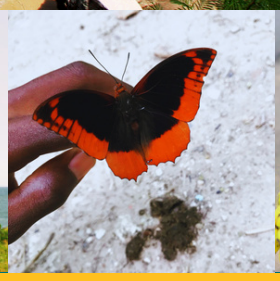

Dar es Salaam City

LOCAL BIODIVERSITY STRATEGY AND ACTION PLAN

October 2024

Supported by:

Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection

based on a decision of the German Bundestag

IKI INTERNATIONAL CLIMATE INITIATIVE

ICLEI Local Governments for Sustainability | CBC Cities Biodiversity Center

INTERACT-Bio Integrated action on biodiversity

Dar es Salaam City Council signatures

.....

Lord Mayor of Dar es Salaam
Mr Omary Kumbilamoto

Date:

.....

City Director: Dar es Salaam City
Mr Jumanne K. Shauri

Date:

Suggested citation

Dar es Salaam City Council (2024). Local Biodiversity Strategy and Action Plan. Dar es Salaam, Tanzania. September 2024.

Note on Dar es Salaam LBSAP versions

In March of 2021, the Dar es Salaam City Council, which held the coordinating role for the City's five municipal councils (Ilala, Ubungo, Kinondoni, Temeke and Kigamboni Municipal Councils) was disbanded and restructured. The first LBSAP for Dar es Salaam was developed prior to 2021 in the context of the former Ilala Municipal Council, which has now been renamed 'Dar es Salaam City Council'. This report therefore addresses biodiversity issues within the geographical and administrative area governed by the former Ilala Municipal Council.

Subsequent to the development of the first version of the LBSAP (document finalised in 2019, launched in November 2022), a revision was made possible through the INTERACT-Bio project in 2024. The revision emphasised issues of urban land use planning and finance mobilisation. The current version of the LBSAP reflects these additions and also include stakeholder feedback gathered during a validation workshop in April of 2024. Stakeholder comments were incorporated as far as possible and a summary of stakeholder feedback appears here as an Annexure. The revised version of the LBSAP still applies to the Ilala area of Dar es Salaam in order to align with the administration and resource allocation for this area and to maintain a scope of planning that is manageable.

Note on the Tanzanian NBSAP

The 2024 Dar es Salaam LBSAP revision was finalised ahead of the revision of the 2024 Tanzanian National Biodiversity Strategy and Action Plan (NBSAP). These action plans, both at the national and sub-national levels, are live works responding to global and national adjustment of biodiversity priorities and targets and local conditions respectively. The revised Tanzanian NBSAP, when it comes available, will offer an opportunity for alignment of the Dar es Salaam LBSAP with the NBSAP.

Drafters of this report

This LBSAP document was drafted by Ernita van Wyk and Kevin Mutia: ICLEI Africa and ICLEI Cities Biodiversity Center.

Acknowledgements

We gratefully acknowledge the stakeholders who supported the development of the 2024 Dar es Salaam LBSAP, in particular through the LBSAP validation workshop. They include: The Dar es Salaam City Council: Natural Resources and Environmental Conservation, Tanzania Landscape Restoration Organisation, The World Bank, Kounkuey Design Initiative (KDI), The Centre for Community Initiatives (CCI), Nipe Fagio, Ardhi University, The Muhimbili University of Health and Allied Sciences; and SeaSense.

The INTERACT-Bio project

This Local Biodiversity Strategy and Action Plan was developed under the auspices of the INTERACT-Bio project: The Integrated Action on Biodiversity (INTERACT-Bio) project, a Global South initiative, aims to improve the utilization and management of urban nature within rapidly expanding cities and the regions surrounding them. The project is funded through The International Climate Initiative (IKI), a key aspect of the German government's international climate finance commitment. Since 2022 the IKI is implemented by the Federal Ministry for Economic Affairs and Climate Action (BMWK) in close cooperation with the Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV) and the Federal Foreign Office (AA). The project, running from 2017 to 2024, focuses on urban communities in Brazil, Tanzania, India, South Africa, China and Colombia, where fast-growing cities fall within biodiversity hotspots of global significance. The project provides interventions at subnational government level to promote the institutional integration necessary for effective realization of the benefits of urban nature across sectors and levels of government. Project mainstreaming approaches have included outreach, enhancing national-subnational dialogue and collaboration, investment cases, pilot projects and city-level biodiversity plans (i.e. LBSAPs). Strengthening the capacity of city-regions to integrate nature into land use, infrastructure and development planning is a major objective of the project.

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INTERACT-Bio Integrated action on biodiversity

Preface

Ilala Municipality is the central urban hub of Dar es Salaam City. It supports major trade, tourism, fisheries, agriculture, business and transport activities. The vibrancy of this portion of Dar es Salaam draws attention to the need for biodiversity and urban nature to support an increasingly busy city centre and rapidly changing peri-urban areas. In a fast-growing city, it is important to protect the natural resources that people depend upon for their livelihoods and enhance the natural assets that improve quality of life and create economic opportunities for people working and living in the city. Increasingly, the world has recognised the impact of urbanisation on biodiversity and the unique role that local and sub-national governments can play in activating local support for national and global biodiversity goals. The Dar es Salaam City Council is proud to present its revised Local Biodiversity Strategy and Action Plan. We are inspired by the LBSAP Biodiversity vision and focal areas and the emphasis on supporting development needs, offering entry points for biodiversity enhancement through land use planning and mobilising finances to support interventions. Implementation is now our imperative.

Halmashauri ya manispaa ya Ilala ndio kitovu cha jiji la Dar es salaam, ambapo ndipo hufanyika shughuli mbalimbali za kibiashara, utalii, uvuvi, kilimo, biashara ndogo ndogo na usafirishaji. Na pia ndipo hupatikana ofisi za serikali kuu ikiwemo wizara, mawakala wa serikali, makampuni binafsi na balozi za nchi mbali mbali. Haya yote yanafanya Manispaa ya Ilala kuwa eneo muhimu kwa maendeleo ya Jiji na hivyo kuhitajika jitihada za makusudi na kuchukua tahadhari za kulinda baiolojia na mazingira asili ya mji, ili kusaidia ulinzi wa mazingira unaoendana na kuongezeka na kukua kwa haraka kwa Manispaa. Katika ukuaji wa Maeneo ya Manispaa, tunatakiwa kulinda mali asili ambazo watu wanazitegemea kwa ajili ya maisha yao na pia kuongeza mali asili hizo ili kuboresha ubora wa maisha ya watu wanaofanya kazi na wanaoishi mijini. Kwa kiasi kikubwa sasa, Dunia inatambua athari za ukuaji wa kasi wa miji na ongezeko la watu mijini juu ya biolojia na mali asili, na nafasi ya kipekee iliyonayo serikali za mitaa katika kusaidia serikali za kitaifa na za kimataifa katika kufikia malengo ya kulinda bioanuwai ya maeneo ya mijini. Manispaa ya Ilala inajivunia kuwasilisha mpango mkakati wa kulinda bianuai kwa mara ya kwanza Tanzania. Uanzishwaji wa Mpango huu umechochewa na mtazamo thabiti wa Halmashauri katika kulinda baiolojia na bioanuwai zilizopo na pia mkazo uliopo katika utunzaji mazingira kwa maendeleo endelevu ya Manispaa. Kwa sasa uwepo wa mpango mkakati huu na utekelezaji, kwetu ni lazima.

Omary Kumbilamoto – Lord Mayor Dar es Salaam City Council (left) and Dar es Salaam City Director Jumanne K. Shauri (right)

Executive Summary

People need nature for their survival and well-being. Countries need nature and biodiversity to build their economies, to prosper and to foster adaptive capability in the face of climate change. In rapidly urbanising, biodiversity-rich countries such as Tanzania, retaining and enhancing nature's contributions in urban spaces pose particular challenges such as the proliferation of unplanned settlements and a necessary focus on grey infrastructure development. All of these activities typically come at the expense of green space and biodiversity.

The Dar es Salaam Local Biodiversity Strategy and Action Plan is a planning tool that supports biodiversity goals as well as facilitates integration and compatibility between biodiversity concerns and other land uses through urban planning, land use management and development control. Tanzania has been a signatory to the Convention on Biological Diversity (CBD) since 1996. As a Party to the Convention, Tanzania's Vice-President's Office (VPO): Environment Division, drafted Tanzania's National Biodiversity Strategy and Action Plan (NBSAP) for the period 2015 – 2020. Since 2010, formal recognition, globally, of the role of local governments in biodiversity planning, gave rise to a local mechanism: The Local Biodiversity Strategy and Action Plan (LBSAP). This gives cities and municipalities a structured tool and process to plan, and allocate resources, for biodiversity and urban nature at the level of their jurisdiction.

The intention is three-fold:

1. To secure nature's benefits, such as improved access to natural resources, improved health and quality of life, for local citizens, and;
2. to support national and global goals to secure nature's benefits at the global scale and to
3. highlight entry points where biodiversity concerns can be enhanced through urban planning mechanisms and other urban agendas such as disaster risk management.

This document summarises the outcomes of engagements for the revision of the 2022 Dar es Salaam LBSAP. It incorporates issues of urban land use planning as well as finance mobilisation, emphasising the need to mainstream biodiversity action through non-biodiversity sectors in the urban space and to address the need for resourcing action on the ground. Dar es Salaam falls within one of the world's 35 recognised biodiversity hotspots: The East African Coastal Forest. Cities and municipalities must manage the tension between urbanisation and retaining and enhancing biodiversity and nature's benefits.

The Ilala LBSAP Vision is defined as: “Ilala will have well-maintained open spaces and gardens and will strive towards expanding these, as well as protecting and restoring existing green and blue infrastructure (forests, wetlands, rivers, mangroves, ponds etc.) within the municipality, whilst raising awareness of the value of nature and improving livelihoods through green infrastructure initiatives.”

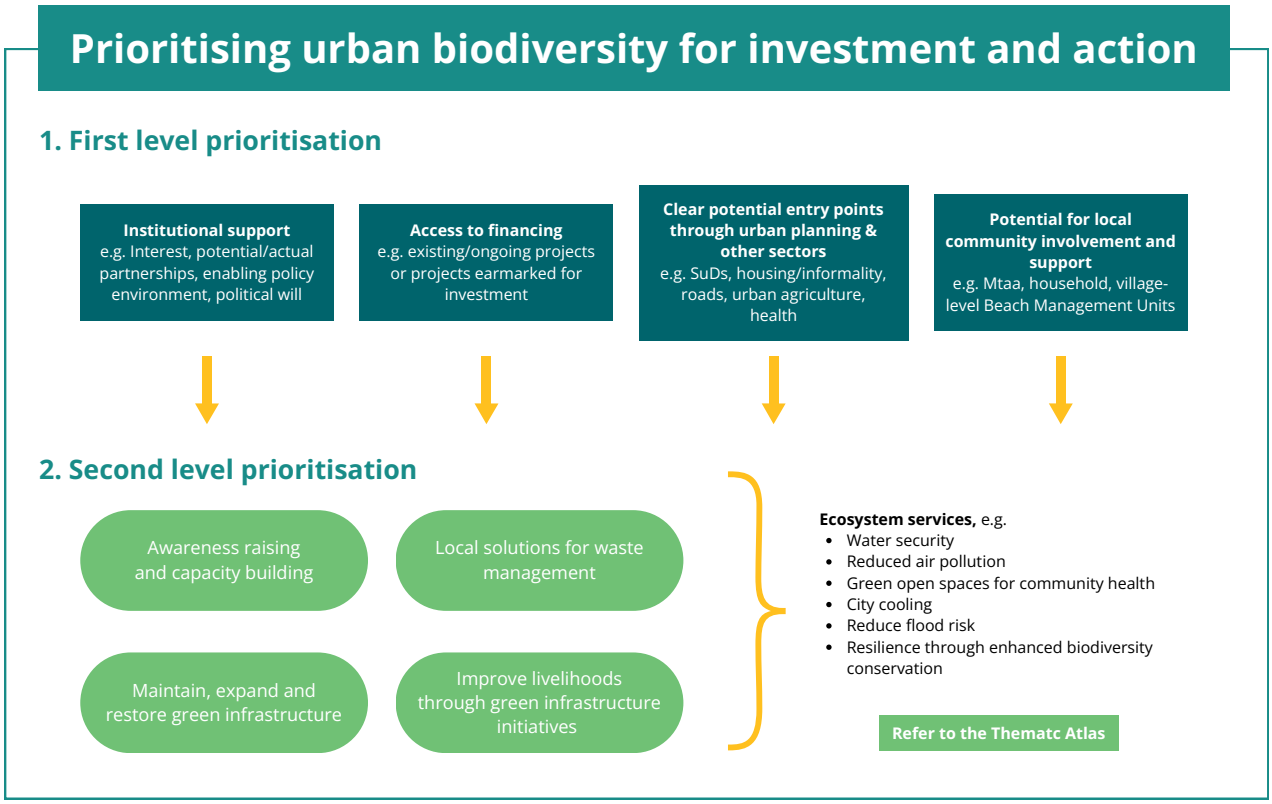
The six main areas of focus developed in the Ilala Municipal LBSAP were:

1. Awareness raising and capacity building;
2. Maintain, expand and restore green and blue infrastructure;
3. Improve livelihoods through green infrastructure initiatives;
4. Develop solutions for waste management;
5. Integration with land use management and other urban frameworks;
6. Mobilise financial resources.

The LBSAP revision was supported by a validation workshop (April 2024), following a review the draft document by stakeholders. Workshop participant feedback (See Annexure) was incorporated into the LBSAP goals as far as possible. A number of key messages emerged:

1. Urban biodiversity initiatives can contribute at different scales, from small, urban gardens, to large catchment-scale projects. The LBSAP can and should be used to facilitate a range of projects at different scales and demonstrate spatial and functional connectivity between green infrastructure patches where possible (e.g. and between land, coastal and marine). Stakeholders also expressed the need for a typology of urban nature-based interventions and a toolkit that shows how different tools can support diverse types and scales of interventions.
2. Lack of policy alignment and lack of institutional and operational integration between key sectors can negatively affect projects with biodiversity goals. During the validation workshop, land-coastal-marine connections, waste water, settlement planning and roads development were identified as critical opportunities for improved alignment to support biodiversity initiatives and enhanced ecosystem services.
3. Mtaa, community and household-level initiatives (and other existing institutional structures, for example, village-level Beach Management Units), in other words, local-level involvement and awareness are critically important for project success and long-term behaviour change. This aspect seems to be often overlooked when designing projects and interventions.

The Ilala LBSAP goals are strongly linked to Ilala's development priorities. There is also strong coherence between the LBSAP goals and Tanzania's NBSAP strategic goals and targets, in particular around (1) the need to raise awareness of the value of biodiversity and the benefits to socio-economic development and well-being and (2) enhanced implementation through participatory planning, knowledge management and capacity building. The LBSAP provides a platform for further engagement and in particular, it offers a structured plan of action for project scoping, project prioritization, proposal development and the mobilization of resources for implementation.



A monitoring and evaluation framework was not defined as part of the Ilala LBSAP. Instead, the LBSAP focus areas and goals were used to describe broad actions and the validation workshop facilitated in-depth discussion about selecting and designing projects. Monitoring and reporting is expected to happen with the frame set by the LBSAP and specific projects at different scales. Results can feed into the municipal reporting system, the national NBSAP as well as the Convention on Biological Diversity's (global) official CitiesWithNature reporting system.

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Abbreviations

ARU	Ardhi University
CBD	Convention on Biological Diversity
CBO	Community Based Organisation
COP	Conference of the Parties
DCC	Dar es Salaam City Council
EMA	Environmental Management Act
GIS	Geographic Information Systems
ICLEI CBC	ICLEI Cities Biodiversity Center
ICLEI AS	ICLEI Africa Secretariat
ICLEI	ICLEI-Local Governments for Sustainability
IUCN	International Union for Conservation of Nature
IMC	Ilala Municipal Council
LVRLACC	Lake Victoria Region Local Authorities Counties Cooperation
LBSAP	Local Biodiversity Strategy and Action Plan
MLHHSD	Ministry of Lands, Housing and Human Settlements Development
NBS	Nature-based Solutions
NBSAP	National Biodiversity Strategy and Action Plan
NEAP	National Environmental Action Plan
NEMC	National Environmental Management Council
NGO	Non-Governmental Organisation
RAS	Regional Administrative Secretary
SCBD	Secretariat of the Convention on Biological Diversity
TANBIF	Tanzania Biodiversity Information Facility
TEEB	The Economics of Ecosystems and Biodiversity
UDSM	University of Dar es salaam
UNU-IAS	United Nations University Institute of Advanced Studies
VPO	Vice President's Office

Introduction

This document, the Local Biodiversity Strategy and Action Plan (LBSAP) for Dar es Salaam City (Ilala area), is a response to (1) a need to structure actions related to biodiversity at the level of local government, in support of local biodiversity protection, restoration and enhancement to support human well-being, and; (2), to support Tanzania's national and global biodiversity commitments as embodied in Tanzania's National Biodiversity Strategy and Action Plan (NBSAP) of 2015. The first version of this LBSAP was based on a co-production approach and conducted through a series of workshops and engagements between June 2018 and October 2019. The LBSAP was revised between February and April of 2024 to highlight potential entry points for biodiversity action by considering a broader range of sectors of municipal service delivery such as land use planning. The Dar es Salaam (Ilala area) LBSAP constitutes the first LBSAP for Tanzania[1].

