD, TFS, TAFORI, SUA, UDSM, INBAR, Private sector, and CSOs
		A bamboo products marketing information system established.	i. To prepare marketing collaterals To design and develop marketing information system.		480	June, 2025	FBD, TFS, CSOs
		A bamboo products trading	i. Identification of bamboo		500	June, 2026	FBD, TFS, LGAs

Objective	Strategies	Targets	Activities	Outcome indicator	Financial Resource (TZS) Million	Time frame	Responsible
		centre in seven (7) forest zone established.	products trading sites. ii. To construct seven(7) trading centres in forest zones.				and Private Sector
		20 products and 5 bamboo branded services developed.	i. To design and develop a brand manual for bamboo products. ii. To convene two (2) stakeholders consultative meetings.		200	June, 2031	FBD, TTB, TFS and Private Sector
	Encourage diversification of sustainable bamboo products export markets.	Five (5) sustainable bamboo products export markets established.	i. To conduct market assessments for bamboo products To develop bamboo products export market guideline.	i. Level of production of bamboo products; and Bamboo forest cover	200	June, 2025	FBD, TFS, SUA and UDSM

Objective	Strategies	Targets	Activities	Outcome indicator	Financial Resource (TZS) Million	Time frame	Responsible
Promote research and innovation on bamboo value chains	Promote bamboo species and provenance trials.	20 provenances species and provenance trials established.	i. To collect bamboo planting materials. ii. To establish and manage 20 provenance trials	Level of Production of bamboo products	700	June, 2028	TFS, SUA, UDSM and TAFORI
	Encourage bamboo vegetative propagation trials and protocols;	A national protocol for bamboo resources assessment developed	i. To prepare a national protocol for bamboo resources assessment. To conduct a stakeholders validation workshop.		800	June, 2025	FBD, TFS, SUA, INBAR, and TAFORI Private Sector and Communities
	Enhance genetic improvement of bamboo species,	Five (5) Permanent Sample Plots established in each forest zone.	ii. Site identification for Permanent Sample Plots establishment in each forest zone. To establish five (5)		400	June, 2028	TFS, SUA, UDSM, and TAFORI

Objective	Strategies	Targets	Activities	Outcome indicator	Financial Resource (TZS) Million	Time frame	Responsible
			i. Permanent Sample Plot in forest zones.				
	Promote awareness on bamboo researched information	Three (3) studies on impact of bamboo on ecosystems and biodiversity conducted.	ii. To conduct three (3) studies on impact of bamboo on Ecosystems and biodiversity. iii. To conduct stakeholders meeting for dissemination of study findings.		800	June, 2028	TFS, SUA, UDSM, and TAFORI CSOs, Private Sector and Communities
		Two (2) priority bamboo species genetically improved	i. To conduct assessment and identification of best bamboo species ii. To conduct a stakeholders validation workshop.		900	Jun, 2031	TFS, TAFORI, SUA and UDSM Private sector, Communities and CSOs

Objective	Strategies	Targets	Activities	Outcome indicator	Financial Resource (TZS) Million	Time frame	Responsible
		Two (2) studies on anatomical, physical, mechanical and chemical properties of indigenous and exotic bamboo species conducted	<ul style="list-style-type: none"> i. To conduct two (2) studies on anatomical, physical, mechanical and chemical properties of indigenous and exotic bamboo species. ii. To conduct stakeholders meeting for dissemination of study findings. 		300	Annually	TFS, TAFORI, SUA and FITI Private sector, Communities, Media and CSOs
		A guideline for sustainable bamboo harvesting techniques developed.	<ul style="list-style-type: none"> i. To prepare a guideline for sustainable bamboo harvesting techniques. ii. To conduct a stakeholders validation workshop. 		180	June, 2027	FBD, TFS, and TAFORI

