



THE UNITED REPUBLIC OF TANZANIA

Ministry Of Natural Resources and Tourism
Forestry and Beekeeping Division



NATIONAL MANGROVE MANAGEMENT AND DEVELOPMENT STRATEGY 2025 - 2035



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**JULY
2025**



EXECUTIVE SUMMARY

Tanzania hosts extensive mangrove forests, spanning approximately 158,100 hectares across fourteen coastal districts, with the Rufiji Delta in Kibiti District constituting 50% of the resource. These ecosystems, thriving in sheltered inter-tidal zones, support biodiversity, climate resilience, and local economies. The National Mangrove Management and Development Strategy (NMMDS) aligns with the National Forest Policy of 1998 and its Implementation Strategy (2021–2031), complemented by the Marine Parks and Reserves Act 1994, the National Integrated Coastal Environment Management Strategy (NICEMS) 2025, and sectoral policies on environment, energy, mining, forestry, fisheries, water, and land.

The NMMDS provides a framework to mainstream mangrove conservation, coordinate decision-making, and ensure long-term sustainability of mangrove ecosystems. It promotes sustainable management, conservation, and restoration to enhance ecological integrity and socio-economic benefits. The strategy includes an action plan detailing strategic objectives, actions, targets, output indicators, baselines, verification methods, timelines and responsible institutions. The budget for implementing the action plan is 21,350 million US.

The envisaged overall Vision is a resilient and sustainably managed mangrove ecosystem that supports biodiversity, mitigates climate change, and enhances socio-economic well-being. While the Mission is to promote the sustainable management, conservation, and restoration of mangrove ecosystems through scientific research, community participation, and policy enforcement. In order to achieve vision and mission the strategic goal seeks to ensure a sustainable management, conservation, and restoration of mangrove forests in Mainland Tanzania, enhancing their ecological integrity and socio-economic benefits.

Specific strategic objectives are to: Strengthen mangrove conservation and management through effective governance and enforcement; Enhance effective restoration and rehabilitation by 60% of degraded mangrove ecosystems to strengthen climate resilience and adaptation; Promote sustainable utilization, eco-friendly alternative livelihoods and engagement of communities dependent on mangroves; Improve knowledge



management, communication, learning and data availability on mangrove ecosystems; promote partnership for sustainable financing in mangrove conservation and management and Enhance cross-cutting issues in mangrove conservation and management. For each strategic objective, strategic actions are provided which indicates output indicator, baseline, target, means of verification, timelines and associated budget.

Various stakeholders shall be responsible for implementation of NMMDS through coordination by the TFS under the Ministry of Natural Resources and Tourism. Resources mobilization will be of paramount importance through blended financing from both public and private sectors, Development Partners, CSOs, NGOs, FBOs and individuals.

Monitoring and evaluation of NMMDS is very crucial to provide guidance and means of tracking progress, evaluate effectiveness, generate learning outcomes for adaptive implementation and ensuring that sustainable conservation, restoration, and utilization of mangrove ecosystems in Mainland Tanzania is secured.

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PREFACE

Mangrove forests worldwide provide vital ecological, social, and economic for sustaining livelihoods and preserving cultural heritage. In Mainland Tanzania mangrove forests occur all along the entire Indian Ocean coast including Mafia and other small islets. Mangroves cover approximately 158,100 ha, of which Rufiji Delta account for approximately 50%.

Managing mangrove forests is recognized by various state sectoral policy frameworks and national development agenda, but with varied priorities, plans and strategic orientations. These inconsistencies often led to environmental and governance challenges to the mangrove resource land use conflicts due to competing demands. As a result, gaps remain due to uncoordinated plans, limited collaboration leading to unsustainable management practices.

At this point, formulation of a comprehensive management strategy will serve as a robust and long-term instrument that provides guidance to the multiple actors to leverage initiatives to secure the future of mangrove ecosystems in mainland Tanzania. The strategy outlines clear vision, mission, strategic objectives and actions that are oriented towards balancing conservation efforts with sustainable use in an equitable and sustainable manner. This strategy is founded on the all-relevant policy instruments with a stake in mangrove management. The strategy serves as a blueprint for coordinated action and a tool to halt mangrove degradation, enhance community participation and strengthen institutional capacity for effective governance. This strategy will be useful in spearheading the country's efforts towards achieving various conservation and ecosystem restoration targets, poverty alleviation, food security, and climate resilience as committed to the regional and global frameworks

The preparation of this strategy was a collaborative and participatory process involving government institutions, academic and research organizations, civil society, local communities and development partners. Their invaluable contributions and shared commitment to mangrove conservation are deeply appreciated.

With this strategy, mainland Tanzania is poised to strengthen its efforts in protecting and sustainably managing its mangrove ecosystems through a holistic, science-based, and inclusive approach. Accordingly, through TFS, the government is committed to ensuring the successful implementation of

this strategy through provision of technical support, knowledge sharing, capacity building, resource mobilization to achieve a resilient and sustainably managed mangrove ecosystem. The ultimate goal is to have a system that supports biodiversity, mitigates climate change and enhances socio-economic well-being.



Dr. Hassan A. Said

PERMANENT SECRETARY

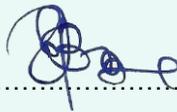
ACKNOWLEDGEMENTS

The successful development of the National Mangrove Management and Development Strategy was made possible by the active participation of various stakeholder groups and experts, including government agencies, development partners, local NGOs and community members who play a role in mangrove conservation and related initiatives.

I extend my profound appreciation to the Tanzania Forest Services Agency (TFS) for their exemplary leadership in the development of this Strategy. Their efforts in coordinating activities, organizing consultative field visits, hosting a series of workshops and meetings, and ultimately drafting the Strategy have been invaluable. I also commend the dedicated efforts of the specialists on the task team. Their technical input, time, and energy have been invaluable to the success of this process

My gratitude extends to the essential environmental institutions whose engagement proved pivotal for this Strategy. These partners include the Division of Environment (Vice President's Office), National Environment Management Council (NEMC), Ministry of Livestock and Fisheries (MLF), Institute of Marine Sciences of the University of Dar es Salaam (UDSM), Marine Parks and Reserves Unit (MPRU), Western Indian Ocean Mangrove Network (WIOMN), Local Government departments, Village Councils, Community-Based Organizations (CBOs), and local NGOs. Their collective input significantly elevated the Strategy's value and credibility.

Special appreciation goes to TFS, Wetlands International and WWF, for their collaborative financial support throughout the development process of this strategy. We look forward to this strong partnership continuing to flourish and advance our shared goals.