Nature is essential for human existence and good quality of life. Nature provides food, energy, medicines and genetic resources and a variety of materials fundamental for people's physical well-being and for maintaining culture. For example, globally, more than 2 billion people rely on wood fuel to meet their primary energy needs. Nature, through its ecological and evolutionary processes, sustains the quality of the air, fresh water and soils on which humanity depends, distributes fresh water, regulates the climate, provides pollination and pest control services and reduces the impact of natural hazards. Most of nature's contributions to people are not fully replaceable, and some are irreplaceable. But, nature and nature's vital contributions to people, are deteriorating worldwide (IPBES Global Assessment, 2019).

As a signatory to the Convention on Biological Diversity (CBD), Tanzania has developed a National Biodiversity Strategy and Action Plan (Tanzania NBSAP, 2015)[2]. To facilitate the operationalisation of the CBD's vision at the country-level. Parties to the Convention (including Tanzania) participated in developing the 2022 Kunming-Montreal Global Biodiversity Framework (GBF). The Kunming-Montreal GBF contains 23 global targets for urgent action towards 2030. These targets are outlined below. They replace the previous Aichi Biodiversity Targets (See: https://www.cbd.int/sp/targets/), which were relevant to the period 2011-2020 and which formed the backbone of Tanzania's 2015 - 2020 NBSAP.

[1] The development of version 1 of the Ilala Municipal Council Local Biodiversity Strategy and Action Plan was supported by two biodiversity mainstreaming projects: INTERACT-Bio and Urban Natural Assets (UNA) for Africa, implemented by ICLEI Africa and funded by the German and Swedish Governments respectively.

[2] The Tanzanian NBSAP is currently being updated and revised (Vice-President's Office: Environment Division, pers. Comm. January 2024).

The Vision and Mission of the 2022 Kunming-Montreal GBF (https://www.cbd.int/gbf/vision/):

- The vision of the Kunming-Montreal Global Biodiversity Framework is a world of living in harmony with nature where "by 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people."
- The mission of the Framework for the period up to 2030, towards the 2050 vision is: To take urgent action to halt and reverse biodiversity loss to put nature on a path to recovery for the benefit of people and planet by conserving and sustainably using biodiversity and by ensuring the fair and equitable sharing of benefits from the use of genetic resources, while providing the necessary means of implementation.

The Tanzanian NBSAP Goals and Targets are currently being revised to align with the global GBF targets. In the interim, the GBF targets therefore provide an important framework for setting national as well as local biodiversity goals and targets.

Kunming-Montreal Global Biodiversity Framework targets:

1. Reducing threats to biodiversity

- TARGET 1: Plan and Manage all Areas to Reduce Biodiversity Loss
- TARGET 2: Restore 30% of all Degraded Ecosystems
- TARGET 3: Conserve 30% of Land, Waters and Seas
- TARGET 4: Halt Species Extinction, Protect Genetic Diversity, and Manage Human-Wildlife Conflicts
- TARGET 5: Ensure Sustainable, Safe and Legal Harvesting and Trade of Wild Species
- TARGET 6: Reduce the Introduction of Invasive Alien Species by 50% and Minimize Their Impact
- TARGET 7: Reduce Pollution to Levels That Are Not Harmful to Biodiversity
- TARGET 8: Minimize the Impacts of Climate Change on Biodiversity and Build Resilience

2. Meeting people's needs through sustainable use and benefit-sharing

- TARGET 9: Manage Wild Species Sustainably To Benefit People
- TARGET 10: Enhance Biodiversity and Sustainability in Agriculture, Aquaculture, Fisheries, and Forestry
- TARGET 11: Restore, Maintain and Enhance Nature's Contributions to People
- TARGET 12: Enhance Green Spaces and Urban Planning for Human Well-Being and Biodiversity
- TARGET 13: Increase the Sharing of Benefits From Genetic Resources, Digital Sequence Information and Traditional Knowledge

3. Tools and solutions for implementation and mainstreaming

- TARGET 14: Integrate Biodiversity in Decision-Making at Every Level
- TARGET 15: Businesses Assess, Disclose and Reduce Biodiversity-Related Risks and Negative Impacts
- TARGET 16: Enable Sustainable Consumption Choices To Reduce Waste and Overconsumption
- TARGET 17: Strengthen Biosafety and Distribute the Benefits of Biotechnology
- TARGET 18: Reduce Harmful Incentives by at Least $500 Billion per Year, and Scale Up Positive Incentives for Biodiversity
- TARGET 19: Mobilize $200 Billion per Year for Biodiversity From all Sources, Including $30 Billion Through International Finance
- TARGET 20: Strengthen Capacity-Building, Technology Transfer, and Scientific and Technical Cooperation for Biodiversity

- TARGET 21: Ensure That Knowledge Is Available and Accessible To Guide Biodiversity Action
- TARGET 22: Ensure Participation in Decision-Making and Access to Justice and Information Related to Biodiversity for all
- TARGET 23: Ensure Gender Equality and a Gender-Responsive Approach for Biodiversity Action

Local action on biodiversity supports social and economic prosperity and well-being. It also supports national efforts to safeguard nature in support of society and contributes to progress tracking as set out by international targets for biodiversity. Concepts such as ecosystem services, green/ecological infrastructure and nature-based solutions evolved in order to articulate the human relationship with nature and to clarify the investment in and returns gained from nature (See Box 1). For local action to support regional, national and international efforts, local action must be structured and must have political, private and public support to attract resources and investment. LBSAPs are instruments for sub-national governments to plan for the enhancement of local biodiversity and to mainstream urban nature into municipal development and spatial planning.

Box. 1 Important Definitions

Ecosystem services

Ecosystem goods and services are the benefits that humans obtain from ecosystem functions in nature as direct or indirect contributions to human well-being. Many, if not all, of the resources that humanity uses to sustain itself, are derived directly or indirectly from ecosystem goods and services provided by nature. There are four main types: i.) provisioning services; ii.) regulating services; iii.) habitat/supporting services; and iv.) cultural services.
Source: Millennium Ecosystem Assessment, 2005; https://www.millenniumassessment.org/en/index.html

Nature-based solutions

Actions to protect, sustainably manage and restore natural or modified ecosystems, which address societal challenges (e.g., climate change, food and water security or natural disasters) effectively and adaptively, while simultaneously providing human well-being and biodiversity benefits. An 'umbrella concept' for other established 'nature-based' approaches such as ecosystem-based adaptation (EbA) and ecosystem-based mitigation, eco-disaster risk reduction and green infrastructure.
Source: https://www.iucn.org/

Green /ecological Infrastructure

The interconnected set of natural and man-made ecological systems, green spaces and other landscape features. It includes planted and indigenous trees, wetlands, parks, green open spaces and original grassland and woodlands, as well as possible building and street-level design interventions that incorporate vegetation. Together these assets form an infrastructure network providing services and strategic functions in the same way as traditional grey infrastructure.

Source: Culwick, & Bobbins 2016. A framework for a green infrastructure approach in the Gauteng City-Region. DOI: 10.13140/RG.2.2.29910.24649

Section 1:
The Value of Urban Nature

1.1 Urbanization and Nature's Benefits in Cities

The world is fast becoming more urbanised. Already today more than half of the world's population lives in cities. Aside from Asia, Africa has some of the fastest growing cities in the world and Tanzania is no exception (Cities Biodiversity Outlook, 2012; World Bank, 2023). Tanzania's population growth averaged nearly 3% p.a. between 1967 and 2012, while the urban population increased by about 5% p.a., urbanization increased from 5.7% in 1967 to 29.1% in 2012. Thus, of the 31.6 million increase in the total population during this period, 12 million were absorbed into urban areas. By 2012, Dar es Salaam City accommodated 10% of the total population of Tanzania (Wenban-Smith, 2014). At the same time, Tanzania's economy is booming: It is Africa's 12th largest economy (Burgess et al, 2017) with an annual economic growth rate of 7.2% (Worrall et al., 2017).

Historically, urban growth has been a major cause of natural habitat loss globally (Nature in the Urban Century, 2018). Furthermore, insofar as desk-top analysis could ascertain, many of the cities around the world that are located in biodiversity hotspots (like Dar es Salaam), have no planning in place to directly mitigate the loss of unique biodiversity or the loss of the associated benefits to society (Weller and Drozdz, 2019). Ecosystem services in these biodiversity hotspots can reduce climate change risks, improve ecological resilience to support urban life (Seddon et al., 2018) and enhance social and economic opportunities. These contributions become critical because cities are places that essentially concentrate human dependence on nature (Mittermeier et al, 2011).

As cities grow and become more densely built and populated, urban residents are increasingly exposed to health risks due to city heat, impacts on urban food systems, contaminated water resources, compromised air quality and lack of open space opportunities for sport and recreation. In addition to the urban impacts on physical health, the combined pressures of urban life, the loss of social cohesion and a diminishing connection with nature diminishes quality of life for those who live in cities. But, nature and nature's benefits can be restored, sustained and recreated in city spaces to support improved urban living. It has been shown that cities that incorporate nature into the urban landscape, facilitate improved human health and well-being, support vibrant economies and protect lives and infrastructure against extreme events (Beatley, 2016).

Nature's benefits to human well-being is recognised globally. In urban contexts, the importance of urban nature has also gained traction. Planning and design principles are available to guide the enhancement of urban ecology (Beatley, 2016) even when much of the landscape has been transformed (Elmqvist et al., 2013). The City of Nairobi, Kenya, for example, sustains its Nairobi National Park, allowing for wildlife migration, a place for urban residents to see and experience large mammals and Maasai pastoralists have been incorporated into this landscape. In Melbourne, Australia, an Urban Forest Strategy aims to address long term heat in the city by doubling tree canopy cover, which is expected to reduce temperatures in the city by as much as 40C. The urgency for Melbourne's Urban Forest Strategy was increased when 374-heat related deaths were recorded during the 2009 drought (Beatley, 2016; City of Melbourne, 2012).

As a signatory to the CBD, Tanzania is committed to sustaining and enhancing Tanzania's special biodiversity through its NBSAP. But, the Tanzania National Action Plan requires support from local initiatives. In particular, Tanzania's fast-growing cities can make a significant contribution as they hold native biodiversity remnants that can be retained, enhanced and restored to support citizen well-being. The Tanzania NBSAP provides a framework for subnational governments to activate local efforts.

1.2 Urban Nature in Dar es Salaam

1.2.1 Dar es Salaam: an important economic city and regional hub

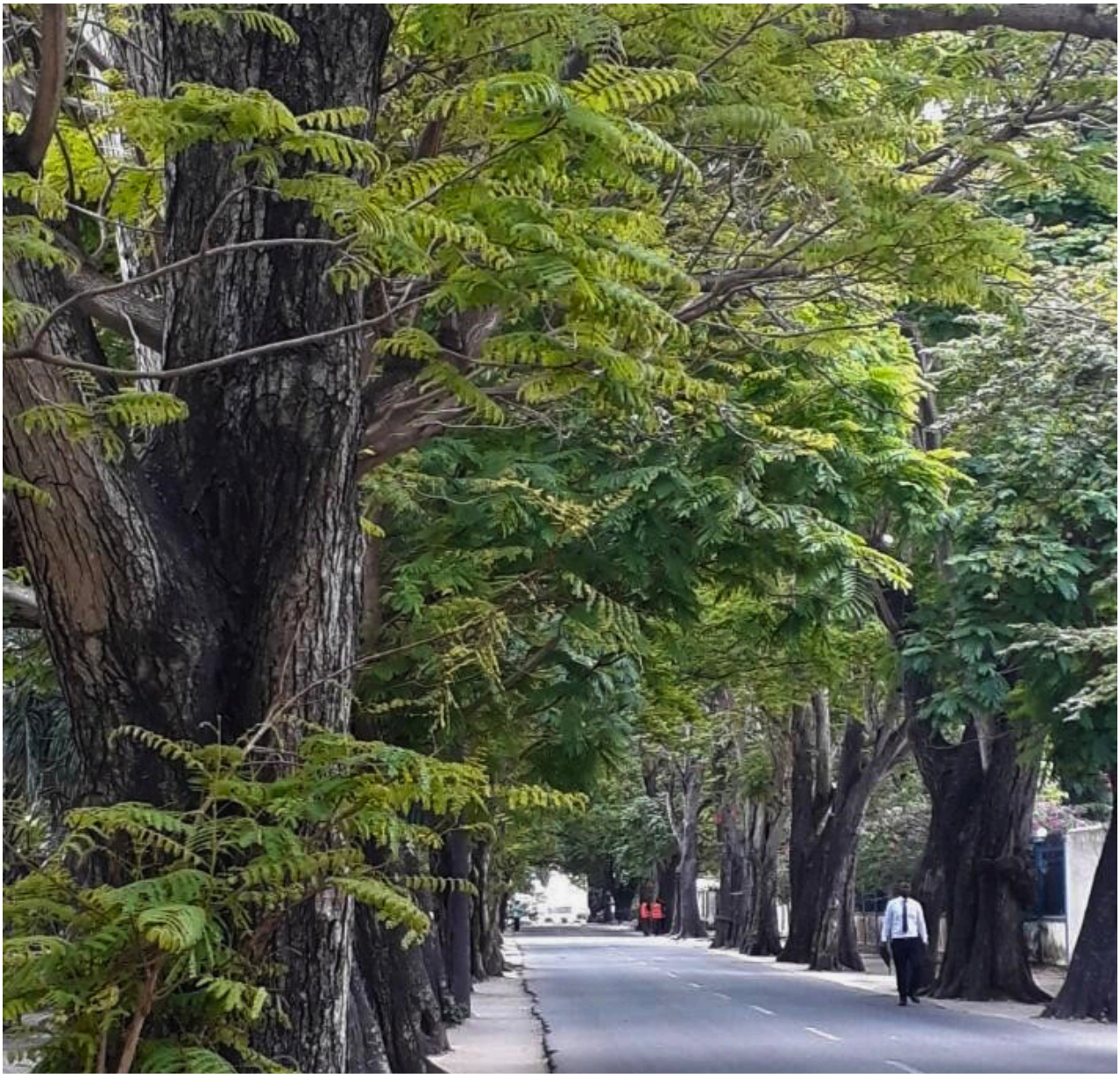
Dar es Salaam is a major city and commercial hub in Tanzania. The city is bounded by the Indian Ocean on the east, coastal areas to the north and south and the inland region to the west. Dar es Salaam comprises 1 393 km2 of land mass plus eight offshore islands. With a current annual population growth rate of 6.5% (current population: 8.1 million [2024 projection]; World Urbanization Prospects, 2018), it is the fastest growing city in East Africa. Dar es Salaam contains four Local Government Authorities which operate independently: Kinondoni, Kigamboni, Temeke and Ubungo Municipal Councils. The Dar es Salaam City Council plays a coordinating role for the municipalities. Dar es Salaam City is the economic, industrial, commercial, trading, educational, cultural and transportation hub of Tanzania. The city is also the leading transit point for most tourists who visit Tanzania. But due to poor urban growth management, Dar es Salaam is characterized by large unplanned and informal settlements that occupy 70% to 80% of all residential land area (World Bank, 2016). The projected annual average of new urban dwellers to Dar es Salaam is around 226,000 people and there is high demand for land for settlements and industrial development (Worrall et al, 2017).

Dar es Salaam Harbour. [Source: Pixabay; 2 July 2019]

1.2.2 Dar es Salaam: A globally important Biodiversity Hotspot City

Dar es Salaam is located in a globally important biodiversity hotspot, the 'East African coastal forest'. Biodiversity hotspots are areas of exceptional concentrations of endemic species (i.e. found nowhere else in the world) that are simultaneously undergoing a high rate of loss of habitat. The hotspots concept is based on the conservation planning principles of irreplaceability and vulnerability. These areas were identified globally as a means to focus conservation funding efforts as hotspots house a significant portion of the world's biodiversity (Myers et al., 2000). The East African coastal forest hotspot runs along the Tanzanian and Kenyan coasts from the border with Somalia in the north, to that with Mozambique to the south. It straddles two ecoregions: Eastern Arc Forest and Northern Zanzibar-Inhambane Coastal Forest Mosaic. Of the original 30 000 km2, just 2 000 km2 (i.e. 6.7%) of the hotspot remains. The East African Coastal forests are an important and highly threatened centre of endemism for plants, mammals, birds, reptiles, frogs, butterflies, snails and millipedes (Burgess and Clarke, 1998 and Burgess et al., 2017). Remnants of these coastal forests remain within Dar es Salaam City's jurisdictional boundary.

Despite rapid urbanization, Dar es Salaam boasts a picturesque shoreline, beautiful beaches, pockets of mangroves, remnants of coastal and Afromontane forest and various wildlife elements (most notably birds, bats, monkeys and marine wildlife). The city centre boasts many shade trees. But, these natural resources are under pressure.



Neem trees providing shade in the Dar es Salaam city center

The Dar es Salaam Environmental Outlook (2011) provides a comprehensive description of Dar es Salaam's environmental issues, institutional landscape and its natural resources, with some focus on ecosystem services. It concludes with a summary of 'Options for Action'.

It appears that for Dar es Salaam, there is no shortage of descriptions, assessments and options for action with regards urban nature. Missing perhaps are: (1) analyses that show the close connections and quantified impact between urban nature, livelihoods and economies; (2) a framework to prioritise specific areas and project concepts for intervention, and at scales that can leverage impact; and (3) actual investment into initiatives that can demonstrate the said benefits.

A notable exception is the plan by the World Bank for a large-scale improvement of the Msimbazi River which is an important natural asset in the city but which is also famous for annual flooding and other urban issues. One nature-oriented decision-support tool for Dar es Salaam is the Thematic Atlas of Nature's Benefits for Dar es Salaam (Karutz et al., 2019). The Atlas has a spatial focus on nature's benefits in the City, showing that there are many opportunities for City and Municipal decisions to simultaneously enhance urban nature and improve the well-being of Dar es Salaam's urban population. In the Atlas, seven themes were distilled by local stakeholders and the benefits of urban nature in the form of green open space is highlighted. The Themes are: Livelihoods, Water as a Human Right, Reduced Air Pollution, Healthy Communities, Reduced Urban Heat, Reduced Flood Risk and Biodiversity. Each thematic chapter describes how urban greening can alleviate urban issues and provides a tool to prioritise where in Dar es Salaam (i.e. spatially, at the landscape scale), investment in green space might optimise nature's benefits to people.