Objective	Strategies	Targets	Activities	Outcome indicator	Financial Resource (TZS) Million	Time frame	Responsible
		A study on value chain analysis of bamboo products conducted.	<ul style="list-style-type: none"> i. To conduct a value chain analysis of bamboo products. ii. To conduct a stakeholders meeting for disseminate study's findings. 		500	June, 2031	TFS, TAFORI, SUA, UDSM, Media and Private sector
	Promote innovation and efficient technologies on bamboo products	Five (5) innovations and technologies on bamboo processing developed.	<ul style="list-style-type: none"> i. To identify best innovation and technologies ii. To convene stakeholders workshop 		900	June, 2031	FBD, TFS, TAFORI, SUA, UDSM, INBAR, Private sector, Communities and CSOs
Enhance human and institutional operation	Strengthen and promote bamboo-based institutions	Ten (10) public and 50 private institutions have access to	<ul style="list-style-type: none"> i. To prepare funding raising plan for bamboo. ii. To convene stakeholders 	<ul style="list-style-type: none"> i. Level of production of bamboo products. ii. Level of employment 	300	June, 2031	PO – PSM, PO – RALG, FBD, TFS, TAFORI, SUA, UDSM, INBAR and Private sector

Objective	Strategies	Targets	Activities	Outcome indicator	Financial Resource (TZS) Million	Time frame	Responsible
capacities and coordination		financial resources.	Workshop for learning business plans development.	in forest sector; and iii. Customer satisfaction level.			
		Five (5) bamboo-based institutions strengthened in technology	i. Appraisal of appropriate technological needs. ii. Purchase recent technologies iii. To organize exchange visits for learning purposes.		300	June, 2031	TAFORI, FITI, VETA, SUA, FTI, SHIVIMITA, SIDO and DPs
	Enhance human resource capacity in the bamboo sub-sector	Five (5) bamboo-based institutions strengthened in technology.	i. To facilitate training of 25 staff on bamboo based technologies. ii. Equip five (5) institutions with required bamboo Based modern technologies.		850	June, 2031	FITI, TFS, TAFORI, SUA, Private Sector, DPs and INBAR FBD

Objective	Strategies	Targets	Activities	Outcome indicator	Financial Resource (TZS) Million	Time frame	Responsible
	Strengthen coordination between public, local communities and private sector	Functional coordination desk office established at FBD.	i. Appoint two (2) functional officers. ii. Provide office facilities.		100	June, 2024	
		A bamboo information management system developed.	i. Stakeholder's consultation and mobilization of data. ii. Design management information system.		280	June, 2025	FBD, TFS, TAFORI, SUA and UDSM
		Fifty (50) persons from public and 50 from private sector trained on production, processing and marketing	i. Training needs assessments. ii. Conduct respective training of 100 stakeholders.		550	Annually	FBD, TFS, TAFORI, SUA, UDSM, INBAR, Private sector, Communities and CSOs

Objective	Strategies	Targets	Activities	Outcome indicator	Financial Resource (TZS) Million	Time frame	Responsible
		annually					
		A national consultative forum involving local and international investors convened every two years	<ul style="list-style-type: none"> i. Identification of investors of relevant potential investors. ii. Convene four (4) investment fora. 		420	June, 2031	FBD, TIC, TFS and Private sector

Objective	Strategies	Targets	Activities	Outcome indicator	Financial Resource (TZS) Million	Time frame	Responsible
		300 stakeholders trained on bamboo education and tailor-made training on bamboo production, processing technologies and marketing.	<ul style="list-style-type: none"> i. Develop specific curricula. ii. Conduct training involving 300 stakeholders. iii. Facilitate participation of 50 bamboo stakeholders in national and international exhibitions. 		630	June, 2027	MEST, FITI and FTI
		An active PPP and joint venture between domestic and foreign investors established	<ul style="list-style-type: none"> i. To conduct engagement meetings ii. Signing the Memorandum of Understanding between partners. iii. To conduct review meetings. 		100	June, 2031	Private sector, TFS, TAWA, TANAPA, CSOs, TIC

