



# **EMPOWERING COMMUNITIES TO UNDERTAKE BEEKEEPING AND BUFFER ZONE CREATION FOR LIVELIHOOD IMPROVEMENT AND MANGROVE ECOSYSTEM CONSERVATION IN PEMBAMNAZI - DAR-ES-SALAAM, TANZANIA**

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# Outline of presentation

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- Objectives
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- Key messages
- Acknowledgements





# Introduction

- Mangrove forests are natural habitats for fauna and form important areas for nurseries, spawning and feeding for numerous species of fish
- They provide ecosystem goods and services to many coastal communities worldwide through fisheries and tourism
- Coastal communities residing close to mangrove forests depend on them for woody products such as firewood, charcoal, construction poles, timber and non-woody forest products
- Mangroves help to protect coastal communities from erosion, storms and tsunamis
- Mangrove forests play an important role in atmospheric carbon sequestration, as they can suck up 50 times more carbon than tropical forests of the same size, making them a crucial land in the fight against climate change (IPCC, 2001)
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## Introduction cont...

- Mangrove forests in Tanzania are owned by the state and are managed by Tanzania Forest Services Agency.
- Conservation and management of these forests are guided by Forest Policy of 1998 and Forest Act of 2002.
- These instruments prohibit human activities in the mangrove reserves without a permit.
- About 2603.2 ha of mangrove forests are in Dar es Salaam distributed in Kigamboni (1673.3 ha), Kinondoni (526.5 ha), Temeke (378.4 ha) and Ilala (25 ha) districts





# Introduction cont...

- There are 10 mangrove species along Tanzania coastline
  1. *Avicennia marina* (Mchu)
  2. *Bruguiera gymnorhiza* (Msisi/Msinzi/Mfinzi or muia)
  3. *Ceriops tagal* (Mkandaa/Mkoko mwekundu)
  4. *Heritiera littoralis*
  5. *Lumnitzera racemosa* (Kikandaa or mkandaa dume/ Kilalamba)
  6. *Pemphis acidula* (Kilalamba dume)
  7. *Rhizophora mucronata* (Mkoko/ mkoko magondi)
  8. *Sonneratia alba* (Mlilana or Mpira)
  9. *Xylocarpus granatum* (Mkomafi/Mkaumwa/Mkuo/ Mtonga)
  10. *Xylocarpus molluccensis*
- Of these, *Avicennia marina*, *Rhizophora mucronata* and *Ceriops tagal* are predominant, while *Pemphis acidula* and *Xylocarpus mulleccensis* are rare species







# Threats to mangroves of Dar es Salaam







## Introduction cont...

- About 150 ha of mangroves have been cleared in the past two decades for charcoal burning, timber, firewood and poles in Pembamnazi area alone.
- Loss of mangrove forests tends to result into
  - increased rate of coastal erosion,
  - loss of biodiversity,
  - loss of ecological and environmental services offered by mangroves, and
  - it affects economic activities of mangrove dependent communities.
- Therefore, there is urgent need for sustainable management of this unique resource to save livelihood and the environment





## Introduction cont...

Efforts are being made by government of Tanzania and NGOs to plant mangroves in deforested and degraded areas in Dar es Salaam region.

About 90 ha of mangroves were planted by the government of Tanzania and NGOs in Dar es Salaam region, between 2016 and 2021

In order to complement restorative activities of deforested and degraded mangrove forest other efforts also need to be undertaken, so as to reduce pressure on mangrove resources.







