# **Cities4Biodiversity (C4B) Workshop**

A case of Zanzibar, United Republic of Tanzania

### Toward a Greening Cities: Urban Nature and Biodiversity Promote "Nature-Positive" Development By Sheha Mjaja Juma and Mohammed Hassan Khamis 28 November, 2022

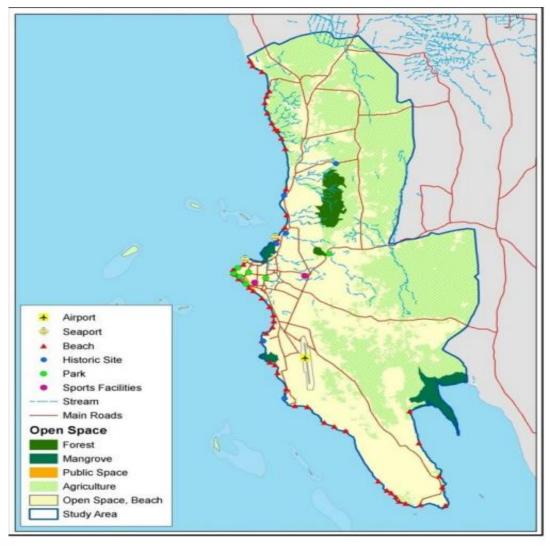
# 1. Basic Information of the Zanzibar City

- Zanzibar is an autonomous part of the United Republic of Tanzania. It consists of two main islands, Unguja and Pemba with a total area of 2,654 km<sup>2</sup> (1,666 km<sup>2</sup> in Unguja and 988 km<sup>2</sup> in Pemba).
- Zanzibar has its own government with a legislative assembly known as the House of Representatives, the executive headed by the President of Zanzibar and its own judicial system.
- According to the 2022 Population and Housing Census, the population of Zanzibar in 2022 is 1,889,773 (915,492 males and 974,281 female) with annual growth rate of 3.7%.



### *Cont*.....

- The Zanzibar City is an engine for social–economic Development of Zanzibar. It is located in West coast of Unguja with total area of 230 km<sup>2</sup>, equivalent to 9% of the total area of Zanzibar and 14% of the area of Unguja.
- Based on 2022 National Census, the total population of the Zanzibar City is 893,169, which is equivalent to 47% of the total population of Zanzibar with population density of 3,883 people per 1 km<sup>2</sup>.
- The total green conservation area (Forest and mangroves area) of the Zanzibar City is 1,151 hectors, which is expected to increase to 1,781 hectors in 2025.
- The current green areas in Zanzibar City is less than 10% of the total area of the City.



NON NON	SHP- ROM	ZanPlan	10/8/2014		¥
	Green and Agriculture Area		0	5 Km	

Map 67: Existing "Green" Elements

# 2. Biodiversity Context of the Zanzibar City

- In Zanzibar City there are 4 main hotspots for Biodiversity context, which are:
- Masingini National Forest Reserve It's a large forest close to the city, which is characterized by more than 35 gorges.
- Masingini is located in the western part about 8 km from the City Center on the highest peak of Zanzibar, about 120 meters above sea level.
- The forest area is 566 hectares, is an essential part of the water supply for the city of Zanzibar, creating large deposits of groundwater.
- Masingini forest is home to over 179 plant species including endemic and rare native species. The forest offers a habitat for herbs and shrubs used in traditional medicine.



### *Cont*.....

- **Migombani Botanic Garden:** Established in 1870, the Migombani Botanical Garden is the only botanic garden in Zanzibar is also one of Zanzibar's historical sites.
- Availability of rare plants and trees, beautiful butterflies and colourful flowers make a unique historical garden in the East African Region.
- Jamhuri Garden, and Forodhani Garden. These two Garden is historical Gardens located in the center of Zanzibar City.
- The Gardens are constituted with various endogenous, exotic and historical trees and are currently used for recreation activities.





#### *Cont*.....

- Mangroves Forestry: In Zanzibar City, there 4 hotspots of mangroves in Zanzibar, which Maruhubi, Chukwani, Kilimani and Kisakasaka
- These mangroves play important part in ecosystems as they stabilize coastline and reduce erosion from waves and storms.
- It also play part in the lives of locals as Mangrove vegetation provides livelihood for them. Majority of them are involved in the extraction of mangrove wood products.
- These 4 mangroves sites comprises of approximately 515 hectors.