Objective	Strategies	Targets	Activities	Outcome indicator	Financial Resource (TZS) Million	Time frame	Responsible
Enhance sustainable investment and financing for bamboo value chains development	Promote bamboo export compensation scheme	One export compensation scheme established.	<ul style="list-style-type: none"> i. Develop a compensation guideline. ii. Formulate technical committee. ii. Design an export compensation scheme. 	<ul style="list-style-type: none"> i. Level of production of bamboo products. ii. Level of employment in forest sector; and iii. Customer satisfaction level. 	2000	June, 2024	MITI, FBD, MoFP, and Private sector
		Five (5) projects on carbon credits established and operational.	<ul style="list-style-type: none"> i. Prepare five (5) project proposals. ii. Develop management plans. ii. Registration of five (5) projects. 		4500	June, 2031	FBD, TFS, TAFORI, SUA, UDSM, DPs and INBAR
	Promote forest landscape restoration through bamboo	Twenty percent (20) of degraded forests restored through bamboo.	<ul style="list-style-type: none"> i. Conduct assessment of degraded areas. ii. Planting of bamboo. ii. In situ conservation. 		5500	June, 2031	FBD, TFS, TAFORI, SUA, UDSM, LGAs, Private sector, Communities CSOs and FFPOs

Objective	Strategies	Targets	Activities	Outcome indicator	Financial Resource (TZS) Million	Time frame	Responsible
	Mobilize funding from development partners, multi-lateral agreements and private investors	Five (5) projects funded by development partners, multi-lateral agreements and private sectors.	i. Prepare five (5) project proposals. ii. Organize two (2) fundraising events.		200	June, 2024	FBD, TFS, TAFORI, SUA, UDSM, DPs, and Private sector
		A fund raising committee to mobilize funding created and operational by June, 2026	i. Awareness raising to stakeholders. ii. Prepare operation guidelines.		100	June, 2026	DPs, CSOs, Private sector and Communities
	Review legal frameworks to attract investors	Five (5) legislations reviewed and amended.	i. Collect stakeholders opinions ii. Incorporate Stakeholders comments.		350	June, 2031	FBD, TFS, TAFORI, SUA and UDSM

Objective	Strategies	Targets	Activities	Outcome indicator	Financial Resource (TZS) Million	Time frame	Responsible
	Promote public - private partnership s investments (PPP).	One regulation enacted.	i. Collect stakeholders opinions ii. Incorporate stakeholders comments.		280	June, 2027	FBD, TFS, TAFORI, SUA and UDSM
		Two (2) national bamboo industrial parks established	i. Conduct engagement meetings ii. Identification and demarcation of potential areas iii. Develop the parks.		200	June, 2027	Private sector, ,MITI, SIDO, SHIVIMITA
Enhanced good governance in the bamboo sub sector	Strengthen transparency, accountability and ruleof law in the bamboo sub-sector.	Two (2) awareness programs conducted annually	Conduct two (2) awareness meetings.	Incidences of corruption.	500	Annua lly	PO – PSM, CSOs, FBD, Media and TFS
		Anti- corruption strategies for bamboo subsector customized.	Review of anti – corruption strategies.		200	June, 2025	PO - PSM, FBD and TFS

Objective	Strategies	Targets	Activities	Outcome indicator	Financial Resource (TZS) Million	Time frame	Responsible
Reduced Impact of HIV/AIDS And NCDs in the bamboo subsector	Mainstream HIV/AIDS And NCDs supportive measures in the sustainable bamboo value chains	HIV/AIDS and NCDs awareness programs increased from 10 to 30.	Conduct 20 awareness sessions on HIV/AIDS and NCDs preventive measures.	HIV/AIDS infection rate; and Mortality rate.	200	June, 2031	CSOs, MH FBD, Media and TFS
		Persons living with HIV/AIDS in the bamboo sub-sector supported by 80%.	Support persons living with HIV/AIDS.		150	June, 2031	CSOs, MHFBD and TFS
Mainstreamed gender equity and equality in the bamboo sub sector	Encourage and support women, youth, and people with disabilities to participate in all aspects	A programme supporting women in the bamboo subsector established	Support women in bamboo sub sector.	Proportion of women, youth and people with disabilities in the bamboo subsector value chain.	150	June, 2031	FBD, TFS, Private sector, Communities, FFPOs and CSOs

Objective	Strategies	Targets	Activities	Outcome indicator	Financial Resource (TZS) Million	Time frame	Responsible
	of bamboo sub sector development.	Women, youth, and people with disabilities participation in the bamboo value chains increased by 30%.	Organize 20 sensitization meetings.		150	Jun, 2031	CSOs, MCDWYSG FBD, TFS, Media and Private sector