# Project objectives

- **The overall objective** of this project is to implement SLM practices for livelihood improvement and stability of mangrove ecosystem in the context of changing climate in Africa through supporting coastal communities of Pembamnazi Ward in beekeeping in the mangrove forest and creating buffer zone adjacent to the mangrove forest.
- **Specific objectives are:**
  1. supporting communities in Pembamnazi to undertake beekeeping in the mangrove forest
  2. supporting communities to create buffer zone adjacent to mangrove forest in Pembamnazi
  3. supporting communities to plant mangroves in the deforested and degraded areas





# Justification of the project

- This project aims at spearheading the conservation and sustainable utilization of mangrove resources within Pembamnazi ward as by facilitating local communities
  - to plant mangroves in the deforested and degraded areas
  - to undertake modern beekeeping in the mangrove forest reserve,
  - establishing and managing buffer zone outside the mangrove forest as a sustainable alternative source of woody products and fuel.
- The farming of high value crops such vegetables and fruits will be allowed in the created buffer zone with the aim to contribute additional household income and looking after the planted exotic fast growing trees.
- Such interventions are expected to reduce pressure on mangrove forests as they will ensure the availability and efficient use of wood energy and buffer zone area.
- Also, presence of beekeeping will promote mangrove forest protection from illegal activities.

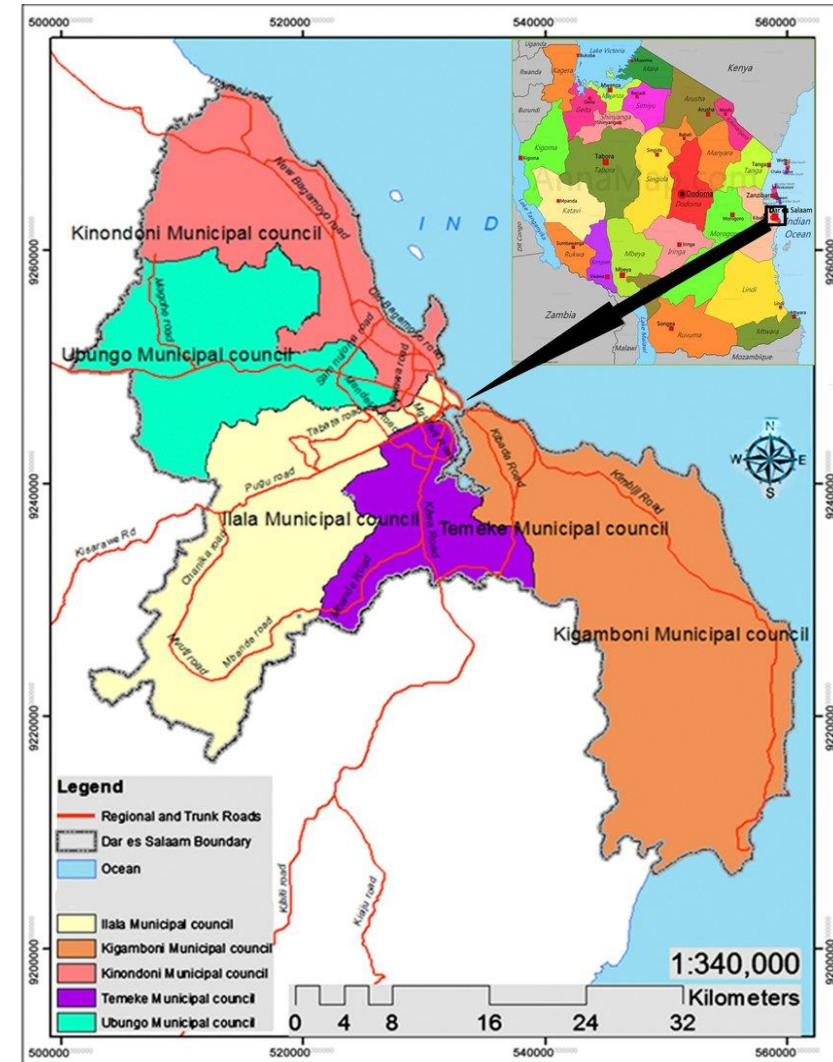




# Project area

This project is being implemented in Pembamnazi ward - Kigamboni Municipality

Project duration is 6 months from April 2023







# Project approach and progress made so far

Expected results	Activities	Progress so far
1. Communities in Pembamnazi are supported to undertake beekeeping in the mangrove	Introducing the project into project areas	Village meeting was organized to introduce the project
	Mobilizing communities into a beekeeping group	One beekeeping group formed, it has 10 members
	Training of beekeeping groups on modern beekeeping methods	Not yet done
	Purchasing tools and equipment for beekeeping and distributing to beekeeping group,	Have already ordered 30 beehives from SUMA JKT. Honey harvesting equipment will be purchased later as their funds have been used to purchase agricultural inputs namely manure, hoes, machetes, watering can, seeds that were not budgeted before.