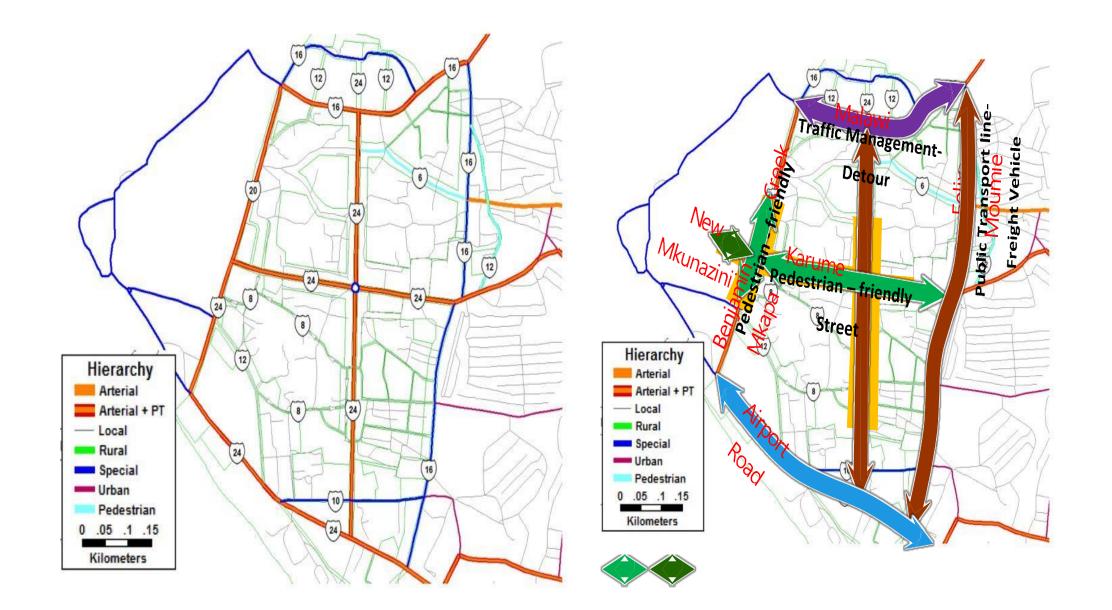


# 3. The Zanzibar Green City Plan

#### 1. Redevelopment of Michenzani Area.

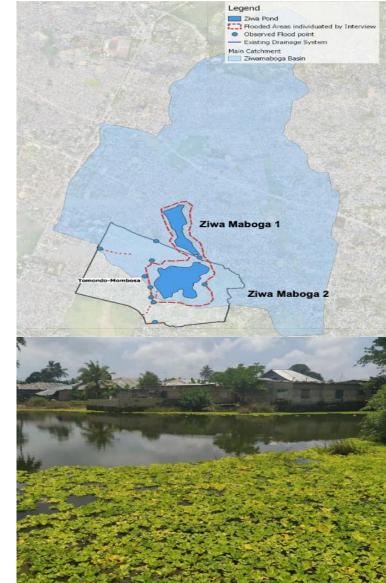
- The main objective of this project is to catalyse a modal shift in mobility, transforming the current vehicle-dominated, congested area at the urban center of Zanzibar into
  - a safe, pedestrian-friendly, livable urban space, which will benefit both local residents and tourists through infrastructure and service upgrading, as well as public space improvements for pedestrians and small businesses.
- **Phase 1:** The street and sidewalk improvement on Mlandege Road, New Mkunazini Street, the back streets of Michenzani Apartment Blocks, and public parks.
- Phase 2: Improvements on Karume Road as a non-motorized mobility corridor, Malawi Road, Nyerere Road, and Creek Road, as well as the public transport hubs near Darajani and other transport facilities





### *Cont....*

- 2. Update landscape of stormwater detention ponds using nature based solution
- i. Ziwa Maboga
- Ziwa Maboga is a system of two ponds (Ziwa Maboga 1 in the north and 2 in the south), located in the southern portion of the rapidly urbanizing Tomondo area of 824ha.
- Ziwa Maboga lacks an outlet for stormwater runoff, resulting in an increase of the water level until the ponds overflow, which impacts the surrounding households resulting in their frequent evacuation during the annual rains.
- Due to the nature of the soil, water is detained in the pond for several days and this, during the rainy season, exacerbates the magnitude of flooding due to stormwater flowing into the already full basin.
- Therefore, the idea of project is to minimize the risk continuous of this area using nature-based solutions



# *Cont....*

# ii. <u>Mwantenga pond</u>

- The Mwantenga pond, located is the Sebleni Shehia, has high building density which is prone to flooding. The entire catchment area is approximately 110ha, and is split into two sub-basins ponds
- The community living in the area is experiencing frequency flooding in each rainfall period.
- Therefore, the idea of this area is to improve the landscape using possible nature based solution.





# *Cont....*

#### 3. Establishing Green Legacy Programme

- The Vision of Green Legacy Programme is a sustainable green and climate resilient Zanzibar'.
- 1.4.2. The Mission:
- 'The Mission of the Green Legacy Programme is to inspire, enable and mobilize all people, communities and stakeholders through their active involvement, in planting trees and foliage, to improve our environment for a future green Zanzibar'.



## 4. The top three key challenges

- The top three key challenges in implementing urban biodiversity strategy in Zanzibar City are:
- i. Encroachment by unlawful buildings, the increasing population of Zanzibar City, which is account of 47% of the total pupation of Zanzibar facilitate the increasing demand of settlement and therefore, increase the informal settlement and encroachment (70% of the settlement in the Zanzibar City is informal).
- ii. Cutting trees/plants due to the growing of farming and demand of energy sources for cooking. 90% of energy sources for cooking of local community is coming from biomass (firewood and charcoal), which contributes to deforestation rate.
- iii. Increasing of pollution. Zanzibar is currently generating more 650 tons of Solid waste per day and more half of that amount is generated from Zanzibar City. Only 40% of the total generated in City is collected daily.

The rest of waste is just haphazardly disposed in different areas of City, which ultimate crease a risk to environment, public health and reduce the quality of the city.



# 5. The opportunities

- The opportunities for implementing urban biodiversity strategy in Zanzibar City are as follows:
  - i. Good collaboration with Development partners especially, the World Bank, which support the Boosting inclusive growth for Zanzibar (BIG-Z) project.
  - ii. Engagement of private sector on management some of the existing Gardens within Zanzibar City.

iii.Good area for investment that will create proper co-management of the Masingini forest natural reserve.

# THANK YOU VERY MUCH AHSATENI SANA