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Mr. Deusdedit K. Bwoyo

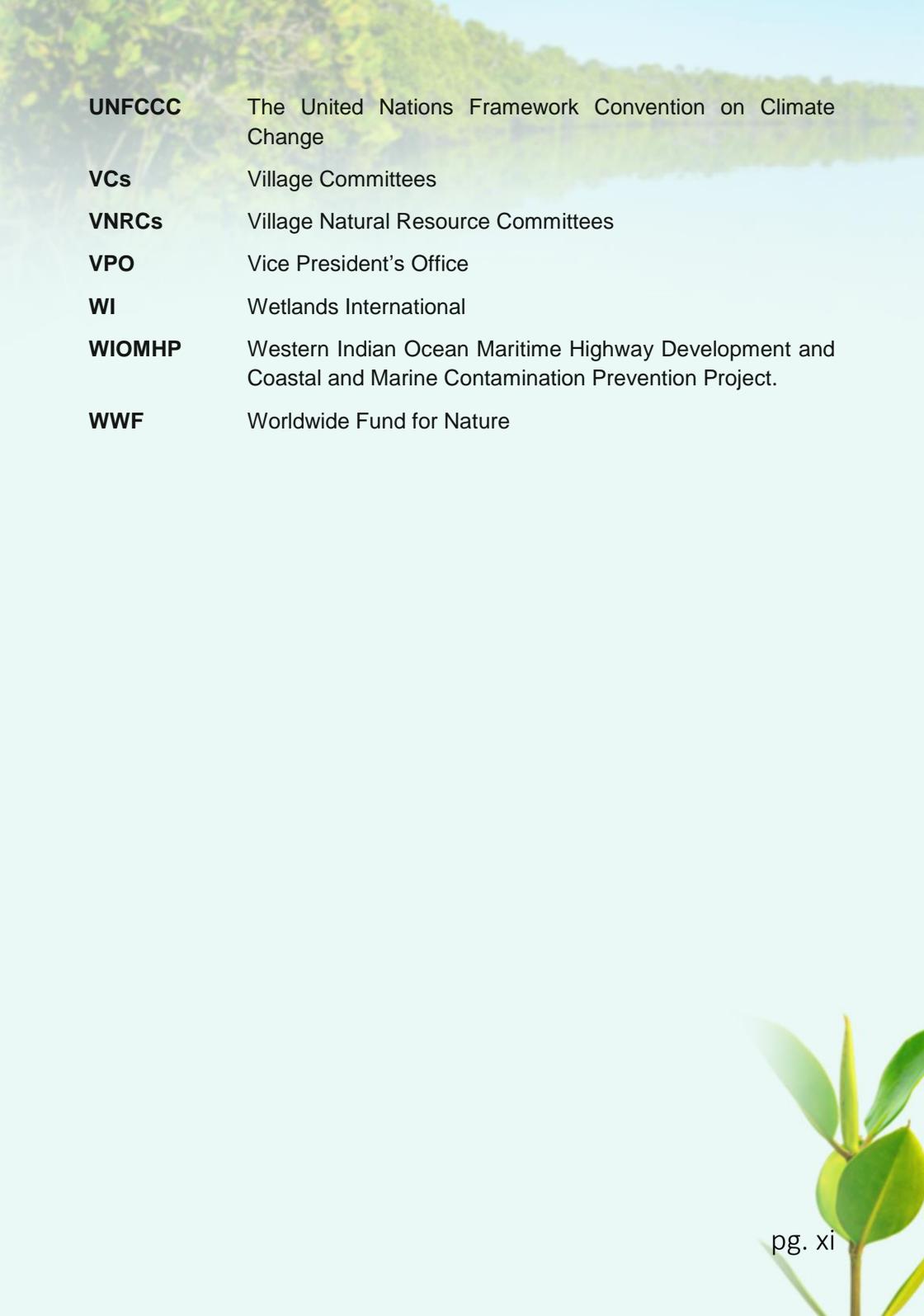
DIRECTOR OF FORESTRY AND BEEKEEPING DIVISION

ACRONYMS AND ABBREVIATIONS

AIDS	Acquired Immuno-deficiency Syndrome
ASCLME	Agulhas and Somali Current Large Marine Ecosystems.
BMUs	Beach Management Units
CBDs	Convention on Biological Diversity
CBFM	Community Based Forest Management
CBFM	Community Based Forestry Management
CBOs	Community Based Organizations
CC	Conservation Commissioner
CSO	Civil Society Organizations
DoE	Department of Environment
DP	Development Partners
EIA	Environmental Impacts Assessment
EMA	Environmental Management Act
FBD	Forest and Beekeeping Division
FBOs	Faith-Based Organizations
FYDPs	Five Years Development Plans
GIS	Geographical Information System
HIV	Human Immune Virus
IUCN	International Union for conservation of Nature
JFM	Joint Forest Management
JMAs	Joint Management Agreement
KICAMP	Kinondoni Coastal Area Management Project
KMGBF	The Kunming-Montreal Global Biodiversity Framework
LGAs	Local Government Authorities
MACEMP	Marine and Coastal Environment Management Project
MCA	Mangrove Capital Africa

MCAF	Mangrove Conservation Alliance Fund
MEL	Monitoring, Evaluation and Learning
MHF	Ministry of Foreign Affairs
MLF	Ministry of Livestock and Fisheries
MLHHS	Ministry of Land, Housing and Human Settlement
MMP	Mangrove Management Project
MNRT	Ministry of Natural Resources and Tourism
MoCDWSG	Ministry of Community Development Gender, Women and Special Groups
MoCLA	Ministry of Constitution and Legal Affairs
MoE	Ministry of Education
MoF	Ministry of Finance
MoH	Ministry of Health
MoM	Ministry of Minerals
MPAs	Marine Protected Areas
MPRU	Marine Parks and Reserves Unit
MTPs	Medium Terms of Plans
NAFORMA	National Forestry Resources Monitoring and Assessment
NCMC	National Carbon Monitoring Centre
NDC	National Determinant Commitment
NEMC	National Environment Management Council
NEP	National Environmental Policy
NFPIS	National Forest Policy Implementation Strategy
NGOs	Non-governmental Organizations
NICEMS	National Integrated Coastal Environment Management Strategy
NMMDS	National Mangrove Management and Development Strategy