# Project approach and progress made so far cont...

Expected results	Activities	Progress so far
2. Communities are supported to create buffer zone adjacent to mangrove forest in Pembamnazi	Mobilizing communities to form a group to undertake creation of buffer zone adjacent to mangrove forest	One trees planting group formed with 15 members
	Conduct training to trees planting group	Not yet done
	Purchasing and distributing working gears to trees planting group	Not yet done
	Creation of buffer zone (land preparation for exotic trees planting)	Negotiation with the Kigamboni district on ownership of the buffer zone area Allowed to implement the project (verbally). Land clearance done (7 ha) Processes are underway to obtain rights of occupancy of the 30 m away from the boundary of mangrove forest.
	Purchase of 17,850 tree seedlings from NTSA	Orders have been made to the 3 local trees nursery operators in Kigambon. Seedlings (teak – <i>Tectona grandis</i> (10,000 seedlings) and casuarina - <i>Casuarina equisetifolia</i> (7,850 seedlings) are ready for purchase



# Project approach and progress made so far cont...

Expected results	Activities	Progress so far
<p>2. Communities are supported to create buffer zone adjacent to mangrove forest in Pembamnazi</p>	<p>Planting of seedlings in the created buffer zone</p>	<p>Fertilizing the land using cow dung manure (June, 2023)</p>
	<p>Mobilizing communities to form a group to undertake farming of high value fruits/vegetables in the created buffer zone</p>	<p>One group formed with 14 members</p>
	<p>Growing high value fruits/vegetables in the created buffer zone</p>	<p>Held meeting with vegetables growing group to discuss potential crops to be grown. Suggested vegetables to be grown were okra, Chinese cabbage, hot papers and bitter tomatoes. These vegetables have high market demand and have multiple harvests. Agreed that 7 members will grow okra, 3 members bitter tomatoes, 2 members Chinese cabbage, 2 members hot papers.</p>
		<p>Purchase of working tools namely 10 hoes, 5 machetes, 14 watering cans, seeds</p>
		<p>Preparation of vegetable nurseries (Chinese cabbage, bitter tomatoes, hot paper)</p>
	<p>Fertilizing the land using cow dung manure and planting of okra</p>	







# Project approach and progress made so far cont...

Expected results	Activities	Progress so far
3. Communities are supported to undertake mangroves planting in the deforested and degraded areas	Mobilizing communities to form a group for mangroves planting	A group of 5 people was formed for mangroves planting
	Mangrove's planting, 5000 propagules (2 ha)	More than 10,000 mangrove propagules were planted in the deforested mangrove areas.





## Way forward

- Transplanting of trees seedlings
- Transplanting of vegetables seedlings
- Fixing beehives in the mangrove forest
- Purchase honey harvesting equipment
- Preparation of by-laws and to facilitate the process of their registration  
(Planned to form one group of up to 30 members)
- Conduct baseline survey
- Monitoring of project activities





## Key messages

- Improved mangrove forest will enhance fisheries output to which the communities are dependent.
- Supporting communities to undertake beekeeping in the mangrove forest is one among the strategies that will enhance both forest protection and livelihood improvements.
- The project will enhance carbon sequestration through increased coverage of mangrove forest and reduced deforestation. This is important in addressing policies advocating for climate change mitigation and adaptation.







# Acknowledgements

- AFF – Financial support
- Kigamboni Municipal Council - accepting the project
- Communities – accepting the project