1.2.3 The Dar es Salaam Strategic Plan: aligning development needs with urban nature benefits

The Dar es Salaam Strategic Plan follows on from the National Five Year Development Plan 2017/18-2021/22 which is geared towards industrialization and the Global Sustainable Development Goal 11, which aims to make cities safe and secure for human settlement while stimulating innovations and development. With its high growth rate and high levels of informal settlement, Dar es Salaam is challenged with many socio-economic problems including: the city's growth has outstripped the usefulness of conventional planning approaches, congested traffic, unemployment, issues around waste management and health problems. The Strategic Plan provides a road map for the envisioned city with sustainable development and competitive investment put forward as requirements to address the major city challenges. The vision in the Dar es Salaam Strategic Plan reads: "for Dar es Salaam City Council to be a leading safe city with sustainable development, competitive investment environment, managed on principles of good governance, where residents have decent living standards."

To attain the Dar es Salaam City Vision, key strategic issues provide areas of focus for the Dar es Salaam City Council - DCC):

- Waste Management, Cleanliness and Beautification of the City;
- Improved City Master Plan;
- Economic Growth, Revenue, and job creation (Employment);
- Improved Equitable Quality Social services and;
- Governance and coordination.

The flagship socio-economic development programmes and services include; acquiring land at Kigamboni and Ubungo for waste management, construction and rehabilitation of inner roads, storm water drainage, tipping cell and leachate ponds, detailed city Master plan, DCC Socio-economic profile for Public and Private investment, construction of 'park-and-ride' along the BRT-corridor, construction of up-country bus terminals at Mbezi Luis, Boko basihaya and Mbagala, and construct of small industries infrastructure for entrepreneurs.

It is evident from the Dar es Salaam Strategic Plan that a major challenge will be to connect and align Dar es Salaam's urban nature and unique biodiversity with urgent development priorities. For example, built infrastructure and the delivery of basic services are important imperatives. The Ilala LBSAP aims to highlight the Ilala area's urban nature and related plans, as a way to start identifying opportunities whereby urban nature can be restored and enhanced to support social development, in line with the DCC strategic plan.

1.3 The Ilala area of Dar es Salaam

The Ilala Municipal Council was established on 1 February 2001 "to promote the social welfare and economic well-being of all persons within its area of jurisdiction". (Ilala Municipal Council Strategic Plan 2018-2022). Ilala Municipality includes the downtown city centre of Dar es Salaam with the picturesque harbour, fish market, beaches, botanical gardens and presidential residence. Ilala is unique in that it has a moving population whereby the majority of Dar es Salaam citizens spend their day time in Ilala but live in other Municipalities. Although the Ilala Municipal Council does not exist anymore, the Ilala area is still of interest in terms of focusing the scope of this LBSAP. The area is bordered by the Indian Ocean in the East and stretches for about 10 kilometres inland. Its altitude ranges between 0 and 900 meters above sea level, which influences the ecological characteristics of the area. Thus, the area consists of a larger lowland area and a small part forming the upland zone.

The small upland areas emerge as small hills or plateaus while most of the lowland areas constitute the urbanised portion of the Ilala area. The upland areas are predominantly agricultural and rural in character.

Coco Beach in Dar es Salaam is popular with locals

Figure 1. Ilala area of Dar es Salaam

Box. 2 Ilala Municipality Vital Statistics

Ilala Municipality area/size = **210km** ^{2}

Population size: **1,220,611** people (2012 Census)

Climate: high humidity and temperatures that vary from 26oC in August to 35oC in December and January. The long rain season (March – May) brings an average monthly rainfall of 150mm – 300mm. The short rain season between October and December has a monthly average rainfall from 75mm – 100mm.

1.4 Dependence on Urban Nature in the Ilala area

The natural vegetation in Ilala Municipality consists of disturbed bushland, miombo woodland, coastal swamps and mangroves. The Zingiziwa and Kinyerezi forests are iconic. The Msimbazi River passes through the Municipality and drains into the Indian Ocean. The Msimbazi is one of the city's largest rivers, but is heavily affected by waste from industries and adjacent residential areas. The river is also being used by small scale urban farmers for irrigation of vegetables and fruits grown along the river banks.

A baobab tree near the mouth of the Msimbazi River. Baobab trees are common features and are culturally important in Dar es Salaam.

Ilala encompasses natural and semi-natural areas such wetlands, forests, rivers and agricultural lands to highly modified areas such as built environment, including settlements and business hubs. The main economic activities in Ilala Municipality are retail business which includes small and medium shops, hotels, bars and restaurants, transportation services, agricultural business, handcraft, banking and construction businesses. Table 1 (below) shows a summary of land cover in Ilala by percentage area occupied by each land cover class. Also refer to the land cover map below.

Figure 2. Land cover map for Ilala area. Source: Thematic Atlas for Dar es Salaam. (Karutz et al., 2018).

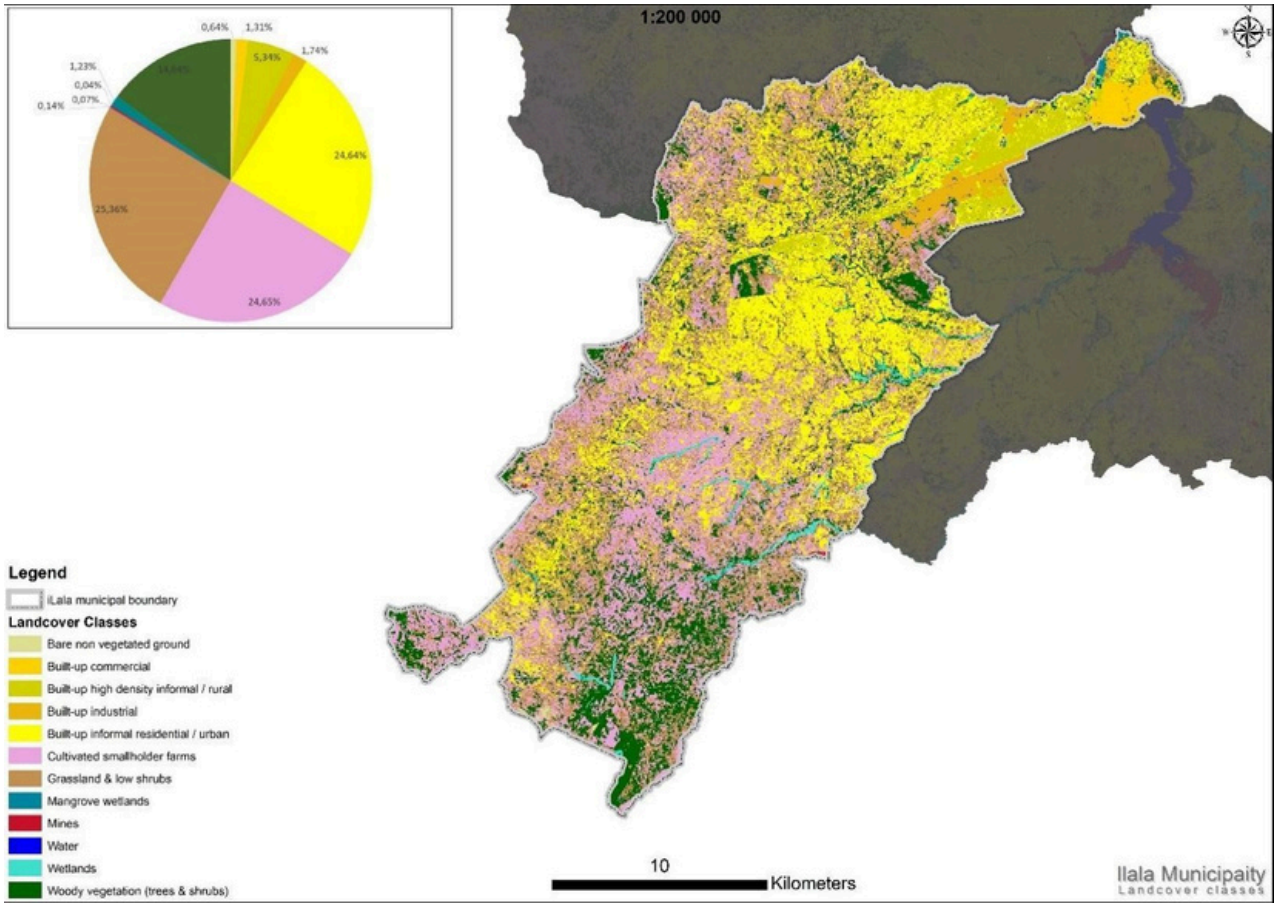


Table 1. Showing land cover in Ilala based on 2017 satellite data (Source: GeoTerra Image)

Land cover class	Hectares	% of total Ilala
Bare non-vegetated ground	233	0,64
Built-up commercial	480	1,31
Built-up high density informal / rural	1947	5,34
Built-up industrial	634	1,74
Built-up informal residential / urban	8990	24,64
Cultivated smallholder farms	8994	24,65
Grassland & low shrubs	9255	25,36
Mangrove wetlands	52	0,14
Mines	27	0,07
Water	15	0,04
Wetlands	450	1,23
Woody vegetation (trees & shrubs)	5415	14,84

Table 1 and the land cover map indicate the dominant land cover classes in Ilala are informal and unplanned, built-up, residential urban cover, cultivated smallholder farms and grassland and low shrubs. Woody vegetation and trees also make a significant contribution to land cover. The built-up areas are mainly in the north and north-east and linearly towards the south. Smallholder farms occupy much of the rest of the land although in the south-west there is a portion of land covered by intact mixed woodland, grassland and wetlands of the Mzinga mangrove Forest near the city centre. The Zingiziwa forest reserve and associated wetlands (See photos below) are situated at the headwaters of the Kizinga River which flows through Ilala and joins the Mzinga River near the city centre. There are also fragments of woody vegetation in amongst the built-up areas of Ilala suggesting the presence of parks and green open space.

Zingiziwa forest and wetlands at the headwaters of the Kizinga River
(Photo credit: Ms Theresia Dennis).

Wild, semi-artificial and artificial nature provide numerous benefits in Ilala. Some economic activities rely indirectly on nature's goods and services. For example, industrial processing and manufacturing is a significant economic sector in Ilala, most notably textile mills and the production of food and beverage. There are also some small-scale industries scattered throughout the Municipality and which are located mostly in residential areas. These industries rely on water resources and land.

However, many livelihood and economic activities are more directly dependent on nature's benefits. For example, livestock farming and fisheries constitute a very important component of the livelihoods of Ilala citizens. Fishing supports both subsistence and commercial purposes. The Ferry Fish Market in Ilala accounts for a daily catch of about 15 tons of fish.

Agriculture is also an important sector for Ilala. Agricultural practices involve small and medium scale farming with both hand equipment and more mechanised soil preparation methods for example using tractors. The Ilala area has a total of 4,000 ha potential for irrigation farming. However, only 66 ha are currently irrigated using seasonal and permanent streams, deep and shallow wells. About 10 000 ha of land in the Ilala area is suitable for agricultural practice especially crop cultivation.

Local food vending in Ilala

Tourism is another activity contributing to the Ilala area's economy. There are a number of hotels and attractive beaches within the Municipality with potential for recreational and tourism activities. Ilala is a major economic hub and gateway (via air travel or sea ferries) to Zanzibar Island and other tourist destinations in Tanzania. Opportunities for nature-based tourism in the Ilala area can be greatly enhanced, but this will require more detailed assessments of Ilala's natural assets and specific and quantified links to economic opportunities based on a number of scenarios. Table 2 (below) shows a summary of natural assets in Ilala based on a natural asset map developed for Dar es Salaam as part of the Dar es Salaam Thematic Atlas of Nature's Benefits to Dar es Salaam (Karutz et al., 2019).

Figure 3. Natural assets in Ilala. Source: Thematic Atlas for Dar es Salaam. (Karutz et al., 2018).

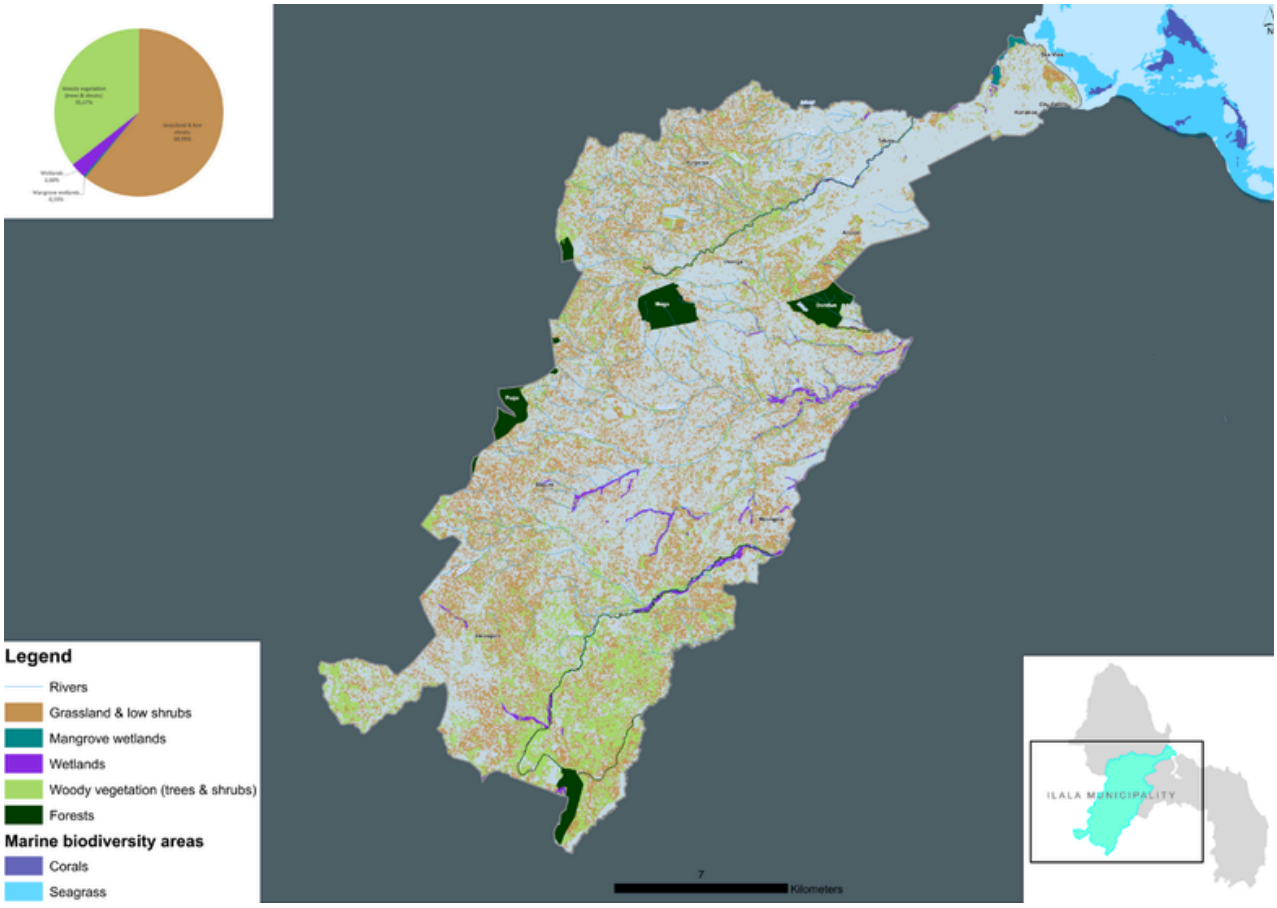


Table 2. A summary of the extent of natural assets in Ilala based on Land Cover (Source: GeoTerra Image)

Natural asset class (Ilala)	Hectares	% of total Ilala
Grassland & low shrubs	9238,72	60,99
Mangrove wetlands	49,62	0,33
Wetlands	454,978	3,00
Woody vegetation (trees & shrubs)	5403,66	35,67

Table 2 above and the Ilala Natural Asset map show that grasslands and low shrubs constitute the majority of natural land in Ilala and as mentioned above, the Mzinga forest and River and associated wetlands provide an important set of nature areas in Ilala, along with the Msimbazi River further north, the Mogo Forest at the headwaters of the Msimbazi and the Dondwe Coastal Forest which protects the waters of the Kizinga River. There is very little information available on the ecological features and condition of natural assets and it is therefore not possible to make a statement about the existing and potential services provided by such natural assets in Ilala. In addition, primary biodiversity data for the Ilala area is not readily available and will have to be developed or sourced from for example, Tanzania Biodiversity Information Facility (TANBIF), universities, consultants, NGOs and taxonomic experts. This will be especially important in the light of research that shows the importance of at least minimal species richness to support ecosystem function (Schwartz et al., 2000) and the role of diverse ecosystems in the effectiveness of nature-based solutions and human adaptation (Seddon et al., 2019). In particular in Dar es Salaam City, including Ilala, focus on retaining and restoring elements of the unique East African Coastal Forest biodiversity hotspot will be important.