OFD	Oil for Development
PFM	Participatory Forest Management
PO-PSMGG	President's Office – Public Service Management and Good Governance
PORALG	President's Office-Regional Administration and Local Government
PUMPSEA	Peri-urban Mangroves Forests as Filters and Potential Phytoremediators of Domestic Sewage in East Africa.
PURA	Petroleum Upstream Regulatory Authority
ReCoMap	Regional Programme for the Sustainable Management of the Coastal Zones of the Countries of the Indian Ocean
REMP	Rufiji Environmental Management Project
RUMAKI	Rufiji-Mafia-Kilwa and Kibiti Seascape
SDGs	Sustainable Development Goals.
SP III	Strategic Plan III
SWIOFP	Southern West Indian Ocean Fisheries Project
TAFF	Tanzania Forest Fund
TCMP	Tanzania Coastal Management Partnership
TCZCMP	Tanga Coastal Zone Conservation and Development Programme
TFS	Tanzania Forest Service Agency
TPDC	Tanzania Development Corporation
TRANSMAP	Transboundary Networks of Marine Protected Areas for integrated conservation and sustainable development: biophysical, socio-economic and governance assessment in East Africa
TZS	Tanzanian Shillings
UDSM	University of Dar es Salaam



UNFCCC	The United Nations Framework Convention on Climate Change
VCs	Village Committees
VNRCs	Village Natural Resource Committees
VPO	Vice President's Office
WI	Wetlands International
WIOMHP	Western Indian Ocean Maritime Highway Development and Coastal and Marine Contamination Prevention Project.
WWF	Worldwide Fund for Nature

KEY TERMINOLOGIES AND DEFINITION OF TERMS

- Biodiversity:** The variety of plant and animal life in a particular habitat or in the world, often considered important for ecosystem health and resilience.
- Blended Financing:** The strategic use of development finance to mobilize additional private capital flows for sustainable development in emerging and frontier markets.
- Climate Change:** A long-term shift in global or regional climate patterns, largely attributed to increased levels of atmospheric carbon dioxide produced using fossil fuels.
- Ecology:** Refers to the study of the relationships between mangrove ecosystems and fisheries, including how mangrove forests support fish populations, the interdependence between mangrove vegetation and aquatic life and how fishing activities impact these ecosystems.
- Mangrove Ecosystem:** A mangrove ecosystem is a unique coastal ecosystem found in tropical and subtropical regions, characterized by the presence of salt-tolerant trees and shrubs that thrive in brackish water where rivers meet the sea.
- Mangroves:** Mangroves are woody plants that thrive in brackish water along coastlines, estuaries, and river mouths. They are specially adapted to survive in saline, oxygen-poor soils and tidal flooding.
- Restoration:** Restoration refers to the process of repairing, rehabilitating, or returning a degraded ecosystem or environment to its original or healthy state.

Stakeholder: Any individual, group, or organization that can affect or be affected by a project or decision.

Sustainable Development: Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

Private sectors: Local NGO/CSO, CBO, Private firms involved in various aspects of mangrove conservation management.

Development partners: International financing Institutions, Developed countries, International NGOs, International/regional economic blocks.

1. INTRODUCTION

1.1 Mangroves of Mainland Tanzania

Mangrove forests in mainland Tanzania occupy the inter-tidal zone, primarily in muddy, sheltered areas of bays, inlets, estuaries, channels and the leeward sides of the islands. They therefore cover vast areas in the large river deltas along the entire Indian ocean coast. Mangrove forests occur across the fourteen coastal administrative districts, from Mkinga in the north to Mtwara in the south, covering approximately 158,100 ha. Rufiji Delta in Kibiti District forms the largest continuous block, covering approximately 50% of the whole resource in the country. Other important blocks include those of Kilwa, Mkinga, Tanga, Pangani, Bagamoyo, Mkuranga and Mtwara. Small blocks are also found in the districts of Kinondoni, Ilala, Temeke, Kigamboni, Mafia Island and Lindi.

There are nine mangrove species that occur in mainland Tanzania namely *Rhizophora mucronata*, *Ceriops tagal*, *Bruguiera gymnorhiza*, *Avicennia marina*, *Sonneratia alba*, *Xylocarpus granatum*, *Heritiera littoralis*, *Lumnitzera racemosa* and *Xylocarpus molluccensis*. There are also other vegetations commonly found associated with mangroves and a diverse fauna community found in the mangrove habitats (sediments, tree trunks and canopy). Based on the topography and geomorphic formations there are four types of mangroves along the coastline of mainland Tanzania, namely: (i) riverine mangroves like those found in Rufiji Delta and the estuaries of Pangani, Wami, Ruvu and Ruvuma rivers, which are also the most well structurally developed formations; (ii) lagoon mangroves that occur in semi-enclosed bodies of water receiving seasonal freshwater like those of Mkinga, Tanga, Kipumbwi-Sange, Bagamoyo-Dar es Salaam, Mkuranga, Kilwa-Lindi-Mtwara; (iii) fringing mangroves, that are driven by the functions of tidal forcing around major islands like those of Mafia; and (iv) over wash mangroves that are characteristic of the numerous small islets scattered along the coasts of Tanga, Mkuranga, Kilwa and Mtwara.

1.2 Rationale

The need for the National Mangrove Management and Development Strategy (NMMDS) for Mainland Tanzania is founded on the National Forest Policy of 1998 through its National Forest Policy Implementation Strategy



(NFPIS) (2021 - 2031). The named strategy is an important instrument for implementation in the TFS Strategic Plan III (SP III) for 2021/22–2025/26.

Various state sectoral policy frameworks that cut across environment, energy, mining, forests, fisheries, water and land recognize the need for conserving and managing mangrove forests to enhance their contribution to local economies and the national development agenda. It is worth noting that the frameworks have varied priorities, plans and strategic orientations, often leading to mangrove resource use conflicts, environmental degradation and stalled development initiatives. Significant gaps remain in enforcement, awareness, and sustainable management practices.

Existing policy and legal frameworks are inadequately enforced, with conservation efforts primarily focused on restrictive measures rather than community-led initiatives, often leading to conflicts with local communities who rely on mangrove resources for their livelihoods. It is also noted that the diversified needs and approaches used by various stakeholders are calling for harmonized approaches aimed at sustaining mangrove resources, which can be achieved through the preparation of this document.

The formulation of this strategy is guided by the urgent need to address these persistent challenges facing mangrove ecosystems in mainland Tanzania, by developing a robust, long-term framework that balances conservation efforts with sustainable use. The urgency to strengthen the management system is great as we endeavour to harness and manage mangrove resources in an equitable and sustainable manner that contribute to national and local development, with emphasis on integrating local communities as partners than threats into conservation and management efforts.

The strategy endeavours to serve as an umbrella framework providing guidance on conserving and managing mangrove forests by multiple actors. The strategy provides the framework for making reforms needed to ensure long-term sustainability of mangrove ecosystems in mainland Tanzania in order to move towards sustainable mangrove forest management and development.