Despite the general absence of a formal assessment of Ilala's natural assets, their condition, analysis of current ecosystem services and therefore lack of information on future opportunities, Dar es Salaam City has a track record of supporting conservation of its natural assets as well as greening of the highly urbanised land within the City, in particular the Ilala area. For example, green open spaces are considered vital and were referred to as "Municipal Breathing Areas" in the Ilala Strategic Plan (2017/8 – 2021/22). It is also recognised that these areas are undervalued and underutilized. Specific projects support inner city greening. Through the Mti Wangu Project, initiated in October 2016, tree planting was much encouraged across the Council and the Council supplied 1500 seedlings and flowering plants to 15 primary schools as part of this initiative. A modest start has also been made in terms of a Biodiversity Catalogue for Dar es Salaam, which supports awareness and selection of indigenous plants for city greening.

The Botanical Garden in Ilala Municipal Council has tourism potential

Past focus on environmental commitments and actions by the previous Ilala Municipal Council was placed on community environmental awareness and education, calls to support environmental research, compliance and pollution monitoring, upgrading of open spaces such as road reserves and inner city roundabouts, the development of greenbelts, efforts to improve coastal and recreational areas, environmental conservation, establishment of ecotourism centres, identification of tourism hotspots and efforts to establish projects that promote tourism, waste management and waste recycling and establishing a communication system on information about disasters linked to climate change.

Sustainable development was emphasised by the Ilala Strategic Plan (2017/18 – 2021/22) and the 'Improved management of natural resources and the environment' was a Strategic Objective of the past strategic plan (See Box 2 below).

Box. 3 Ilala Municipal Council Strategic Objectives

- Services improved and HIV/AIDS infections reduced
- Effective implementation of the National Anti-Corruption Strategy Enhanced and Sustained
- Access, quality and equitable social service delivery improved
- Quantity and quality of economic services and infrastructure improved
- Good governance and administrative services enhanced
- Social welfare, gender and community empowerment improved
- Emergence preparedness and disaster management improved
- Improved management of natural resources and environment
- Information and communication Technology improved

The Dar es Salaam LBSAP must support the goals of the Tanzania NBSAP as well as align with the Dar es Salaam Strategic Plan and the Ilala State of the Environment report (2016).

Section 2:
An overview of the Tanzanian National Biodiversity Strategy and Action Plan

2.1 What is a NBSAP?

National governments worldwide, including Tanzania, since 1996, signed and became Party to the Convention on Biological Diversity (CBD). By becoming a Party to the CBD, each national government commits to three primary goals:

1. Conservation of biological diversity;
2. Sustainable use of the components of biological diversity; and
3. Fair and equitable sharing of the benefits arising out of the utilisation of genetic resources.

Global biodiversity goals are usually guided by internationally agreed strategies or frameworks that provide detailed interpretations to guide signatories. During the 2011 - 2020 decade, the CBD Strategic Plan for Biodiversity 2011-2020 listed five strategic Aichi Biodiversity Goals which directly link to 20 specific targets (the Aichi Biodiversity Targets) to guide national planning and local action. In the current, 2021 - 2030 decade, the Kunming-Montreal Global Biodiversity Framework, adopted in December of 2022, guides national efforts. National governments worldwide are encouraged to develop National Biodiversity Strategy and Action Plans (NBSAPs) to adhere to their commitment to the CBD and to address these targets agreed upon by Parties.

The initial Tanzania NBSAP (2015-2020) was developed in October 2015 and is currently being revised (VPO: Env Division, personal communication, 5 February 2024). Notably, achievement of nationally determined goals and targets will not be possible without the active contribution of local municipal governments. Local governments are therefore encouraged to develop LBSAPs which should be strategically aligned to the national NBSAP to ensure continuity and synergy in biodiversity planning and policy development between the local and national levels of government (Secretariat of the Convention on Biological Diversity, 2017).

2.2 Vision, Goals and Targets of the Tanzanian NBSAP

The Tanzanian NBSAP provides the national framework within which sub-national governments can formulate their biodiversity strategies and actions. A new, revised version of the Tanzanian NBSAP will come available during the course of 2024.

Given that the new NBSAP was not yet available at the time of writing, the 2015-2020 NBSAP will be referred to here.

The vision of the Tanzania NBSAP (2015 - 2020) states: *"By 2025, biodiversity and ecosystems are well protected, restored and used sustainably, ecosystem functioning is maintained, so that they perpetually deliver sustainable intrinsic benefits for socio-economic development".* (p. xii)

The Tanzania NBSAP Strategic Goals and Targets are outlined below:

NBSAP Strategic Goal A: Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society

- Target 1: At least 60% of the population is aware of the importance of biodiversity and its impact on human well-being and socio-economic development of the country.
- Target 2: Programmes for the valuation of biodiversity and payments for ecosystem services developed and integrated into national and local development strategies and plans.
- Target 3: Incentives harmful to biodiversity are eliminated, phased out or reformed and positive incentives for the conservation and sustainable use of biodiversity are developed and applied.
- Target 4: Investments in systems of production and consumption based on sustainable eco-friendly practices increased.

NBSAP Strategic Goal B: Reduce the direct pressures on biodiversity and promote sustainable use

- Target 5: The rate of degradation and fragmentation of ecosystems and the loss of habitats is significantly reduced
- Target 6: At least three Legislations that govern exploitation of aquatic and terrestrial resources are reviewed and enforced.
- Target 7: Biodiversity and agriculture related policies, laws and strategies promote sustainable management of forest, agricultural and aquaculture ecosystems are reviewed and implemented.
- Target 8: All forms of pollution from water and land-based activities are brought to levels that are non-detrimental to biodiversity ecosystem functions.
- Target 9: Invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to prevent their introduction and establishment.
- Target 10: The multiple anthropogenic pressures on coral reef and vulnerable ecosystems impacted by climatic change are minimized.

NBSAP Strategic Goal C: Improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity

- Target 11: Area covered under marine protected areas be increased from 6.5% to 10% and effectively manage the existing terrestrial and marine protected areas.
- Target 12: Nationwide biodiversity assessment conducted, species that require special attention identified and managed to ensure their long-term sustainability.
- Target 13: Strategies to reduce genetic erosion developed and implemented to maintain genetic diversity of cultivated plants, farmed and domesticated animals and their wild relatives.

NBSAP Strategic Goal D: Enhance the benefits to all from biodiversity and ecosystem services

- Target 14: Ecosystems that provide essential services, related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, local and vulnerable communities.
- Target 15: Ecosystem resilience and the contribution of biodiversity to carbon stocks enhanced, through conservation and restoration, thereby contributing to climate change mitigation and adaptation and to combating desertification.

NBSAP Strategic Goal E: Enhance implementation through participatory planning, knowledge management and capacity building

- Target 16: Fair and Equitable Sharing of Benefits arising from utilization of biodiversity resource is in force and operational, consistent with national and international legislation.
- Target 17: Tanzania has adopted NBSAP as a policy instrument, and has commenced implementation with effective participation.
- Target 18: Traditional knowledge, innovation and practices relevant for the conservation and sustainable use of biodiversity respected and safeguarded.
- Target 19: Significant increase in the contribution of knowledge, technology and scientifically based information that are generated and shared.
- Target 20: Financial resources in support of biodiversity programmes significantly increased.

During 7-19 December 2022 in Montreal, Canada, governments from around the world came together to agree on a new set of global goals to guide world-wide action towards 2030 to halt and reverse the loss of nature. "The Kunming-Montreal Global Biodiversity Framework (GBF) has 23 targets for urgent action over the decade to 2030 (Also see Introduction section above). The actions set out in each target need to be initiated immediately and completed by 2030. Together, the results will enable achievement towards the outcome-oriented goals for 2050.

Actions to reach these targets should be implemented consistently and in harmony with the Convention on Biological Diversity and its Protocols, and other relevant international obligations, considering national circumstances, priorities and socioeconomic conditions." (Convention on Biological Diversity, 2022).

The current (2015-2020) Tanzania NBSAP considers the impact of urbanisation on biodiversity: "It is estimated that Tanzania has lost at least one-third of its important ecosystems and biodiversity hosted within forests and wooded areas over the past few decades due to agriculture expansion and urban growth. Almost 38% of Tanzania's forest cover is being lost at the rate of about 400,000 ha annually and should this continue, the country would deplete its forest cover in the next 50-80 years. Along the coast, 18% of the mangrove forest cover has been lost over a period of 25 years (1980 – 2005). Similarly, more than half of inland water ecosystems (rivers, lakes and dams) have been degraded and 90% of the wetlands are under increasing pressure losing many of their important functions." (p. xii). Dar es Salaam City is heavily reliant on charcoal from surrounding forests, resulting in the overexploitation of these resources. Cities also intensify environmental issues such as solid waste and particularly plastics, which then impact on biodiversity and the ability of ecosystems to deliver services to people (Tanzania NBSAP, 2015 – 2020 and Karutz et al., 2019).

The 2015-2020 NBSAP also considers sector objectives that have bearing on the natural environment. In particular, the Settlement sector is encouraged to:

- Integrate planning and improve management of urban centres and designation of urban land uses based on environmental impact considerations;
- Develop gardens, parks, open spaces in urban centres for public use; greenbelts with pollution tolerant species; and more generally, planting of shade-giving and fruit-bearing as well as ornamental trees along urban roads, school compounds, hospitals, government and private office building compounds, peripheries of playgrounds, water bodies, places of worship, assemblies, markets, etc.;
- Promote natural resource-based strategies in the planning and development of human settlements; (NBSAP 2015 - 2020; p. 133)

The NBSAP therefore implies the need for mainstreaming between biodiversity and other sectors. The Dar es Salaam LBSAP expands on this idea that a multi-sector approach may provide effective entry points for biodiversity planning and securing nature's benefits for the city.

2.3 A biodiversity role for cities and sub-national governments

Following on from the Rio Convention (in 1992) and the birth of National Biodiversity Strategies and Action Plans (NBSAPs), the UN Conference of the Parties have given increasing recognition to the need to engage sub-national governments more directly to stimulate, organise and report on local action for biodiversity. During the CBD COP-10 in Nagoya, Japan, in October 2010, Decision X/22 was adopted endorsing a "Plan of Action on Sub-National Governments, Cities and Other Local Authorities for Biodiversity (2010-2020)". With an endorsement from the CBD and Parties for local biodiversity planning, a tool and process were needed to achieve the Local Biodiversity Planning. This is where the idea of Local Biodiversity Strategies and Action Plans (LBSAPs) originated. "Local Biodiversity Strategies and Action Plans (LBSAPs) can be the backbone for organising and integrating biodiversity issues locally, while also advancing National Biodiversity Strategies and Action Plans (NBSAP) and CBD efforts. (Puppim de Oliviera et al., 2014).

The UN-Habitat Urban Agenda (2017) sets out a vision and an implementation plan for sustainable urban development, with some explicit reference to urban nature:

"The New Urban Agenda reaffirms our global commitment to sustainable urban development as a critical step for realizing sustainable development in an integrated and coordinated manner at the global, regional, national, subnational and local levels, with the participation of all relevant actors. The implementation of the New Urban Agenda contributes to the implementation and localization of the 2030 Agenda for Sustainable Development in an integrated manner, and to the achievement of the Sustainable Development Goals and targets, including Goal 11 of making cities and human settlements inclusive, safe, resilient and sustainable."(p. 4)

"We envisage cities and human settlements that: (a) Fulfil their social function, including the social and ecological function of land, and that are participatory, promote civic engagement, engender a sense of belonging and ownership among all their inhabitants, prioritize safe, inclusive, accessible, green and quality public spaces." (p. 5)

Section 3:
Why do we need a Local Biodiversity Strategy and Action Plan?

3.1 What is a LBSAP?

According to the **'Local Biodiversity Strategy and Action Plan Guidelines: An aid to municipal planning and conservation'** [3] A Local Biodiversity Strategy and Action Plan (LBSAP) is a guiding strategy, supported by specific goals and actions, developed to ensure the effective protection, sustainable use and efficient management of biodiversity within a municipal boundary over a specific time period.

A LBSAP is developed by the Municipality with support from external stakeholders (such as neighbouring municipalities, national government, local political leaders, local NGOs etc.) to not only ensure that the LBSAP is well-informed and ground truthed but also to ensure that buy-in from all stakeholders is achieved. Multi-party participation, particularly local political leaders, also ensures that the LBSAP is adopted by the relevant sub-national Council to obtain the necessary commitment for implementation.

A LBSAP generally includes a vision and linked focus areas which provide overarching direction to the plan. A vision is intended to provide direction to the plan as well as provide inspiration and motivation. LBSAP focus areas are intended to be planned, deliberate and focused efforts required to achieve the vision. The vision and focus areas are supported by goals and actions which are implemented over a specific time period (usually 5 – 10 years) to realise the LBSAP vision. LBSAP goals are intended to be well defined targeted statements that give clarity, direction and focus to the LBSAP. Essentially, they are the 'heart and soul' of the LBSAP and should be closely aligned with the Tanzania NBSAP, and ultimately the Global Biodiversity Framework targets.

A LBSAP is more than a mere checklist of activities and outputs over multiple years as it provides the City a cohesive and clear roadmap of "where we are now", "where we want to be" and "how we will get there" with regard to the protection, sustainable use and management of biodiversity. Whilst a LBSAP can be a stand-alone document, it should ideally be aligned with municipal policy frameworks and plans and, where applicable, broader city plans as well as the NBSAP. This will assist with translation of international and national biodiversity policies and targets into implementable action at the local level.

3.2 Why do we need a LBSAP?

There are numerous benefits to developing a LBSAP, which not only support the achievement of the NBSAP goals and targets as well as international conservation obligations, but also support the city or municipality with coordinated local biodiversity planning and policy development. Developing a LBSAP provides the municipality with a clear plan of the interventions and actions required at a local level to manage biodiversity within the municipal boundaries more effectively and sustainably to support human livelihoods and quality of life.

Additionally, by obtaining Council / Mayoral approval for the LBSAP and including either the whole LBSAP or key targets and actions from the LBSAP into local land use planning legislation, not only are nature considerations mainstreamed into planning, but municipal funding and staff capacity can then be allocated towards achieving the specific LBSAP goals. This will make a tangible and visible difference on the ground.

Lastly, through the inclusion of the LBSAP into land use planning legislation, specific actions can be allocated to different municipal departments, effectively 'spreading the load' of actions to be implemented. This will enhance municipal integration and ensure that municipal departments and potentially new sectors even outside of the municipality, work more closely together to ensure the maintenance and management of biodiversity across different line functions.

Section 4:
Where we are now? Setting the scene for LBSAP development for Dar es Salaam

4.1 Policy and legislative context

Tanzania has an extensive legislative framework concerning the environment and natural resources are considered in both development planning as well as national government priorities. This section outlines key legislation and policies informing the management of biodiversity both at a national level as well as a local level.

Table 2. Legislation and Policies relevant to the Dar es Salaam LBSAP (Ilala area)

Legislation/ Policy/ Strategy	How to relates to Biodiversity
National	
National Biodiversity Strategy and Action Plan (NBSAP), 2015-2020. Tanzania is Signatory to the Convention on Biological Diversity (CBD). This triggers an obligation to protect and conserve its biodiversity as a global resource.	The NBSAP aims at reducing loss of biodiversity, promoting the value of biodiversity and improving community livelihoods. It is a guidance document to realise and promote sustainable utilisation and conservation of biodiversity.

Legislation/ Policy/ Strategy	How to relates to Biodiversity
The Tanzanian Environmental Management Act No. 20 of 2004.	This Act provides both legal and institutional framework for the sustainable management of the environment, prevention and control of pollution, waste management, environmental quality standards, public participation, environmental compliance and enforcement. It provides for the preparation of a National Environmental Action Plan (NEAP) in the interval of five years. According to the Act, NEAP is the basis for integrating environmental concerns in formulation and implementation of development plans and programmes and it therefore is an important instrument alongside the NBSAP for the implementation of Actions stipulated in the NBSAP. The EMA 2004 requires Sector Ministries and Local Government Authorities to prepare their respective Environmental Action Plans in conformity with the NEAP so as ensure environmental mainstreaming.
Tanzania Urban Development Policy (work in progress)	Preliminary report: Tanzania Urbanisation Laboratory (TULab), 2019. Harnessing Urbanisation for Development: Roadmap for Tanzania's Urban Development Policy. Paper for the Coalition for Urban Transitions. London and Washington DC. Available at: http://newclimateeconomy.net/content/cities-working-papers. The Roadmap currently does not strongly reflect climate change or nature-based solution aspects that can change the trajectory of urbanization.

Legislation/ Policy/ Strategy	How to relates to Biodiversity
The National Environmental Policy, 2021	This policy provides the framework for mainstreaming environmental considerations in the decision-making process in Tanzania. The policy identifies eight major issues of environmental concern: Land degradation, deterioration of water sources, loss of wildlife habitat and biodiversity, deterioration of aquatic ecosystems, deforestation, environmental pollution, climate change and the safe use of modern biotechnology.
The National Wildlife Conservation Act No. 5 of 2009	The Act is responsible for the conservation of wildlife and ensures protection, management and sustainable utilization of wildlife resources, habitat, ecosystem and the non-living environment supporting such resources, habitat or ecosystem with actual or potential use or value.
Water Resource Management Act No. 11 of 2009	The Act provides for pollution control and issues discharge permits of effluents to water bodies including the underground strata according to Environmental Quality Regulations provided under the Environmental Management Act No. 20 of 2004. The Act provides measures for flood mitigation and control for the purpose of preventing or minimising the risk of flooding, flood damage and water pollution by prohibiting the construction on submersible lands of dikes, levees or other structures which will likely hinder the runoff of flood water.

Legislation/ Policy/ Strategy	How to relates to Biodiversity
The National Parks Act No. 11 of 2003	The Act stipulates the management of National parks through a board of trustees and their responsibilities and the role of the Minister for Natural Resources and Tourism to ensure protection and promotion of the biodiversity rich areas.
The Public Health Act No. 1 of 2009	The Act prohibits discharges into a sewer or into drain that may cause malfunctioning of the drainage systems and cause pollution of aquatic biodiversity in addition to causing health hazards. These include solid waste, chemical waste and hot liquids.
The Fisheries Act No. 22 of 2003	The Act regulates fishing activities in both fresh and marine waters. Among others, it emphasises on the conservation of critical habitats or endangered species, and restricts the issuance of fishing licences for fishing in any conserved areas.
The Forest Act No. 14 of 2002	The main objectives of this Act is to ensure ecosystem stability through conservation of forest biodiversity, water catchments and soil fertility; promote and enhance the contribution of the forest sector to the sustainable development of Tanzania and the conservation and management of natural resources for the benefit of present and future generations.

Legislation/ Policy/ Strategy	How to relates to Biodiversity
The Plant Protection Act No. 13 of 1997	The Act is responsible for prevention of the introduction and spread of harmful organisms, ensure sustainable plant and environmental protection, to control the importation and use of plant protection substances, to regulate export and imports of plants and plant products and ensure the fulfilment of international commitments, to entrust all plant protection regulatory functions to the Government, and for matters incidental thereto or connected therewith.
The Marine Parks and Reserves Act No. 29 of 1994	The Act provides for the establishment, management and monitoring of marine parks and reserves, to establish a marine park and reserves unit and to repeal certain existing legislation.
The 2007 Tanzania Urban Planning Act and Associated Planning Guidelines (including an envisaged revision of the Guidelines)	The envisaged revision of the Guidelines will include detail on how new developments should take into account biodiversity (i.e. each plot should have a minimum of two trees). The guidelines are going to be updated in 2020 and will include recommendations for protection of biodiversity within cities as well as recommendations on how to include biodiversity into land use planning.

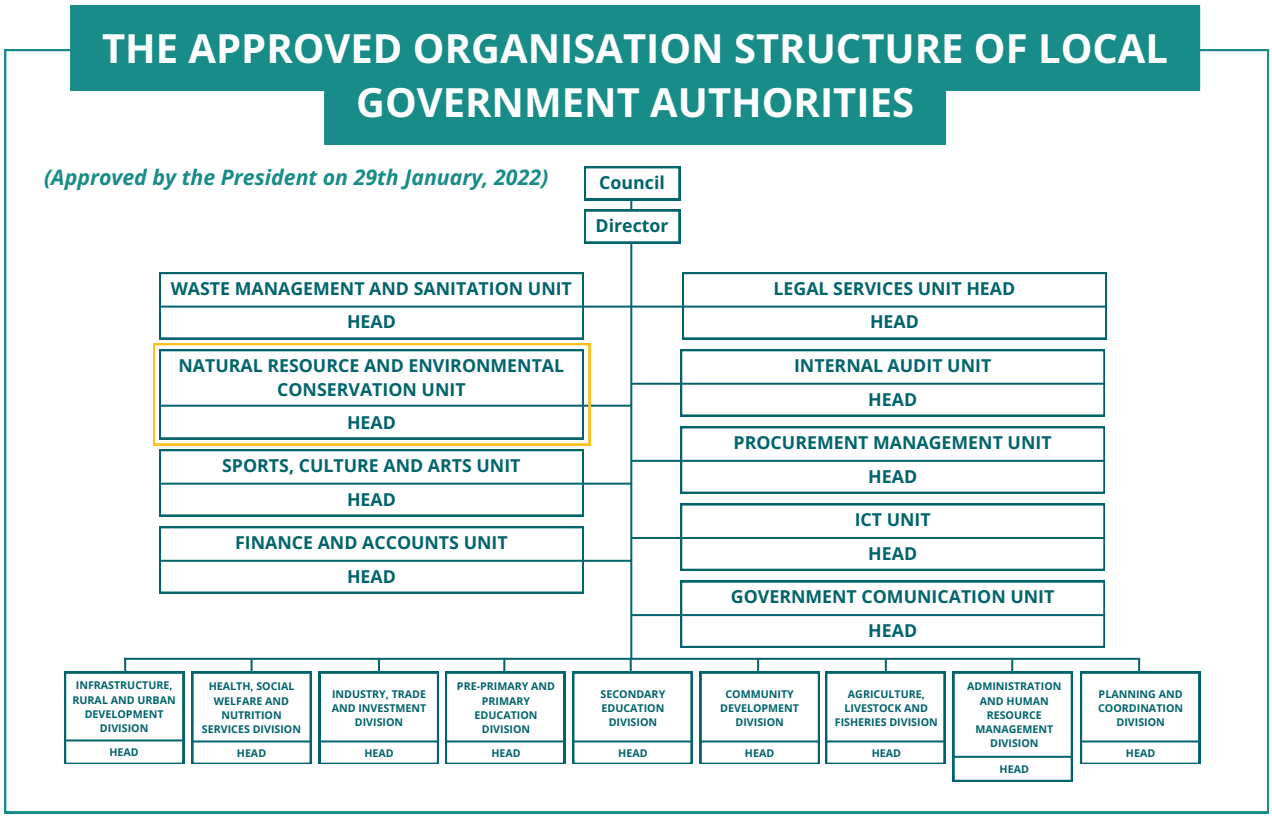
Legislation/ Policy/ Strategy	How to relates to Biodiversity
Local	
Dar es Salaam City Environment Outlook, 2011	The Dar es Salaam City Environment Outlook reports on the sector status of all aspects of the city, including the natural environment. It discusses issues related to the geography; the socio-economy; policy, legal and institutional framework; land resources and management; aquatic environment; mineral and energy resources; waste management and sanitation; environmental pollution; and climate change. It also provides a scenario analysis of the city and proposes relevant options to ensure sustainable development.
Strategic Plan for Dar es Salaam City Council 2017/18 -2021/22	The Plan is geared towards industrialization and the Global Sustainable Development Goal 11, which aims to make cities safe and secure for human settlement while stimulating innovations and development. The Plan provides a road map for the envisioned city with sustainable development and competitive investment to address the major city challenges.

Legislation/ Policy/ Strategy	How to relates to Biodiversity
Ilala Municipal Council Strategic Plan 2017/18 – 2021/22	Sustainable development is emphasised by the Ilala Strategic Plan and the 'Improved management of natural resources and the environment' is one of the Municipality's Strategic Objectives. Ilala Municipal Council has a track record of supporting conservation of its natural assets as well as greening of the highly urbanised land within the Council's jurisdiction. For example, green open spaces are considered vital and are referred to as "Municipal Breathing Areas" in the Ilala Strategic Plan.
Ilala Municipal Council State of the Environment Report	The State of Environment Report provides an integrated assessment of the overall quality of Tanzania's environment. The pressure being placed on it and society's responses to current and emerging environmental issues. The report provides an assessment of natural resources, including biodiversity and it informs and influences policy in planning processes.

4.2 Institutional arrangements

The cross-sectoral nature of biodiversity planning requires strong coordinating structures. In particular, in Tanzania, matters of local government are overseen by the Ministry: President's Office: Regional Administration and Local Government (PO:RALG). In addition, local environmental issues and achievements have bearing on both the PO:RALG and the Tanzanian Ministry of Environment: The Vice-President's Office: Environment Division, which is the ministry responsible for revising and overseeing the implementation of the NBSAP. To enable the implementation of NBSAPs and the development and implementation of LBSAPs across various levels of government, it will be important that mechanisms are created for cooperation and coordination among various levels of government – national, subnational and local (vertical cooperation) – and among various sector stakeholders and governmental line functions (horizontal cooperation) (See: Guidelines for an integrated approach in the development and implementation of national, subnational and local biodiversity strategies and action plans (Secretariat of the Convention on Biological Diversity, 2017). The Figure below illustrates the vertical decision-making institutional structures for municipal environmental decisions according to the PO:RALG (Fig 4.1) and in line with the VPO: Environment Division Ministry (Fig. 4.2).

Figure 4.1. Local Government structure for municipalities in Tanzania. (Source: The approved functions and organisational structure of Local Government Authorities, 2022)



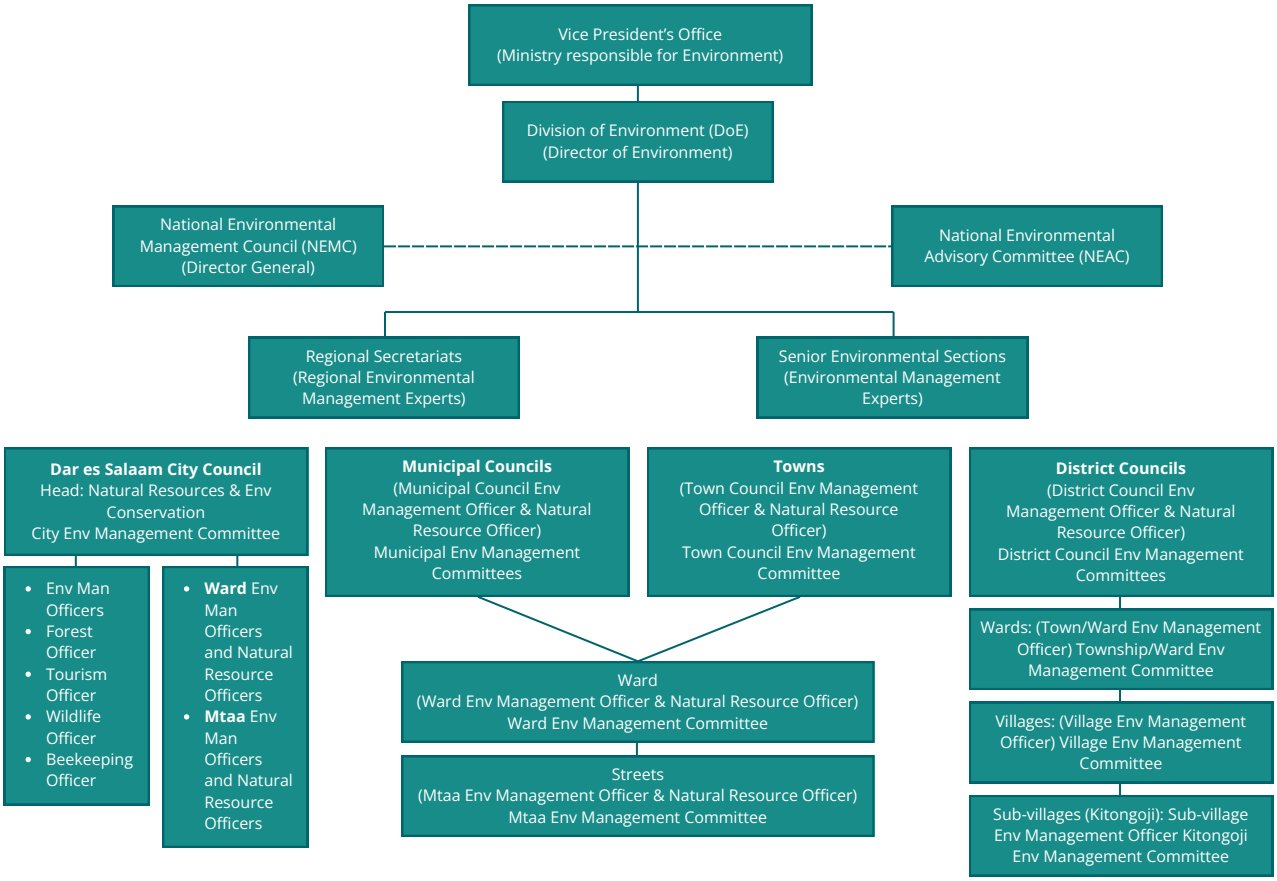


Figure 4.2. Organogram for different levels of governance and administration of environmental matters in Tanzania, with specific elements shown for Dar es Salaam (Source: Adapted from the Dar es Salaam Climate Action Plan 2020 – 2050 and with inputs from the Dar es Salaam City Council).

This LBSAP asserts that it is important, in addition to the institutions shown in Fig. 4 above, to establish alignment and coordination functions across other sectors and vertically, such as with urban and land use planning, to create effective support for LBSAP implementation on the ground. Creating strong alignment between levels of governance and between sectors can be resource intensive and requires champions to sustain meaningful connections. This LBSAP suggests a number of areas where stronger connections can be fostered to support urban biodiversity and land-use alignment.

Recommendations for institutional strengthening:

At the national level: Better alignment between the national land use planning commission, the ministry of environment, the ministry of lands housing and human settlements development and the ministry of regional administration and local government among other key ministries to align their various plans, policies and

practices to better streamline the preservation of biodiversity and nature, while planning and implementing land administration, urban planning activities, regional and local governance. This aligns the NBSAP to other ministerial directives and policies to ensure coherence and harmonisation at the national level.

At the regional level: Better liaison between the regional land officer and the regional disaster risk focal point, together with the regional focal point for the ministry of environment, to align land administration and planning, regional disaster risk plans as well as biodiversity planning at the regional level.

At the local government level: There is an opportunity to capitalise on the functions of the environmental management officer (EMO) as well as natural resource officers (NROs) – Forest, Wildlife and Beekeeping, at the council-level to improve the mainstreaming of biodiversity at the local level. Engaging closely with the regional land officer to better incorporate biodiversity within land use planning frameworks. Additionally, in terms of implementation of planning frameworks, the EMO and NROs could be instrumental to support the regional land officer in demarcating areas that are allocated for environmental protection. The EMOs would also be supported by the ward and mtaa officials who are key relevant actors at the local levels to support in demarcation processes to reduce encroachment of development.

At the ward and mtaa levels: The ward and mtaa officials are instrumental to implementation processes at the local level since they are the closest administration to the people. Thus, involving ward and mtaa officers in demarcation processes of land that is or may be allocated and zoned for natural conservation as well as green open spaces would enhance biodiversity protection and the protection of green open spaces from encroachment of urban development. They would also prevent land sales in these areas since they are involved in understanding which areas should not be developed and have supported in their demarcation. Having training and capacity building at this level to equip ward and mtaa officials with a better understanding of the importance and benefits of preserving green open spaces and other natural areas from development for the city-wide resilience to climate change and other external impacts would be beneficial.

Section 5:
Where we are going – Dar es Salaam City Council Local Biodiversity Strategy

5.1 LBSAP vision

The Vision of the Dar es Salaam LBSAP links to the Tanzania NBSAP (2015 – 2020) and is included below:

Dar es Salaam (Ilala area) LBSAP Vision

"We envision that the Ilala area will have well-maintained open spaces and gardens and will strive towards expanding these, as well as protecting and restoring existing green and blue infrastructure (forests, wetlands, rivers, mangroves, ponds etc.) within the municipality, whilst raising awareness of the value of nature and improving livelihoods through green infrastructure initiatives"

5.2 Key Focus areas

The 6 key Focus Areas for the Ilala LBSAP are outlined below:

Dar es Salaam (Ilala) LBSAP Focus Areas

1. Awareness raising and capacity building;
2. Maintain, expand and restore green and blue infrastructure
3. Improve livelihoods through green infrastructure initiatives;
4. Utilise local and novel solutions for waste management;
5. Integration with land use management and other urban frameworks;
6. Mobilise financial resources

The 6 focus areas of the Ilala LBSAP align well with the Ilala Strategic Plan's Objective 8, namely: Improved management of natural resources and environment. The strong focus on awareness raising indicates that there is currently a general lack of awareness of the benefits of urban nature among city dwellers. The call towards maintenance, restoration and expansion of green infrastructure and urban nature shows a desire to care for and enhance existing urban nature aspects; and the livelihoods focus links to the need for urban nature to support local economic and social development. The waste management focus area indicates Ilala's and Dar es Salaam's dominating issue of waste and that is will be difficult to address any environmental issue in the municipality without attention to issues of waste. The call to be more integrative with regards land use and urban planning speaks to the intention of attaining biodiversity goals by working collaboratively with other sectors. The final focus area points to the funding imperative and the urgency around active investment in urban nature. The focus areas all link well with the Dar es Salaam Strategic Plan and in particular, the need for urban nature to attract investment, attention to issues of waste and the potential of urban nature to support the improvement of living standards.

Section 6:
LBSAP goals to achieve the vision

6.1 Biodiversity Focus Areas and Goals

Focus Area 1: Awareness raising & capacity building

- **Goal 1.1:** Conduct targeted awareness raising campaigns on the value and sensitivity of nature, as well as the by-laws and regulations governing nature, at the local community level.
- **Goal 1.2:** Conduct training with decision-makers within Ilala Municipality on the benefits and risks of nature.

Focus Area 2: Maintain, expand and restore green & blue infrastructure

- **Goal 2.1:** Develop a map of existing blue and green infrastructure, both natural and artificial, within Ilala Municipality.
- **Goals 2.2:** Assess green infrastructure within Ilala Municipality to determine their current state.
- **Goal 2.3:** Undertake a prioritisation exercise to determine strategy: where greening, protection and restoration efforts should be focused.
- **Goal 2.4:** Develop an inventory ('check-list') of the indigenous and invasive flora and fauna within Ilala Municipality.

Focus Area 3: Improve livelihoods through green and blue infrastructure initiatives

- **Goal 3.1:** Inventorise and map all green and blue infrastructure related to livelihoods.
- **Goal 3.2:** Develop a 'green-focused' community-based organisation (CBO) to support individuals with accessing funding for green infrastructure projects.

Focus Area 4: Develop solutions for waste management

- **Goal 4.1:** Undertake a pilot training project to teach local community members how to separate compostable waste from total waste at the household level and undertake 'shambamfuko' initiatives to encourage the use of that compostable waste.
- **Goal 4.2:** Advocate for new methodologies to use solid waste for alternative uses (e.g. charcoal, biogas, bricks, furniture etc.) to reduce over-extraction of natural resources, reduce pollution and support national-led waste reduction initiatives.
- **Goal 4.3:** Develop local methodologies for waste water management as poor water quality (in particular due to sewage inputs) has a significant impact on river and human health.