2. SITUATION ANALYSIS

2.1 Importance of mangrove forests

Mangrove forests are vital coastal ecosystems that provide crucial ecological, economic and social benefits to local and neighbouring communities. This makes mangrove conservation and management as one of the national priorities. Key benefits of mangrove forests include:

- **Livelihood opportunities:** many coastal communities neighbouring with mangroves rely on them for firewood, timber, honey production and traditional medicine;
- **Support to fisheries:** mangrove forests serve as essential breeding and nursery grounds for some commercially important fish and shellfish species, directly supporting local fisheries and contributing to the national fishing industry;
- **Eco-tourism potential:** mangroves have a great potential of being well-managed to attract eco-tourism, providing economic incentives to local communities for conservation while promoting sustainable provision of other ecosystem services;
- **Coastal protection:** mangroves have demonstrated power to act as natural barriers against coastal erosion, reducing the impact of waves, storm surges and flooding. Hence saving lives and properties;
- **Carbon sequestration:** in these times of climate change, mangroves have demonstrated high potential, nature-based solution, as they sequester and store significantly higher amounts of carbon compared to terrestrial forests, playing a crucial role in climate change mitigation; and
- **Biodiversity support:** mangrove ecosystems provide habitat supporting marine and terrestrial biodiversity by being breeding grounds for fish, crabs, molluscs, and various bird species.

2.2 Challenges facing mangrove forests

Despite their importance, mangrove forests in mainland Tanzania continue to face significant multiple threats, originating from both anthropogenetic and natural drivers. These include:

- **Deforestation and illegal logging:** unsustainable and often illegal harvesting for timber, firewood, and charcoal production contributes to mangrove depletion.

- Climate change and sea-level rise: changing weather patterns, increased storm activity and rising sea levels threaten mangrove health and expansion. For instance, the recent cyclone Hidaya accompanied by floods in May 2024 has been implicated for the observed massive dieback of the mangroves in the Kilwa block.
- Coastal development and land conversion: uncontrolled and mismanaged expansion of agriculture, aquaculture, salt farms, and urban infrastructure encroaches on mangrove habitats.
- Inadequate community awareness and participation: limited knowledge among local communities about the long-term benefits of mangrove conservation leads to unsustainable exploitation.
- Insufficient policy implementation and law enforcement: although policies exist, enforcement mechanisms are often insufficient, leading to continued degradation.
- Inadequate coordination: various stakeholders from both the state and non-state actors are not adequately coordinated in addressing mangrove conservation and management issues.
- Pollution and habitat degradation: industrial and agricultural pollution, oil spill as well as waste dumping and sewage discharges, negatively impact mangrove ecosystems.
- Limited financial and technical resources: insufficient internal budgetary allocations and inconsistent external funding and technical expertise hampers coordinated and long-term mangrove management and restoration initiatives.

These conservation and management challenges, over the past decades, have resulted into considerable mangrove degradation and loss that jeopardizes not only biodiversity and coastal resilience, but also the socio-economic well-being of communities dependent on the mangroves.

2.3 Mangrove Conservation and Management

2.3.1 Overview

Mangrove management effort in Tanzania dates back to the colonial rule where in 1898 the German administration established a mangrove harvesting concession system for the purpose of controlling mangrove harvesting and trade in the Rufiji Delta. When the British administration took over, it went ahead in 1928 to declare all mangrove areas as forest reserves with clear delineated mangrove forest boundaries. In 1959 the British rule enacted the Forest Ordinance aimed to strengthen protection of the forest resource including mangroves. Post-independence management of mangroves was taken over by the Forest Division which later became Forestry and Beekeeping Division (FBD). In 2010 Tanzania Forest Services Agency (TFS) was established and took over management responsibilities of the mangrove forests.

Various management tools have previously been prepared to enhance mangrove management, including the preparation of the first Mangrove Management Plan for mainland Tanzania in 1991. The management plan was implemented through a 10-year Mangrove Management Project (MMP). The main focus of MMP was to conserve designated critical mangrove areas as protected zones to prevent over exploitation and habitat loss and restore degraded mangrove areas while promoting sustainable use. The project introduced mangrove ecosystem zonation and the field organization structure to support implementation of the management plan, the structure of which exists to date. A recent operational tool developed by TFS is the National Guideline for management and utilization of the mangrove resources (2021). Additionally Marine Park and Reserve Unit recognises Mangroves as key marine ecosystem that need to be protected as stipulated in their Marine Parks and Reserves Strategic Plan 2023/24-2027/28, and their respective General Management Plans (GMP) that provide strategic guidance for managing mangrove ecosystems within Marine Protected Areas.

Development of the management plan cultivated a growing recognition of the ecological importance of mangroves for biodiversity, coastal protection and fisheries leading to initiation of several mangrove conservation and restoration projects and programmes in the years 1990-2000. Some of these conservation projects/programmes supported and implemented by the government in collaboration with various development partners and

conservation actors had specific component for mangroves includes Rufiji Environment Management Project (REMP), South-West Indian Ocean Fisheries Project (SWIOFP), Oil for Development (OfD) project, Tanga Coastal Zone Conservation and Development Programme (TCZCMP), Western Indian Ocean Maritime Highway Development and Coastal and Marine Contamination Prevention Project (WIOMHP), Agulhas and Somali Current Large Marine Ecosystems (ASCLME), Regional Programme for the Sustainable Management of the Coastal Zones of the Countries of the Indian Ocean (ReCoMaP), Peri-urban Mangroves Forests as Filters and Potential Phytoremediators of Domestic Sewage in East Africa (PUMPSEA), Transboundary networks of marine protected areas for integrated conservation and sustainable development: biophysical, socio-economic and governance assessment in East Africa (TRANSMAP), Kinondoni Coastal Area Management Project (KICAMP), Tanzania Coastal Management Partnership (TCMP), Marine and Coastal Environment Management Project (MACEMP). More recent and on-going initiatives include Mangrove Capital Africa (MCA), Sustainable Use of Mangroves in the Western Indian Ocean Region and Mangrove Management for Climate Risk Resilience and Improved Livelihoods. There is also a notable addition of the designation of the RUMAKI Biosphere Reserve encompassing the mangroves of Rufiji Delta (Kibiti), Mafia Island and Kilwa.

2.3.2 Institutional framework

The institutional framework for NMMDS is multi-faceted, integrating governmental, community, academia and research, and private sector entities. The following are key contributions from these entities:

Government ministries, departments and agencies

- Ministry of Natural Resources and Tourism through the Forestry and Beekeeping Division and Tanzania Forestry Services Agency (TFS) assumes the overall implantation of the forest policies, regulations, strategies, programmes and management plans including mangrove management. In addition, the Tanzania Forest Fund promote awareness of the importance of the protection, development, and sustainable use of forest resources through public education and training.
- Vice President's Office (VPO) assumes the overall responsibility for environmental policies, including mangrove management. The state Ministry provides a framework for environmental management through the National Environmental Master Plan for Strategic Interventions 2022 - 2032 that encompasses mangrove ecosystems as a nature-based solution for climate change mitigation. Under the VPO, the National Environment Management Council (NEMC) regulates investment development through EIA/EA, enforce the environment law against environmental pollution, provides framework for environmental research priority areas and awareness through where mangrove forests are protected.
- Ministry of Fisheries and Livestock focus on sustainable fishing practices that impact mangrove ecosystems. Under this Ministry, the Marine Parks and Reserves Unit (MPRU) is responsible for the designation and management of marine protected areas that include mangrove habitats.
- Ministry of Land, Housing, and Human Settlements oversees land-use planning that affect coastal areas, including where mangroves occur.

Local government authorities

- Regional administrations and District Councils implement mangrove policies and engage local communities in conservation practices.
- Village Councils are the grassroots structures that empower local governance in managing and protecting mangrove resources through participatory approaches.

Community-based organizations

- Local NGOs engage in awareness-raising, education, and community-led restoration initiatives.
- Community Forest Management Groups facilitate local communities' involvement in mangrove management and sustainable practices.

Research institutions and universities

- Conduct research on mangrove ecosystems, their biodiversity, and restoration techniques.
- Partner with the government and communities to translate research findings into action, facilitating development and practicing of monitoring and evaluation systems by creating frameworks for regular assessment of mangrove health, biodiversity and management efficiency.

Private sector engagement

- Collaborate with businesses, especially in sectors such as tourism and fisheries, to promote sustainable practices related to mangroves.
- Encourage Corporate Social Responsibility initiatives focused on mangrove conservation.

International partnerships and collaborations

- Engage with international development partners donor and conservation organizations for technical support, funding, and knowledge exchange on mangrove management.
- Participate in regional agreements for coastal and marine resource management.

2.3.3 Policy and legal framework

The legal and policy framework governing mangrove forests in Tanzania is multifaceted and includes various national laws, policies, and international commitments. There is no specific policy that addresses the unique needs of mangrove forests; instead, mangrove management in the country applies forest management arrangements used in terrestrial forests.

National Forest Policy 1998 and **Forest Act 2002** have introduced a forest management strategy famously known as Participatory Forest Management (PFM) to achieve sustainable forest management by promoting community management (CBFM) or co-management (JFM) of forest and woodland resources. Section 3(b) of the Forest Act, 2002 encourages and facilitates the active participation of the citizen in the sustainable planning, management, use and conservation of forest resources through the development of individual and community rights, whether derived from customary law or under this Act, to use and manage forest resources. Under the Forest Act (2002), communities are allowed to sign Joint Management Agreement (JMAs) with government and other forest owners (commonly referred to as “Joint Forest Management” or JFM).

The Forest Policy adopts a participatory approach to forest management by involving all stakeholders (including local communities) in management systems, demarcation of forest reserves, devising mechanisms to ensure equitable sharing of benefits, and lease of forest reserves to private investors through various forms of joint management agreements, embedded with appropriate user rights and benefits.

Marine Parks and Reserves Act 1994 creates a framework for the establishment and management of marine protected areas, which often include significant mangrove ecosystems. The Act includes in its objectives: promotion of community-oriented education and dissemination of information concerning conservation and sustainable use of marine parks or reserves.

The National Land Policy of 1995 (2023 Edition) and the Land Act 1999 advocates the protection of land resources from degradation for sustainable development, ensuring wise use of land, guiding allocations and resolving conflicts. The Policy provides for the protection of sensitive areas such as water catchments, forest biodiversity, national parks and wetlands. It also recognises the dual system of land tenure, customary and statutory rights of occupancy, as equal before the law; provides conditions for transactions of

land, which has a market value. It also calls for Community involvement in resource management, land use planning and conflict resolution will be necessary.

Other important frameworks that have a role in mangrove management include, but not limited to, the National Beekeeping Policy 1998, National Wildlife Policy 2007, National Agriculture Policy 2013, National Livestock Policy 2006, National Tourism Policy 1999, National Public Private Partnership Policy 2009, National Energy Policy 2015, National Water Policy 2002, National Mineral Policy 2009, Land Use Planning Act (2007) and National Climate Change Strategy (2012), The Petroleum Act 2015, The national Natural gas Policy of Tanzania 2013, Tanzania Shipping Agencies Act 2017, Local Government (Urban Authorities) Act 1982, Local Government (District Authorities) 1982, Tanzania Investments Act, 2022, Rural Energy Act, 2005 and National Climate Change Strategy (2012).

2.3.4 Regional and global context

Development of this National Mangrove Management and Development Strategy is consistent with regional and global environmental policies and agreements, which the country has signed and ratified, endorsing the importance of mangrove forests. These include:

- The Nairobi Convention on the Protection, Management and Development of the Marine and Coastal Environment of the Western Indian Ocean Region and its Protocols.
- United Nations Sustainable Development Goals (SDGs): aligning with SDG 14 (Life below Water) and SDG 15 (Life on Land), which emphasize the protection and restoration of ecosystems.
- The Convention on Biological Diversity (CBD): commitment to protect biodiversity and implement sustainable conservation initiatives.
- The United Nations Framework Convention on Climate Change and its related protocols and the Paris Agreement on Climate Change: recognition of mangroves as critical carbon sinks, contributing to Tanzania's climate mitigation and adaptation efforts.
- The Ramsar Convention on Wetlands: commitment to protecting its wetlands, including mangrove ecosystems.

3. STRATEGIC DIRECTIONS

3.1 The Strategy

The National Mangrove Management and Development Strategy (NMMDS), which includes implementation mechanisms and the actions, reinforces the collaborative roles of relevant sectors and resource users to identify and develop solutions to urgent mangrove challenges. The action plan details the implementation of the strategic objectives where strategic actions, target, output indicators, baseline information, means of verifications, timeframe for implementation and responsible institutions are outlined. Moreover, an indicative budget for implementing the action plan is provided.

3.2 Overall Vision and Mission

3.2.1 Vision

A resilient and sustainably managed mangrove ecosystem that supports biodiversity, mitigates climate change and enhances socio-economic well-being.

3.2.2 Mission

To promote the sustainable management, conservation and restoration of mangrove ecosystems through scientific research, community participation and policy enforcement.

3.3 Objectives

3.3.1 General strategic objective

To ensure the sustainable management, conservation and restoration of mangrove forests in Mainland Tanzania, enhancing their ecological integrity and socio-economic benefits.