Focus Goal 5: Integration with land use management and other urban frameworks

- **Goal 5.1:** Explore opportunities to utilize land use management and improved urban land management/zoning to encourage environmental preservation.
- **Goal 5.2:** Identify priority areas where implementation could be piloted to highlight nature-based solution intervention for improved urban services and provision of ecosystem services.

Focus Goal 6: Mobilise financial resources

- **Goal 6.1:** Identify feasible project options and finance mechanisms.
- **Goal 6.2:** Prepare for and engage finance streams.

Refer to guiding notes in Table 3 below for further detail on the selected goals.

Figure 5. Schematic showing Dar es Salaam's LBSAP vision, Focus Areas and Goals

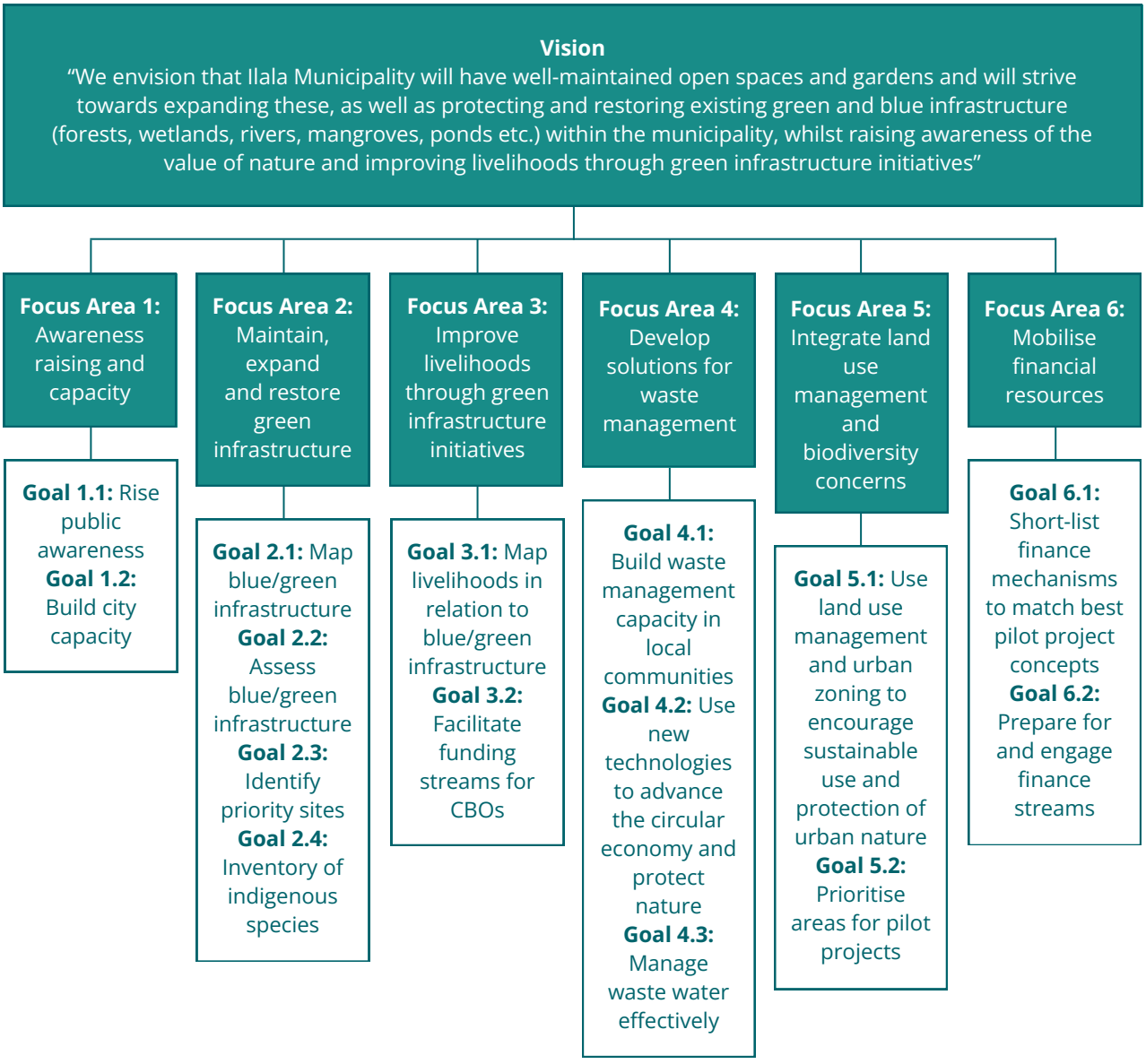


Table 3. Dar es Salaam LBSAP Focus Areas, Goals and Guiding Notes

Biodiversity Goals	
Focus Area 1: Awareness raising & capacity building	**Goal 1.1** Conduct targeted awareness raising campaigns on the value and sensitivity of nature, as well as the by-laws and regulations governing nature, at the local community level. **Guiding Notes:** These awareness raising campaigns should be directed specifically at local communities living in and alongside sensitive natural assets such as rivers, wetlands, mangroves and forests. The awareness raising campaigns have three main aims: 1. To raise awareness of the value of nature (emphasising the unique coastal forest habitats and species of Dar es Salaam, (e.g. emphasising rare species such as the straw-coloured fruit bat, which is Near Threatened according the IUCN's Red List) and the benefits that nature provides which support human livelihoods; 2. To develop educational tools to promote local biodiversity as urban natural assets; For example, some residents living near the city's forests may view the forest as habitat of monkeys, snakes, cats, birds, pigs and other organisms which harm their livestock or crops. This needs awareness but also strategies for human-wildlife conflict, where necessary. 3. To highlight that these natural assets are sensitive so they must be taken care of by the local community living in and alongside them; stop dumping waste into these systems (particularly rivers), pick up litter; and 4. To create an understanding of the risks of living in close proximity to natural assets, such as flooding, human-wildlife conflict (see above) with the resultant negative impacts on homes and livelihoods.
	Goal 1.2 Conduct training with decision-makers within Ilala Municipality on the benefits and risks of nature **Guiding Notes:** Training should be undertaking in three parts: 1. Undertake an interactive workshop with decision makers where they are not only made aware of the value of nature's benefits to support human livelihoods and well-being (such as cooling the city, reducing air pollution, providing food, beautification

Biodiversity Goals	
	etc.) but also the value of nature from a financial perspective and how introducing nature into the city can cut city costs on services; as well as generate profit (e.g. fish and vegetable sales/markets, indigenous plant sales); similarly highlight how damaging nature can reduce benefits and incur financial costs for the city to deal with; 2. Undertake site visits to areas of the city where well-managed natural assets are supporting human livelihoods; and to areas of the city where poorly managed nature is having negative effects of people; and; 3. Provide decision-makers with a pamphlet/ flyer/ short document with all the key information relating to the financial benefits of including nature in the city vs the financial costs of excluding nature from the city. Information can be based on global experiences as well on information for Dar es Salaam where available.
Focus Area 2: Maintain, expand and restore green infrastructure	**Goal 2.1** Develop a map of existing blue and green infrastructure, both natural and artificial, within Ilala Municipality. **Guiding Notes:** Map should include all current man-made parks and gardens within Ilala Municipality as well as other green spaces such as avenues of trees, traffic circles and undeveloped open spaces. Map should also highlight potential spaces where greening efforts can occur. The map should include the location and size of all the wild natural assets within Ilala Municipality including wetlands, rivers, forests, mangroves etc. The spatial data should be properly curated and updated as necessary. It forms an important input into the assessment (See Goal 2.2)
	Goal 2.2 Assess green and blue infrastructure within Ilala Municipality to determine their current state. **Guiding Notes:** The investigative study should indicate the state of each of the natural assets identified in the map developed as part of Goal 2.1 as well as the current benefits (natural, social, economic and cultural) being derived from these natural assets so that these considerations can inform prioritisation decisions.

Biodiversity Goals	
Focus Area 2: Maintain, expand and restore green infrastructure	**Goal 2.3** Undertake a prioritisation exercise to determine strategy: where greening, protection and restoration efforts and new greening projects, should be focused. **Guiding Notes:** In order for Dar es Salaam City to realise the full benefits that nature can provide to people and to the Municipality, natural assets indicated in the map in Goal 2.1. need to protected, and where they have been degraded, restored and even expanded or scaled up/replicated. For example, there is a big demand from the Dar es Salaam City Council to establish multiple new botanical gardens. Recognising that budget and capacity is a constraint, the prioritisation exercise should highlight the focus of protection and restoration efforts and indicate which natural assets should be focused on, in what order. Prioritisation should include Dar es Salaam City planning officials to ensure alignment between the requirements to enhance urban nature and other societal goals reflected in Ilala's development strategies and land use and spatial plans.
	Goal 2.4 Develop an inventory of the indigenous and invasive flora and fauna within Ilala Municipality **Guiding Notes:** The inventory will include a list of indigenous flora and fauna as well as a list of invasive flora and fauna. If possible, pictures should be included. Species inventories for Ilala municipality would be useful in terms of complementing the map in Goal 2.1 by adding to a description of the current state of urban nature. This would assist with decisions around a need for the protection of rare species and/or business opportunities through say wildlife viewing/ecotourism and for the general promotion of indigenous species, e.g. planting indigenous trees that also provide other urban services such as shade. This information would also guide programmes that target invasive species. In addition, this work should include a list of problem species which are or can result in human-wildlife conflict. For example: Some wild species pose challenges such as bats, monkeys, bush pigs and crows. Bats (e.g. straw-coloured and Egyptian fruit bats) in large numbers roost in and soil infrastructure, they cause fear as they are suspected to be vector of diseases, huge populations of these bats can cause trees to die and residents prune or cut trees in effort to scare them, hampering city greening efforts.

Biodiversity Goals	
Focus Area 3: Improve livelihoods through green infrastructure initiatives	**Goal 3.1** Inventorise and map all green infrastructure related to livelihoods **Guiding Notes:** The aim would be to understand, not just where the green infrastructure is and what state it is in, but to establish how green infrastructure in Ilala Municipality supports a diversity of livelihoods and to understand the existing business and potential business that could be generated through nature-based production and trade, e.g. tree nurseries, wildlife centers, bee farms, ecotourism. Decision-makers would benefit from a guide book that outlines such opportunities and how to advance them to support livelihoods.
	Goal 3.2 Develop a 'green-focused' community-based organisation (CBO) to support individuals with accessing funding for green infrastructure projects **Guiding Notes:** Where feasible, the Ilala Municipality will support the organisation of informal business by encouraging the formation of community-based organisation. (CBO). This facilitates an easier relationship between civil society and the Ilala Municipality. For example, all CBOs are registered by municipal community development officers. The Municipality can provide support in terms of registering the CBO, issuing permits and providing extension services such as training/know-how on how to cultivate certain crops, fish and livestock species and gaining access to species varieties. The Municipality can also provide assistance, in terms of identifying markets for trade. In addition, support can be given in terms of access to funding opportunities, in particular for special projects.

Biodiversity Goals	
Focus Area 4: Developing solutions for waste management	**Goal 4.1** Undertake a pilot training project to teach local community members how to separate compostable waste from total waste at the household level and undertake 'shambamfuko' initiatives to encourage the use of that compostable waste. Introduce novel solutions where necessary, e.g. where past experiments have failed. **Guiding Notes:** The pilot project will be undertaken at the Mtaa and community/household level. Compostable waste accounts for the majority of waste so the project will aim to teach local community members on: 1. How to separate compostable waste from total waste; 2. How to make compost; and 3. How to incorporate the compost into shambamfuko, which can include food growing, cultivation of young trees for selling, etc.
	Goal 4.2 Advocate for new methodologies to use solid waste for alternative uses (e.g. charcoal, biogas, bricks, furniture etc.) to reduce over-extraction of natural resources, reduce pollution and support national-led waste reduction initiatives. (This goal would also need a financing plan to secure waste processing equipment – see Goal 6) **Guiding Notes:** Note that acceptance/adoption of new technologies can be problematic. Where successful, such initiatives may be small-scale (CBO-level) and/or larger, commercial ventures. Waste reduction can directly or indirectly support the conservation of urban nature: e.g. rivers, water quality (sanitation), forests and mangroves by for example reducing over-utilisation (e.g. wood cutting to produce charcoal, cleaner rivers).
	Goal 4.3 Develop local methodologies for waste water management as poor water quality (in particular due to sewage inputs) has a significant impact on river and human health **Guiding Notes:** Poor waste management on land has downstream impacts on ocean health. This creates livelihood and well-being impacts for people reliant on fisheries-based livelihoods and has implications for food and nutritional security for the wider Dar es Salaam population. There is an opportunity to link Focus Area 1 (awareness) with this, i.e. connections between land and ocean.

Biodiversity Goals	
Focus Area 5: Integration with land use management and relevant urban frameworks	**Goal 5.1** Explore opportunities to utilize land use management and improved urban land management/zoning to incorporate urban ecosystem services and green and blue infrastructure at various scales. **Guiding notes:** Land use and urban planning functions typically take place remote from biodiversity planning. This is true for various levels of governance, from national to municipal. This presents a challenge, because land use and land use decisions exert a big impact on urban biodiversity and the services that nature can provide in the city. This requires alignment between national-level policies and strategies as well as local level bylaws and regulations. Within this goal, it is also important to consider the following aspects: Linking spatial and economic plans, alignment of spatial plans, developing innovative structure plans, improving land tenure systems, addressing informality and poor development control mechanisms and the need for fostering local economic development local livelihood enhancement, integrate master plans with green and blue infrastructure planning and innovative zoning schemes.
	Goal 5.2 Identify priority areas where implementation could be piloted to highlight nature-based solution intervention for improved urban services and provision of ecosystem services. **Guiding notes:** The prioritisation of blue/green infrastructure (See Goal 2.3) should be considered within the context of development needs and the government's priorities for capital investment in infrastructure. This will further guide decision-making as to where blue/green and grey infrastructure can best be combined to achieve societal needs within the city. The green and blue infrastructure map (including current ecosystem services) (Goal 2.1) will be an important input into defining priority areas for urban planning and zoning, especially where grey and blue/green infrastructure can be mutually supportive.

Biodiversity Goals	
Focus Area 6: Mobilising resources (financial and other)	**Goal 6.1:** Identify feasible project options and finance mechanisms (this could flow from Goal 5.2) **Guiding notes:** To ensure support for municipal biodiversity projects, interventions must be guided by municipal development priorities and sometimes political priorities, whilst keeping in mind the best opportunities to be offered by ecosystem services in the urban setting. Investment cases and concept notes are tools which can be developed in this case, to guide the prioritisation of possible project ideas and to determine their feasibility. Appropriate finance mechanisms must also be matched with the most ideal project concepts.
	Goal 6.2: Prepare for and engage finance sources **Guiding notes:** Prior to implementation, the most ideal finance mechanisms need to be identified to mobilize financial resources. This must align with finance legislations, in order to make available the financial resources needed to support the project.

6.2 Biodiversity Actions supporting the Goals

The biodiversity actions included in this LBSAP (see the table below) link directly to the biodiversity goals defined by the Ilala LBSAP team. For example, for the awareness raising goal, the Ilala team identified the need, in each case, to identify target audiences and to prepare the case or arguments for urban nature, carefully and tailored for different audiences. Similarly, actions to generate the basic spatial biodiversity information needed to make decisions, were clearly defined and presented step by step. It was discussed within the group that an approach to categorising the actions could be to identify (1) which actions are already being addressed, either by the municipality or through donor projects; (2) which actions could be funded through municipal funding streams or through local cross-sectoral partnerships in the city; and (3) which actions can be addressed by applying for external funds, either through existing or new donor projects, or through developing new funding proposals with partners.

Refining actions for the Ilala LBSAP

Table 4. High level actions associated with the Dar es Salaam LBSAP focus areas and goals

High Level Action Plan		
Focus Area 1: Awareness raising & capacity building		
Focus Areas & Goals	**Key Actions**	**Responsibilities**
Goal 1.1 Conduct targeted awareness raising campaigns on the value and sensitivity of nature, as well as the laws and regulations governing nature, at the local community level.	1. Identify key stakeholders responsible for promoting the value of nature, and their functions 2. Determine resources needed for raising awareness 3. Identify awareness raising materials for target audiences 4. Provide the envisaged outcomes regarding the expected sustainable natural environment (prepare communication strategy) 5. Implement: i.e. explain the importance of nature to the community: e.g. using different formats: social media, conduct local community meetings and workshops, use fliers & billboards. 6. Review bylaws and regulations governing sustainable utilisation of nature that will lead to environmental resilience	1. Government trust (IMC) – NEMC, Media - VPO; Private Institution – Academic institutions, CBO's/NGO's, Regional Administrative Secretary (RAS) 2. Private institutions, IMC, Media, CBO/NGO's 3. IMC, Private sector, NGO's 4. IMC, Communities, Research institutions, VPO 5. Academic institution, IMC, Media, Community (ward and street leaders), NGO's 6. IMC, Community

High Level Action Plan		
Goal 1.2 Conduct training with decision-makers within Ilala Municipality on the benefits and risks of nature	1. Identify the target group at different levels: city, municipal, ward, Mtaa 2. Develop justifications for greening Ilala Municipality, e.g. the environmental benefits and people's livelihood 3. Determine resources required for presenting the topic to decision-makers 4. Prepare a concept document including description of training materials needed, justifications, and the benefits and risks of nature 5. Conduct training and evaluation of the impact of training (e.g. feedback evaluation form)	1. IMC 2. IMC 3. IMC, ICLEI 4. IMC Technical team, ICLEI 5. IMC Technical Team, Community, ICLEI

High Level Action Plan		
Focus Area 2: Maintain, expand and restore green infrastructure		
Focus Areas & Goals	**Key Actions**	**Responsibilities**
Goal 2.1 Develop a map of existing blue and green infrastructure, both natural and artificial, within Ilala Municipality. (Note: some actions for Goal 2.1 and Goal 2.2. can be run in parallel)	1. Prepare or purchase base maps and surveying tools, e.g. GPSs 2. Mapping methodology: Identify and map the location and size of existing blue and green infrastructure in Ilala Municipality using satellite images, town planning drawings and interviews with local leaders 3. Site visits: Verify the status of existing green spaces 4. Curate all information in a reliable and appropriate GIS-based database; 5. Prepare an updated map of blue and green infrastructure in Ilala Municipality	1. Municipal planner, Municipal environmental officer, NEMC, VPO 2. Municipal land surveyors, Municipal planner, NEMC, VPO 3. Municipal planner, environmental officers, NEMC, VPO 4. Municipal planner, Municipal natural resources officer, Municipal environmental officer 5. Municipal planner 6. Municipal surveyors, Municipal planner 7. Municipal surveyors, Municipal planner 8. Municipal surveyors, Municipal planner, Municipal environmental officer

High Level Action Plan		
Goal 2.2 Assess green and blue infrastructure within Ilala Municipality to determine their current state. (Note: some actions for Goal 2.1 and Goal 2.2. can be run in parallel)	1. Prepare survey tools and methodologies for socio-economic, environmental and spatial assessment; 2. Categorise and assess attributes: Current uses, ecosystem services (benefits), land ownership and tenure, threats, e.g. levels of encroachment, whether natural or man-made, conservation status, ecosystem type: e.g. wetland, forest, mangroves, rivers and floodplains, green open spaces, play grounds and sports fields and other relevant attributes of each unit of green infrastructure; 3. Develop an inventory to reflect the stock and current state of green spaces (refer to Focus Area 2, Goal 2.1); 4. Analyse the opportunities and constraints related to the existing blue and green infrastructure; 5. Draft a report: Existing situation, status of planned and existing uses, benefits and opportunities challenges and recommendations for protection, reclamation and expansion and maintenance of the blue and green infrastructure; 6. Develop by-laws for safeguarding blue and green infrastructure to secure sustainable use;	1. Municipal environmental officer, Municipal forestry, Municipal natural resource officer, Botanist, Municipal agricultural officer, NEMC 2. Municipal planner, Municipal environmental officer, NEMC 3. Municipal planner, Municipal environmental officer, NEMC 4. Municipal environmental officer, Municipal forestry officer, Natural resources officer, Agricultural officer, Botanist, Municipal planner, NEMC 5. Botanist, Natural resources officer, Environmental officer, Planner, NEMC 6. Municipal planner, Municipal environmental officer, NEMC

High Level Action Plan		
Goal 2.3 Undertake a prioritisation exercise to determine strategy: where greening, protection and restoration efforts should be focused.	1. Use the map of existing status of blue and green infrastructure 2. Establish criteria for prioritisation 3. Identify priority sites of blue and green infrastructure requiring protection, restoration and/or expansion; 4. Propose interventions for prioritised blue and green infrastructure; 5. Prepare a report on prioritised sites for protection, restoration and/or expansion of green and blue infrastructure, including a budget; 6. Present strategy to stakeholders, gather inputs to adjust the strategy.	1. Municipal planner, Municipal environmental officer, Agricultural officer, Forestry officer, Botanist, NEMC 2. Environmental officer, Planner, Research unit: universities, NGO's, CBO's etc. 3. Municipal planner, Municipal environmental officer, NGO's, CBO's, ICLEI, NEMC 4. Municipal planner, Environmental officer, Agricultural officer, Forestry officer, Botanist, Landscape architects 5. Municipal environmental officers, NEMC

High Level Action Plan		
Goal 2.4 Develop an inventory of the indigenous and invasive flora and fauna within Ilala Municipality	1. Identify the indigenous and invasive fauna and flora with support from the maps developed in 4.1 2. Prepare tools and methodologies for inventory 3. Conduct the inventory 4. Prepare a map using GIS 5. Analyse, interpret and present results of the inventory survey of indigenous and invasive fauna and flora 6. Prepare report that includes conclusions and recommendations for the resilience of the indigenous fauna and flora of Ilala Municipality	1. Botanist, Zoologist, Municipal environmental officer, Forestry officer, Agricultural officer, Natural resources officer, NEMC, MUHAS (Muhimbili University of Health and Allied Sciences), Ardhi University, University of Dar es Salaam. 2. Same as 1 3. Same as 1 4. Municipal environmental officers, Raman Huria, Geography department, NEMC. 5. ICLEI, Municipal environmental officer, Forestry officer, Agricultural officer, NEMC 6. ICLEI, Municipal environmental officer, Forestry officer, Agricultural officer, NEMC

High Level Action Plan		
Focus Area 3: Improve livelihoods through green infrastructure initiatives		
Focus Areas & Goals	**Key Actions**	**Responsibilities**
Goal 3.1 Inventorise and map all green infrastructure related to livelihoods.	1. Develop a map of all green infrastructure related to livelihood activities 2. Identify the types of green infrastructure-related livelihoods (activities and spatial aspects), e.g. horticulture, vegetables, fruits trees (i.e. urban farming), plant nurseries, pottery (containers for nursery plants), compost and manure, firewood, charcoal, biogas 3. Conduct socio-economic survey, e.g. profiles: gender, age, disability, who are the beneficiaries and how does money/profit get distributed and how is the money used, income and turn-over, challenges (both vendors and customers) 4. Data analysis, interpretation and discussion using SPSS and GIS and Excel software and tools 5. Create maps using GIS technology 6. Write report: situation analysis, challenges, conclusions and recommendations 7. Dissemination of information/information sharing	1. GIS departments from iLala Municipal Council, Raman Huria, Ardhi University, University of Dar es Salaam 2. Environment department Ilala Municipal Council 3. IMC, Nipe Fagio (NGO's) 4. IMC and NBS and NGO's, Ardhi Univ and UDSM 5. GIS departments from iLala Municipal Council, Ramani Huria, Ardhi University, University of Dar es Salaam 6. Ardhi/UDSM 7. IMC

High Level Action Plan		
Goal 3.2 Develop a 'green-focused' community-based organisation (CBO) to support individuals with accessing funding for green infrastructure projects	1. Prepare methodology: surveying tools and questionnaires 2. Identify communities that need organisational development and establishment 3. Identify and categorise types of livelihoods (e.g. formal, informal) using methodology 4. Assess/determine community's interests and activities, using methodology 5. Describe organisational structures and functions 6. Identify and assess capacity needs: organisational set-up, book-keeping training, record keeping, bank account administration and financial management 7. Identify and prioritise interventions, e.g. support formation of community-based committee and governance structures where necessary 8. Identify sources of funds (e.g. donors, government support, in-kind, investors) and pitch to potential funders 9. Write report	1. Ilala Municipal Council with support from NGOs 2. IMC, CBO's and NGO's 3. IMC, CBO's and NGO's 4. NGO's, Universities, CBO's, led by IMC 5. NGO's and CBO's, Universities, IMC (CBO's) 6. NGO's and CBO's, Universities, IMC (CBO's) 7. IMC, Universities, NGO's, CBO's under ILala municipal 8. IMC, ICLEI, NGO's, Universities, CBO's 9. Universities, Nipe Fagio (NGO), CBO's, IMC

High Level Action Plan		
Focus Area 4: Utilising local solutions for waste management		
Focus Areas & Goals	**Key Actions**	**Responsibilities**
Goal 4.1 Undertake a pilot training project to teach local community members how to separate compostable waste from total waste at the household level and undertake 'shambamfuko ' initiatives to encourage the use of that compostable waste.	1. Develop selection criteria 2. Identify target area and community/stakeholders for pilot training 3. Select training materials for waste separation and composting 4. Conduct on-site training on solid waste separation, composting and household use of compost and marketing of compost 5. Monitoring and evaluation 6. Write project implementation report with aspects to show potential for scaling up	1. IMC environmental officer, CBO's/NGO's 2. IMC 3. IMC 4. IMC – environmental officer, NGOs 5. IMC Technical team, ICLEI 6. IMC, ICLEI

High Level Action Plan		
Goal 4.2 Advocate for new methodologies to use solid waste for alternative uses (e.g. charcoal, biogas, bricks, furniture etc.) to reduce over-extraction of natural resources, reduce pollution and support national-led waste reduction initiatives.	1. Search for and document the current available methodologies for use of solid waste 2. Identify feasibility of methodologies in the context of Ilala solid waste re-use 3. Identify the target groups/communities and settlements/areas 4. Prepare advocacy tools 5. Advocate for alternative use of solid waste, e.g. prepare and establish demonstration pilot projects based on the feasible methodologies 6. Fundraising for the project 7. Outsource to expertise where appropriate 8. Conduct monitoring and evaluation 9. Write report	1. IMC, Consultants, NGO's and CBO's 2. IMC, Consultants, NGO's and CBO's 3. IMC environmental officer 4. IMC 5. IMC 6. IMC, Donors, Sponsors, NGO's 7. NGO's, Consultants, CBO's, Universities/Learning institutions 8. IMC Technical team 9. IMC
Goal 4.3 Develop local methodologies for waste water management as poor water quality (in particular due to sewage inputs) has a significant impact on river and human health	1. Develop options for improving water quality 2. Identify entry points where local communities can play a role 3. Collaborate with water infrastructure and water distribution agencies to workshop solutions 4. Collaborate with water and sanitation NGOs and projects such as the Msimbazi Basin Development project which is also addressing waste water issues	1. IMC, DAWASA, NEMC 2. NGOs, Mtaa-level & communities 3. IMC, Wami-Ruvu Basin Water Board, DAWASA, NEMC 4. NGOs (e.g. BORDA) & PO:RALG (Msimbazi)

High Level Action Plan		
Focus Area 5: Integration with land use management and relevant urban frameworks		
Focus Areas & Goals	**Key Actions**	**Responsibilities**
Goal 5.1	1. Align national land use planning frameworks and the LBSAP/other environmental policies to mainstream biodiversity; 2. Align city-level bylaws and urban planning legislation and development control regulations with biodiversity planning; 3. Develop an institutional map to define roles and responsibilities and consider capacity constraints (e.g. for enforcement); 4. Develop institutional arrangements for improved and integrated biodiversity and land use planning (Consider using existing institutional structures) 5. Use urban planning tools such as structure plans, and integrate blue/green infrastructure layers within the city master plan and strengthen development control procedures (e.g. within bylaws) to inform decisions on managing development while protecting biodiversity and enhancing ecosystem services (e.g. green open space). 6. Identify legislative gaps: Unpack urban legislation as it relates to development control and enforcement including; land sales, demarcation, planning consent, and building permit processes;	1. National land use planning commission 2. Ministry of environment 3. National Environmental Management Council (NEMC) 4. Ministry of Water and Irrigation (MoW&I 5. Ministry of lands housing and human settlements development 6. Ministry of regional administration and local government 7. Regional Administrative Secretary 8. Regional land officer 9. Regional and district disaster management committees 10. 10.Council director 11. 11.DCC 12. 12.legal officer 13. 13.IMC environmental officer 14. 14.Ward committees 15. 15.Ward Executive officer 16. 16.Mtaa Executive Officer 17. 17.Mtaa Chairperson

High Level Action Plan		
	7. Link urban planning and disaster risk planning through the green-blue framework to incorporate nature-based solutions, e.g SuDs at a citywide scale especially in and around unplanned areas. The issue of waste can be similar, i.e. use this as the entry point, as with disaster risk.	
Goal 5.2 Identify priority areas where implementation could be piloted to highlight nature- based solution intervention for improved urban services and provision of ecosystem services.	1. Link sites from map (Goal 2.1) and the findings of the thematic atlas with prioritized project areas in the Dar Master Plan to identify areas for intervention. 2. Utilizing the capital investment plan within the masterplan and linking prioritized nature based projects in order to mobilize resources for implementation. 3. Linking prioritized projects in the capital investment plan and other sectoral plans. (Selection criteria for site selection (use Thematic Atlas and existing projects, e.g. Msimbazi Opportunity Plan, political preference) 4. Highlight opportunities to pilot interventions for improved municipal services e.g flood reduction where biodiversity and ecosystem services co-benefits can be maximized	1. Ministry of Water and Irrigation (MoW&I) 2. DAWASA 3. Council director 4. DCC 5. Town planning Officer 6. GIS officer 7. IMC environmental officer 8. Ward committees 9. Ward Executive officer 10. Mtaa Executive Officer 11. Mtaa Chairperson

High Level Action Plan		
Focus Area 6: Integration with land use management and relevant urban frameworks		
Focus Areas & Goals	**Key Actions**	**Responsibilities**
Goal 6.1 Identify two feasible project options and matching (appropriate) finance mechanisms (this could flow from Goal 5.2)	1. Develop a set of criteria to prioritise a number of nature-based projects in the City of Dar es Salaam that align with the LBSAP focus areas and goals; 2. Identify and document two prioritised projects that integrate biodiversity and urban planning concerns. (Investment cases and 'idea cards' can be useful in developing these ideas); 3. Identify a suite of finance sources and mechanisms that are feasible, given the selected projects, and which are enabled by national policy and legislation; 4. Identify non-financial resources to support the priority projects, e.g. network support such as alignment with NGO initiatives and university student projects; 5. Cross-cutting activity: Engage all relevant government and non-government stakeholders in steps 1 and 2.	1. City Council: various sectors within City Council, e.g. environment and conservation, planning, disaster risk, local government finance department. 2. National government, 3. Funders/donors 4. Investors
Goal 6.2: Prepare a list of action steps for two prioritised projects	1. Document the next steps that would be necessary to activate financial flows towards the selected projects; 2. Cross-cutting activity: Engage all relevant government and non-government stakeholders in steps 1 and 2.	1. City Council: various sectors within City Council, e.g. environment and conservation, planning, disaster risk, local government finance department. 2. National government, 3. Funders/donors 4. Investors

6.3 Project scoping and selection

Urban biodiversity initiatives can contribute at different scales, from small, urban gardens, to large catchment-scale projects. The LBSAP can and should be used to facilitate a range of projects at different scales and demonstrating spatial and functional connectivity (e.g. between land, coastal and marine) between them, where possible. [During a participatory exercise (validation workshop, April 2024), stakeholders also expressed the need for a typology of urban nature-based interventions and a toolkit that shows how different tools can support diverse interventions.]

A number of small and larger projects are underway and which align strongly with the Dar es Salaam LBSAP goals. The Msimbazi Catchment Management Plan is a large-scale catchment project which can provide linkages and entry points for other, smaller nature-based projects in the Ilala (and Kinondoni) areas (See Box 2).

Box. 4 The Msimbazi Watershed Management Plan

The Msimbazi River and its tributaries flow through the heart of Dar es Salaam. It covers 271 km2 and is home to 27% of the city's population. Historically, The Msimbazi Valley was a beautiful, vast greenspace. The river served as an important water source, and the fertile floodplain provided prime land for agriculture and animal grazing.

However, over the last fifty years, urbanization pressure has gradually reduced the water retention capacity in the wider basin. During the rainy seasons, especially the Lower Basin and Lower Middle Basin, the city's most severe flooding takes place, putting residents, livelihoods, properties, and critical infrastructure at risk. The Msimbazi River flooding events are linked to seven main challenges: (i) Urbanization and deforestation; (ii) Soil erosion and increased sedimentation; (iii) Infrastructure barriers; (iv) Solid waste dumping; (v) Inadequate storm water and sanitation infrastructure; (vi) Climate change effects; and (vii) Vulnerable living environments.

In January 2018 the Vice President of Tanzania established a task force to coordinate various government initiatives and provide guidance for the future with respect to flood protection and environmental restoration. The first step was an extensive and collaborative stakeholder planning exercise for transforming the Msimbazi Basin into a beacon of urban resilience, to bring to bear significant benefits for the city, and the vulnerable communities living in the Msimbazi valley and Lower Basin. The Msimbazi Opportunity Plan describes a multi-annual investment program for flood risk protection, environmental restoration and urban development.