3.3.2 Specific strategic objectives

1. Strengthen mangrove conservation and management through effective governance and enforcement;
2. Enhance the effective restoration and rehabilitation by 60% of degraded mangrove ecosystems to strengthen climate resilience and adaptation;
3. Promote sustainable utilization, eco-friendly alternative livelihoods and engagement of communities dependent on mangroves;
4. Improve knowledge management, communication, learning and data availability on mangrove ecosystems;

5. Ensure sustainable financing in mangrove conservation and management; and
6. Enhance cross-cutting issues in mangrove conservation and management.

3.4 Strategic Actions: responsibilities and timelines

Table 1 summarizes the strategic actions for each strategic objective as a roadmap for ensuring the effective management of mangrove ecosystems in mainland Tanzania over the next decade.

Strengthen mangrove conservation and management through effective governance and enforcement								
Improved mangrove ecosystem health and services								
Strategic Outcome Indicator	Strategic Actions	Output Indicator	Baseline	Target	Means of Verification	Timeline	Responsible	Budget (TZS in millions)
1.2 Strengthen coordination in mangrove management	<ul style="list-style-type: none"> • Number of coordination/collaboration engagements • Number of Memorandum of Understanding (MoU) developed 	<ul style="list-style-type: none"> • Smart mobile monitoring, drone-based surveillance • 14 villages are currently involved in monitoring 	Electricity Act, 2008, Rural Energy Act, 2005,	<ul style="list-style-type: none"> • Twenty meetings • At least three MoU 	Reports MoU	2025-2034	VPO (NEMC), PORALG, MNRT (TFS), MLF (MPRU), MLHHS, MoF, MoM, MoE (PURA and TPDC), LGA, MoCDGWSG, DPs, Private sectors	800
			<ul style="list-style-type: none"> • Number of innovative technologies • Area of mangroves monitored • Number of community groups involved in monitoring 	<ul style="list-style-type: none"> • At least 3 drones • At least 60% of the total mangrove area is under monitoring • At least 60% of villages adjacent mangroves are involved 	<ul style="list-style-type: none"> • Number of Drones, • Number of mobile apps, • Reports 	2026-2034	VPO (NEMC), PORALG, MNRT (TFS), MLF (MPRU), MLHHS, MoF, MoM, MoE (PURA and TPDC), LGA, MoCDGWSG, DPs, Private sectors	3,000
1.4 Integrate mangrove management into local and	<ul style="list-style-type: none"> • Number of mangrove integrated plans • Number 	<ul style="list-style-type: none"> • Twelve mangrove management plans 	<ul style="list-style-type: none"> • At least ten mangrove management plans 	<ul style="list-style-type: none"> • Management plans approved • Reports 	2025-2034	VPO (NEMC), PORALG, MNRT (TFS), MLF (MPRU), MLHHS, MoF, MoM,	800	



Strengthen mangrove conservation and management through effective governance and enforcement								
Improved mangrove ecosystem health and services								
Strategic Objective 1 Outcome Indicator	Strategic Actions	Output Indicator	Baseline	Target	Means of Verification	Timeline	Responsible	Budget (TZS in millions)
	national plans	stakeholders involved <ul style="list-style-type: none"> Number of consultative and awareness meetings with stakeholders 			<ul style="list-style-type: none"> Meeting minutes 		MoE (PURA and TPDC), LGA, MoCDGWSG, DPs, Private sectors	

Enhance the effective restoration and rehabilitation by 60% of degraded mangrove ecosystems to strengthen climate resilience and adaptation by 2034							
Improved Mangrove ecosystems services							
Strategic Objective 2 Outcome Indicator	Output Indicator	Baseline	Target	Means of Verification	Timeline	Responsible	
2.1 Undertake socio-economic and ecological assessment of mangrove ecosystems.	<ul style="list-style-type: none"> Mangrove ecological and socio-economic status IUCN red-list threatened species status 	NAFORMA 2015 Mangrove Management Maps, 1991	<ul style="list-style-type: none"> All 14 districts or mangrove blocks assessed Two major assessments per block conducted – one at the beginning and one at the end of the MMS lifetime 	<ul style="list-style-type: none"> Assessment report Maps 	2026 - 2034	TFS, MNRT, NEMC, MPRU, Research Institutions, Academic institutions, private sector, coastal communities	900
	2.2. Develop local and national restoration programs in mangroves.	<ul style="list-style-type: none"> Number of restoration programs developed. Area of mangroves restored 	<ul style="list-style-type: none"> 8 restoration programs are integrated into the mangrove management plans 15,491 ha of assessed degraded areas. 	<ul style="list-style-type: none"> 14 restoration programs implemented 60% of degraded mangrove areas restored or rehabilitated. 	<ul style="list-style-type: none"> Approved mangrove management plans. Monitoring and Restoration reports. 	2026 - 2034	Ministries and other stakeholders involved in mangrove management.
2.3 Promote community-led mangrove	<ul style="list-style-type: none"> Number of community groups/members 	<ul style="list-style-type: none"> 2 mangrove nurseries. Fourteen (14) 	<ul style="list-style-type: none"> 300 community groups engaged 	<ul style="list-style-type: none"> Training reports. Community 	2026 - 2034	Ministries and other stakeholders involved in	850



Enhance the effective restoration and rehabilitation by 60% of degraded mangrove ecosystems to strengthen climate resilience and adaptation by 2034								
Improved Mangrove ecosystems services								
Strategic Objective 2 Outcome Indicator	Strategic Actions	Output Indicator	Baseline	Target	Means of Verification	Timeline	Responsible	Budget (TZS in millions)
	restoration and management initiatives	engaged in mangrove restoration. <ul style="list-style-type: none"> Number of community-led restoration initiatives. 	restoration programs	<ul style="list-style-type: none"> 215 community led mangrove nurseries established 	y-led nurseries establishment reports.		mangrove management	
	2.4 Develop restoration guidelines on mangroves restoration.	Mangrove restoration guidelines developed.	No national mangrove restoration guidelines.	One (1) national mangrove guideline.	Approved mangrove restoration guidelines.	2026 - 2028	MNRT-TFS	250



Promote sustainable utilization, eco-friendly alternative livelihoods and engagement of communities dependent on mangroves								
Decreased illegal and unsustainable mangrove exploitation activities								
Strategic Objective 3 Outcome Indicator	Strategic Actions	Output Indicator	Baseline	Target	Means of Verification	Timeline	Responsible	Budget (TZS in millions)
3.1 Develop sustainable management guidelines for mangrove resources	3.2 Promote and support eco-friendly alternative livelihoods in mangroves.	Number of mangrove management guidelines developed	One (1) guideline in place (Mwongozo wa Usimamizi na Matumizi Endelevu ya Misitani ya Mikoko, 2021)	Two sustainable management guidelines developed	Approved management guidelines	2026-2029	MNRT-TFS, MLF-MPRU	450
		<ul style="list-style-type: none"> Number of groups engaged in eco-friendly alternative livelihoods. Number of groups accessing various financing opportunities. Increased number of eco-friendly alternative livelihoods 	<ul style="list-style-type: none"> 500 groups engaged in eco-friendly alternative livelihoods Five (05) eco-friendly alternative livelihoods 	<ul style="list-style-type: none"> 2000 groups engaged 20% of the groups accessing various financing opportunities Seven (07) eco-friendly livelihoods established 	<ul style="list-style-type: none"> Implementati on and monitoring reports 	2026-2034	MNRT-TFS, MLF-MPRU, LGAs, DPs, Private sectors	1200
3.3 Conduct education and awareness programs about sustainable use and		<ul style="list-style-type: none"> Number of groups Number of awareness programs Number of awareness packages 	<ul style="list-style-type: none"> 14 awareness programs 42 awareness packages 	<ul style="list-style-type: none"> 2000 group trained 42 awareness programs 126 awareness packages 	Reports	2026-2034	MNRT-TFS, MLF-MPRU, NEMC, DPs, Private sectors	600



Promote sustainable utilization, eco-friendly alternative livelihoods and engagement of communities dependent on mangroves									
Decreased illegal and unsustainable mangrove exploitation activities									
Strategic Objective 3	Outcome Indicator	Strategic Actions	Output Indicator	Baseline	Target	Means of Verification	Timeline	Responsible	Budget (TZS in millions)
		management of mangroves							
		3.4 Conduct a comprehensive value chain assessment of mangrove goods and services	<ul style="list-style-type: none"> Number of mangrove goods and services identified Number of value chains identified 	No available information	One (1) mangrove value chain assessment	Reports	2026 - 2028	TFS, MNRT, NIEMC, Research Institutions, Academic institutions, private sector, coastal communities	700

Improve Knowledge Management, Communication, Learning and data availability on mangrove ecosystems								
Mangrove ecosystems knowledge and information availability enhanced								
Strategic Objective 4	Outcome Indicator	OUTPUT INDICATOR	Baseline	Target	Means of Verification	Timeline	Responsible	Budget (TZS in millions)
4.1 Establish long-term mangrove ecosystems monitoring		Established mangrove monitoring centre	<ul style="list-style-type: none"> No existing mangrove monitoring centre and sub-stations 	<ul style="list-style-type: none"> One mangrove monitoring centre, and its two sub-stations 	<ul style="list-style-type: none"> Established functional monitoring centres Monitoring reports 	2026-2034	<ul style="list-style-type: none"> MNRT-TFS, MLF-MPRU Conservation and Research Institutions/Organizations 	7,000
		Number of monitoring programmes	<ul style="list-style-type: none"> NAFORMA, 2015 	<ul style="list-style-type: none"> Two monitoring programme majors (one at the beginning and one at the end of the NIMDS implementation) 	<ul style="list-style-type: none"> Monitoring reports 			
4.2 Integrate local or indigenous knowledge into the management of mangroves		Number of local or indigenous approaches identified and document in mangrove management		3 including mangrove use, threats, management approaches, etc.	Implementation and monitoring Reports	2025-2035	<ul style="list-style-type: none"> Academic and research institutions Local communities Development partners, Private sectors Government Institutions 	1,000



Promote partnership for sustainable financing in mangrove conservation and management							
Strategic Objective 5 Outcome Indicator	At least TZS 22 billion mobilized to finance the implementation of the strategy						
Strategic Actions	OUTPUT INDICATOR	Baseline	Target	Means of Verification	Timeline	Responsible	Budget (TZS in millions)
5.1 Prepare fundable proposals	Number of proposals submitted	3 proposals	4 new proposals	Accepted proposals	2026 -2034	TFS, MPRU, NEMC, other Government agencies, Development partners and private sector	200
5.2 Leveraging on blended financing models	<ul style="list-style-type: none"> Number of blended finance mechanisms identified Amount of financial resources mobilized 	Tanzania Forest Fund (TAFF)	<ul style="list-style-type: none"> At least 3 financing mechanisms (e.g., blue carbon credit projects, private sector co-financing) operational. At least TZS 22,000,000,000 to be secured 	Signed agreement	2025 -2034	VPO-NCMC, TFS, TAMISEMI, MPRU	200
5.3 Establish Mangrove Conservation Alliance Fund (MCAF)	Operational Mangrove Conservation Fund	Zero	One (1) mangrove conservation fund	Government Notice	2026 -2034	MNRT-TFS, MLF-MPRU	200
5.4 Forge regional and	Number of agreements signed	<ul style="list-style-type: none"> Kenya-Tanzania Transboundary 	At least two (2) new collaboration	Signed agreements	2026-2034	MNRT-TFS, VPO-NEMC, MLF-MPRU	150

Promote partnership for sustainable financing in mangrove conservation and management								
At least TZS 22 billion mobilized to finance the implementation of the strategy								
Strategic Objective 5 Outcome Indicator	Strategic Actions	OUTPUT INDICATOR	Baseline	Target	Means of Verification	Timeline	Responsible	Budget (TZS in millions)
	international collaboration in mangrove conservation and management	<ul style="list-style-type: none"> Number of partners secured 	Conservation Area (TBCA) – <ul style="list-style-type: none"> Nairobi Convention Western Indian Ocean Mangrove Network (WIOMN) Western Indian Ocean Marine Science Association (WIOMSA) 	agreements				

Enhance cross-cutting issues in mangrove conservation and management								
Cross-cutting issues in mangrove conservation and management enhanced by 2034								
Strategic Objective 6 Outcome Indicator	Strategic Actions	OUTPUT INDICATOR	Baseline	Target	Means of Verification	Timeline	Responsible	Budget (TZS in millions)
	6.1 Promote gender-inclusive and responsiveness approaches in mangrove management.	Number of gender responsive and inclusive programmes	30% of the VNRCs occupied by women	50% of participation of women, youth, elderly, and other special groups	Implementati on and monitoring reports	2026-2034	MNRT-TFS, VPO-NEMC, MLF-MPRU, MoCDGWSG	500
	6.2 Enhance research on climate change impacts on mangroves, their ecosystem dynamics and resilience.	Number of researches on climate change on mangrove ecosystems carried out	1 (major one ongoing research on mapping, the extent and distribution of mangroves)	At least one (1) new research on climate change impacts carried out	Research reports	2026-2034	Academic and research institutions	300
	6.3 Coastal communities health improved by reducing infectious and communicable diseases	<ul style="list-style-type: none"> Percent reduction in HIV/AIDS infections. Percent reduction in malaria infections. 	<ul style="list-style-type: none"> 3.46% among adults in coastal regions (NBS report, 2022) TBD 	<ul style="list-style-type: none"> At least 10% reduction in HIV/AIDS infections At least 10% reduction in malaria infections. 	Reports	2026-2034	MoH, LGAs, MoCDGWSG, DPs, Private sectors	500
	6.4 National anti-corruption	<ul style="list-style-type: none"> Percent change in corruption 	TBD	At least 80% reduction in cases of		2026 - 2034	PO-PSMGG (PCCB), MOHA, MoLCA	150



Enhance cross-cutting issues in mangrove conservation and management							
Cross-cutting issues in mangrove conservation and management enhanced by 2034							
Strategic Objective 6 Outcome Indicator	OUTPUT INDICATOR	Baseline	Target	Means of Verification	Timeline	Responsible	Budget (TZS in millions)
strategy and action plan enhanced and sustained	incidences.		corruption				

4. MONITORING, EVALUATION AND LEARNING

This Monitoring, Evaluation, and Learning (MEL) Framework is structured to support adaptive management, policy alignment, stakeholder engagement, and sustainable outcomes across ecological, social, and economic dimensions of mangrove conservation and management in accordance to the strategic objectives and actions defined in this strategy.

4.1 Purpose of the MEL Framework

The purpose of this MEL framework is to provide guidance and means of tracking progress, evaluate effectiveness, and generate learning outcomes for adaptive implementation of the National Mangrove Management and Development Strategy in mainland Tanzania, ensuring that sustainable conservation, restoration, and utilization of mangrove ecosystems is secured.

4.2 MEL Objectives

- A. Monitor the implementation of strategic actions and interventions;
- B. Evaluate the impact and effectiveness of management practices;
- C. Facilitate adaptive management through learning and feedback loops;
- D. Support decision-making for scaling up with evidence-based information; and
- E. Ensure accountability to stakeholders, including communities, government and development partners.

4.3 Strategic Objectives for Monitoring

Strategic objective	Key areas for monitoring
Conservation and management	Institutional coordination, enforcement of laws, reduction in illegal activities, protected area coverage
Restoration and rehabilitation	Area restored, species diversity, survival rate of planted mangroves
Sustainable utilization, eco-friendly alternative livelihood and community engagement	Participation levels, benefit sharing, capacity building Sustainable alternative livelihoods,

Strategic objective	Key areas for monitoring
Knowledge management, communication, learning and data availability	income from mangrove-based activities Data collection, publications, knowledge sharing platforms
Financing and partnerships	Fundraising, budget allocation, MoUs and agreements forged
Cross-cutting issues in mangroves	Gender and inclusive and responsible program, climate change and HIV and AIDS

4.4 MEL Indicators

A. Output indicators for operational-based changes

- i. Number of hectares of mangrove mapped and zoned for protection and restoration;
- ii. Number of communities, community-based organizations (CBOs) and/or groups reached out and trained;
- iii. Number of enforcement operations conducted; and
- iv. Budget allocated and disbursed for mangrove conservation and management programmes.

B. Outcome indicators for short-to-medium term changes

- i. % increase in mangrove cover by designated management block;
- ii. % decrease in reported illegal mangrove exploitation activities;
- iii. % of communities participating in local mangrove conservation governance structures; and
- iv. Increase in average household income from mangrove-related livelihoods.

C. Impact indicators for long-term changes

- i. Improved mangrove ecosystems health;
- ii. Increased carbon sequestration rates in mangrove areas;
- iii. Reduced coastal erosion and flooding incidents; and
- iv. Enhanced resilience of local communities to climate change.

4.5 Data Collection and Management

1. Frequency: Quarterly (outputs), Annually (outcomes), Every 3–5 years (impact)
2. Methods: Remote sensing (GIS), field surveys, community participatory monitoring, government records, case studies
3. Tools and platform: Mobile data apps, dashboards, national environmental data systems (e.g., NEMC, TFS, MPRU), GIS platforms, Global Mangrove Watch (GMW), WIO Mangrove Network (WIOMN).

4.6 Roles and Responsibilities

Stakeholder/Actor	Role
Tanzania Forest Services Agency (TFS)	Lead agency for implementation and reporting
Marine parks and Reserves Unit (MPRU)	Lead Institution in Marine Protected Areas
National Environmental Management Council (NEMC)	Oversight and coordination of environmental standards
Local Government Authorities	Local enforcement, community mobilization
Private sectors	Capacity building, community engagement, third-party monitoring
Development partners	Capacity building, community engagement, third-party monitoring
Academia/Research Institutions	Baseline studies, ecological monitoring, data analysis
Local Communities	Participatory monitoring, knowledge sharing

4.7 Learning and Adaptive Management

- Learning forums: Annual Mangrove Learning Summits, district-level review workshops;
- Feedback mechanisms: Stakeholder reports, adaptive strategy updates, real-time data dashboards;
- Documentation: Lessons learned, best practices, case studies shared across regions.

4.8 Reporting and Communication

- Annual Progress Reports: Shared with stakeholders, including government, donors, and community groups;
- Policy Briefs: Targeted summaries for decision-makers;
- Public Platforms: Open-access dashboards, newsletters, media campaigns.

4.9 Risks and Mitigation in MEL

Risk factor	Mitigation measures
Inconsistent data collection	Standardized assessment tools/protocols and training
Community disengagement	Incentivized participation, feedback integration
Budget limitations	Mainstream MEL in sectoral funding, donor engagement
Data silos	Establish a centralized MEL information system

4.10 Budgeting for MEL

Allocate 5–10% of the total NMMDS budget to MEL activities including staffing, data systems, training and third-party evaluations.

5. CONCLUSION

The National Mangrove Management and Development Strategy 2025–2035 is of paramount importance as it provides a transformative roadmap for sustainable mangrove management in mainland Tanzania, aiming to restore 15,491 hectares, reduce illegal exploitation by 60%, and engage 40% of coastal communities in conservation by 2035. Through inclusive collaboration among government, communities, private sector, and international partners, it aligns with global priorities, including the IUCN Red List of Ecosystems, to safeguard high-risk mangrove areas like Rufiji Delta from collapse. By integrating advanced technologies, securing a total of 21,350 million US Dollar and addressing threats like pollution and land tenure conflicts. The strategy will further enhance biodiversity, bolster climate resilience, and improve livelihoods. Hence, all stakeholders are called to commit their efforts to this ambitious vision, ensuring mangroves thrive as vital ecosystems for future generations, with adaptive management guiding progress through robust monitoring and learning.





NATIONAL MANGROVE MANAGEMENT AND
DEVELOPMENT STRATEGY
2025 - 2035