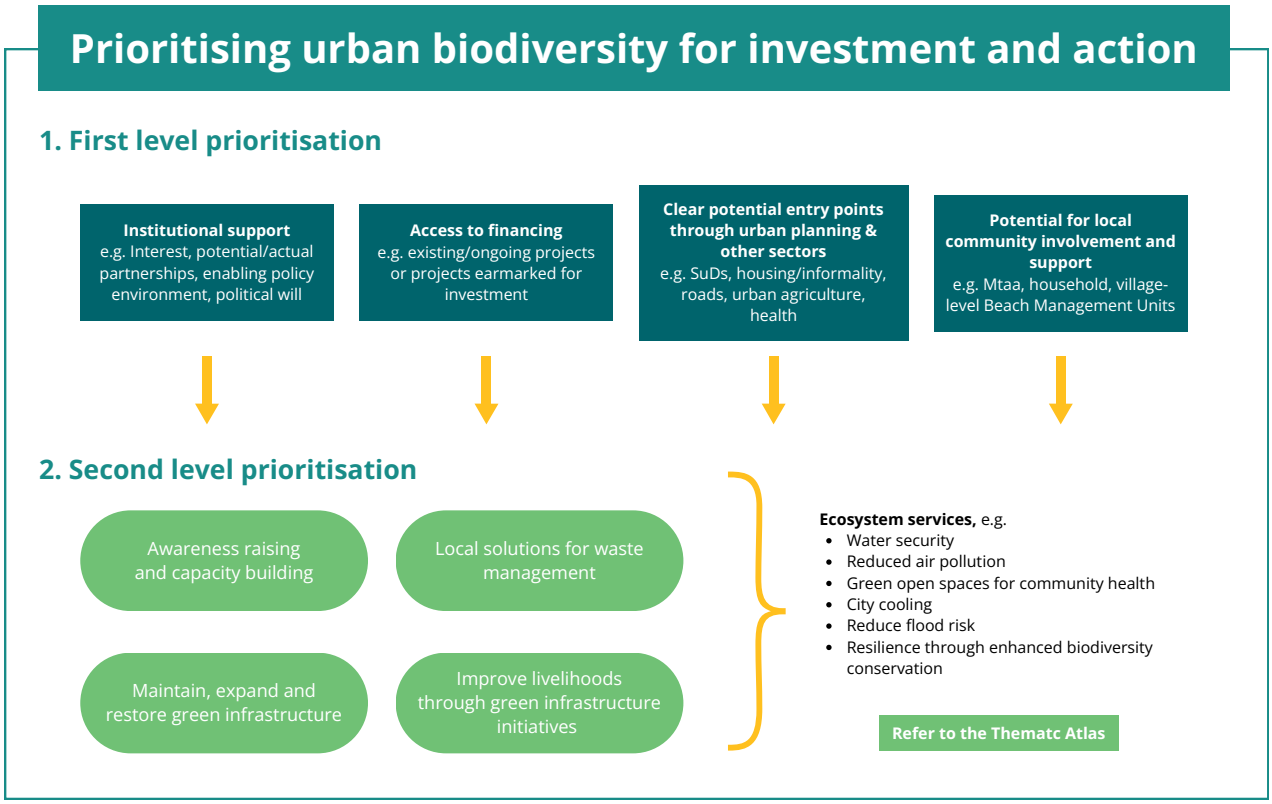
The vision of the Msimbazi Opportunity Plan is to transform the Msimbazi Valley from a flood hazard area to an iconic city park surrounded by prime real estate for urban development. Major ecosystems to be protected and restored include i. The Pugu-Kazimzumbwi natural forest reserves; ii. The wooded areas in the upper & middle valleys alongside the riverbanks; and iii. The Mangrove forest and wetlands between Hananasif and Upanga.

The Msimbazi Opportunity Plan is now being implemented through the Msimbazi Basin Development Project (MBDP). It is co-financed by credits from the World Bank (US$ 200 million) and Spanish Government (Euro 30 million) and a grant from Government of Netherlands (Euro 30 million). Implementation of the MBDP is led by President's Office, Regional Administration and Local Government (PO-RALG).

The MBDP is a significant initiative in the city of Dar es Salaam and will provide opportunities for smaller, nature-based projects to learn and to seek opportunities for synergies between initiatives.

The Dar es Salaam LBSAP 2024 revision process also offered an opportunity to develop a broad process for prioritising LBSAP goals when scoping for, selecting and designing diverse projects (Fig. 6):

Figure 6. A framework for prioritising urban biodiversity projects



As a first level of prioritisation, the most important success factors include the presence of institutional support, access to funding support, connections with non-biodiversity sectors facilitated through urban planning mechanisms and clear opportunities to engage community level involvement in planning and implementation. Other goals such as improved awareness, restoring green infrastructure and enhanced ecosystem services and livelihoods can be considered.

6.4 Linking the LBSAP to the NBSAP

(Note: This section needs to be updated based on the revised Tanzanian national BSAP)

Following the process of developing their LBSAP, the Ilala Municipal Council and wider stakeholders considered the Tanzania National Biodiversity Strategy and Action Plan (NBSAP) Targets. The group considered the synergies between the Ilala LBSAP and the national Tanzania NBSAP Targets.

Recognising and discussing alignment between the Dar es Salaam LBSAP with NBSAP targets

Table 6.2 shows connecting points between the Dar es Salaam LBSAP and the national NBSAP goals and targets, to explore specific alignment between these the national and local biodiversity action plans. Thirteen (13) LBSAP goals aligned with thirteen (13) national NBSAP goals. The need to create awareness, build local capacity and knowledge and the need for local biodiversity assessments, especially in support of local livelihoods, again stood out and also that there is specific support on these aspects at the level of the NBSAP.

During the LBSAP development, the Ilala team indicated for example a deficiency of good maps as well as basic information on urban nature and urban biodiversity, collated in the right manner to support decisions and action planning. In other words, initial actions were more focused on generating sound information and on analysing and preparing this information for decision-making. The CitiesWithNature (See: https://www.citieswithnature.org/) platform can advance this effort by the tracking of progress based on the LBSAP goals.

In summary, The Dar es Salaam LBSAP goals are strongly linked to Ilala's and Dar es Salaam's development priorities. There is also strong coherence between the LBSAP goals and Tanzania's NBSAP strategic goals and targets, in particular around (1) the need to raise awareness of the value of biodiversity and the benefits to socio-economic development and well-being and (2) enhanced implementation through participatory planning, knowledge management and capacity building. The LBSAP provides a platform for further engagement and in particular, it offers a structured plan of action for the mobilization of resources for implementation.

Links between GBF and Dar es Salaam LBSAP Focus areas and goals.

Given that the Dar es Salaam LBSAP is being revised before the revision of the national Tanzanian NBSAP will be made available, we draw links between the Tanzania LBSAP focus areas and goals and the Global Biodiversity Framework goals and targets. The links are shown in Fig. 7 below. Since the goals of the Dar es Salaam LBSAP are quite detailed, the links are drawn mainly between the LBSAP focus areas and the GBF targets, such that the levels of detail match up in the comparison.

Target 2 of the GBF aligns well with the Dar es Salaam LBSAP Focus Area 2 (blue line), which is essentially about restoration. This is an opportunity for the LBSAP to adjust the goals of this focus area to strive for the 30% target as suggested by the GBF. The Dar es Salaam Focus Area 2 also aligns well with the GBF Target 21 (orange line). These targets address the need for relevant information and knowledge to guide biodiversity action. The light green line indicates alignment between the GBF and LBSAP around invasive species action while the purple line draws the connection between ensuring nature's contributions to people (GBF) and nature-based livelihood support in the city of Dar es Salaam (Focus Area 3). The green line connection is of particular interest to the current LBSAP. It connects the call for nature-oriented urban planning (GBF Target 12) with Focus Area 5 of the Dar es Salaam LBSAP, which addresses urban land use planning and management as an entry point for enhancing biodiversity. GBF Target 16 is strongly aligned with LBSAP Focus Area 4 (yellow line), connecting the need for solid waste management at the local level and recognising that in urban contexts, waste and consumption patterns have a significant impact on ecosystems and ecosystem services. GBF Target 20 is aligned with LBSAP Focus Area 5 (red line), showing emphasis on the need for cooperation between different sectors and city line management, such as biodiversity, urban planning and sister risk management. The blue line linking GBF Target 20 with LBSAP Focus Area 6 address the need to mobilise financial resources to support biodiversity action.

Figure 7. Schematic showing links between the Dar es Salaam LBSAP and the Global Biodiversity Framework targets

Global Biodiversity Framework targets	
1. Reducing threats to biodiversity	
Target 1	Plan and Manage all Areas to Reduce Biodiversity Loss
Target 2	Restore 30% of all Degraded Ecosystems
Target 3	Conserve 30% of Land, Waters and Seas
Target 4	Halt Species Extinction, Protect Genetic Diversity, and Manage Human-Wildlife Conflicts
Target 5	Ensure Sustainable, Safe and Legal Harvesting and Trade of Wild Species
Target 6	Reduce the Introduction of Invasive Alien Species by 50% and Minimize Their Impact
Target 7	Reduce Pollution to Levels That Are Not Harmful to Biodiversity
Target 8	Minimize the Impacts of Climate Change on Biodiversity and Build Resilience
2. Meeting people's needs through sustainable use and benefit-sharing	
Target 9	Manage Wild Species Sustainably to Benefit People
Target 10	Enhance Biodiversity and Sustainability in Agriculture, Aquaculture, Fisheries, and Forestry
Target 11	Restore, Maintain and Enhance Nature's Contributions to People
Target 12	Enhance Green Spaces and Urban Planning for Human Well-Being and Biodiversity
Target 13	Increase the Sharing of Benefits from Genetic Resources, Digital Sequence Information and Traditional Knowledge
3. Tools and solutions for implementation and mainstreaming	
Target 14	Integrate Biodiversity in Decision-Making at Every Level
Target 15	Businesses Assess, Disclose and Reduce Biodiversity-Related Risks and Negative Impacts
Target 16	Enable Sustainable Consumption Choices to Reduce Waste and Overconsumption
Target 17	Strengthen Biosafety and Distribute the Benefits of Biotechnology
Target 18	Reduce Harmful Incentives by at Least $500 Billion per Year, and Scale Up Positive Incentives for Biodiversity
Target 19	Mobilize $200 Billion per Year for Biodiversity From all Sources, Including $30 Billion Through International Finance
Target 20	Strengthen Capacity-Building, Technology Transfer, and Scientific and Technical Cooperation for Biodiversity
Target 21	Ensure That Knowledge Is Available and Accessible to Guide Biodiversity Action
Target 22	Ensure Participation in Decision-Making and Access to Justice and Information Related to Biodiversity for all
Target 23	Ensure Gender Equality and a Gender-Responsive Approach for Biodiversity Action

Dar es Salaam LBSAP Focus Areas and Goals	
Focus Area 1: Awareness raising & capacity building	
Goal 1.1	Conduct targeted awareness raising campaigns on the value and sensitivity of nature, as well as the by-laws and regulations governing nature, at the local community level.
Goal 1.2	Conduct training with decision-makers within Ilala Municipality on the benefits and risks of nature
Focus Area 2: Maintain, expand and restore green & blue infrastructure	
Goal 2.1	Develop a map of existing blue and green infrastructure, both natural and artificial, within Ilala Municipality.
Goals 2.2	Assess green infrastructure within Ilala Municipality to determine their current state.
Goal 2.3	Undertake a prioritisation exercise to determine strategy: where greening, protection and restoration efforts should be focused.
Goal 2.4	Develop an inventory of the indigenous and invasive flora and fauna within Ilala Municipality
Focus Area 3: Improve livelihoods through green and blue infrastructure initiatives	
Goal 3.1	Inventorise and map all green and blue infrastructure related to livelihoods
Goal 3.2	Develop a 'green-focused' community-based organisation (CBO) to support individuals with accessing funding for green infrastructure projects
Focus Area 4: Solutions for waste management	
Goal 4.1	Undertake a pilot training project to teach local community members how to separate compostable waste from total waste at the household level and undertake 'shambamfuko' initiatives to encourage the use of that compostable waste.
Goal 4.2	Advocate for new methodologies to use solid waste for alternative uses (e.g. charcoal, biogas, bricks, furniture etc.) to reduce over-extraction of natural resources.
Goal 4.3	Manage waste water effectively. Focus on limiting sewage input into rivers.
Focus Area 5: Integration with land use management and other urban frameworks	
Goal 5.1	Explore opportunities to utilize land use management and improved urban land management/zoning to encourage environmental preservation.
Goal 5.2	Identify priority areas where implementation could be piloted to highlight nature-based solution intervention for improved urban services and provision of ecosystem services.
Focus Area 6: Mobilise financial resources	
Goal 6.1	Identify feasible project options and finance mechanisms
Goal 6.2	Prepare for and engage finance streams

Table 5. Alignment between the Ilala LBSAP Focus Areas and Goals and the Tanzanian NBSAP Goals and Targets.

(Note: This Table is should be updated based on the revised Tanzania NBSAP)

Synergies Between the National Tanzania NBSAP and Local Ilala MC LBSAP	
Ilala LBSAP Focus Areas and Goals	**Relevant Tanzania NBSAP Goals and Targets**
Focus Area 1: Awareness raising & capacity building	
Goal 1.1 Conduct targeted awareness raising campaigns on the value and sensitivity of nature, as well as awareness of the the by-laws and regulations governing nature, at the local community level.	1. Strategic Goal A, Target 1: At least 60% of the population is aware of the importance of biodiversity and its impact on human well-being and socio-economic development of the country. 2. Strategic Goal B, Target 6: At least three Legislations that govern exploitation of aquatic and terrestrial resources are reviewed and enforced. 3. Strategic Goal B, Target 7: Biodiversity and agriculture related policies, laws and strategies promote sustainable management of forest, agricultural and aquaculture ecosystems are reviewed and implemented.
Goal 1.2 Conduct training with decision-makers within Ilala Municipality on the benefits and risks of nature.	1. Strategic Goal A, Target 1: At least 60% of the population is aware of the importance of biodiversity and its impact on human well-being and socio-economic development of the country.

Synergies Between the National Tanzania NBSAP and Local Ilala MC LBSAP	
Ilala LBSAP Focus Areas and Goals	**Relevant Tanzania NBSAP Goals and Targets**
Focus Area 2: Maintain & expand existing green spaces	
Goal 2.1 Develop a map of the existing green spaces within Ilala Municipality	1. Strategic Goal C, Target 12: Nationwide biodiversity assessment conducted, species that require special attention identified and managed to ensure their long-term sustainability.
Goals 2.2 Undertake a study of the existing green spaces within Ilala Municipality to determine their current state.	1. Strategic Goal C, Target 12: Nationwide biodiversity assessment conducted, species that require special attention identified and managed to ensure their long-term sustainability.
Goal 2.3 Develop a 'Greening Plan' for Ilala Municipality	
Focus Area 3: Improve livelihoods through green infrastructure initiatives	
Goal 3.1 Inventorise and map all green infrastructure related to livelihoods	1. Strategic Goal D, Target 14: Ecosystems that provide essential services, related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, local and vulnerable communities.

Synergies Between the National Tanzania NBSAP and Local Ilala MC LBSAP	
Ilala LBSAP Focus Areas and Goals	**Relevant Tanzania NBSAP Goals and Targets**
Goal 3.2 Develop a 'green-focused' community based organisation (CBO) to support individuals with accessing funding for green infrastructure projects	1. Strategic Goal E, Target 16: Fair and Equitable Sharing of Benefits arising from utilization of biodiversity resource is in force and operational, consistent with national and international legislation. 2. Strategic Goal E, Target 20: Financial resources in support of biodiversity programmes significantly increased.
Focus Area 4: Protect and restore natural infrastructure	
Goal 4.1 Develop a map of the existing blue and green infrastructure within Ilala Municipality	1. Strategic Goal C, Target 12: Nationwide biodiversity assessment conducted, species that require special attention identified and managed to ensure their long-term sustainability.
Goal 4.2 Undertake an investigative inventory study of all the blue and green infrastructure within Ilala Municipality to determine the current state and the current benefits being derived.	1. Strategic Goal E, Target 19: Significant increase in the contribution of knowledge, technology and scientifically based information that are generated and shared. 2. Strategic Goal C, Target 11: Area covered under marine protected areas be increased from 6.5% to 10% and effectively manage the existing terrestrial and marine protected areas.

Synergies Between the National Tanzania NBSAP and Local Ilala MC LBSAP	
Ilala LBSAP Focus Areas and Goals	**Relevant Tanzania NBSAP Goals and Targets**
Goal 4.3 Undertake a prioritisation exercise to determine where protection and restoration efforts should be focused.	1. Strategic Goal D, Target 14: Ecosystems that provide essential services, related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, local and vulnerable communities.
Goal 4.4 Develop an inventory of the indigenous and invasive flora and fauna within Ilala Municipality	1. Strategic Goal C, Target 12: Nationwide biodiversity assessment conducted, species that require special attention identified and managed to ensure their long-term sustainability.
Focus Area 5: Utilising local solutions for solid waste management	
Goal 5.1 Undertake a pilot training project to teach local community members how to separate compostable waste from total waste at the household level and undertake 'shambamfuko' initiatives to encourage the use of that compostable waste.	1. Strategic Goal A, Target 4: Investments in systems of production and consumption based on sustainable eco-friendly practices increased. 2. Strategic Goal B, Target 8: All forms of pollution from water and land-based activities are brought to levels that are non-detrimental to biodiversity ecosystem functions. 3. Strategic Goal E, Target 18: Traditional knowledge, innovation and practices relevant for the conservation and sustainable use of biodiversity respected and safeguarded.

Synergies Between the National Tanzania NBSAP and Local Ilala MC LBSAP	
Ilala LBSAP Focus Areas and Goals	**Relevant Tanzania NBSAP Goals and Targets**
Goal 5.2 Advocate for new methodologies to use solid waste for alternative uses (e.g. charcoal, biogas, bricks, furniture etc.) to reduce over-extraction of natural resources, reduce pollution and support national-led waste reduction initiatives.	1. Strategic Goal A, Target 4: Investments in systems of production and consumption based on sustainable eco-friendly practices increased. 2. Strategic Goal B, Target 8: All forms of pollution from water and land-based activities are brought to levels that are non-detrimental to biodiversity ecosystem functions.

6.5 Alignment with the Dar es Salaam Climate Action Plan (2020 - 2050)

Following the Paris Agreement on Climate Change at the 2015 Conference of the Parties (COP) of the United Nations Framework Convention on Climate Change (UNFCCC), signatories have devised ambitious climate action plans. In line with this global direction, The City of Dar es Salaam has developed a Climate Action Plan (2020 - 2050) or 'CAP', that aligns with the global goal of limiting the average temperature rise to 1.5°C. The Dar es Salaam Climate Action Plan considers both adaptation and mitigation measures, arranged according to nine themes and 44 actions (See Fig. 8).

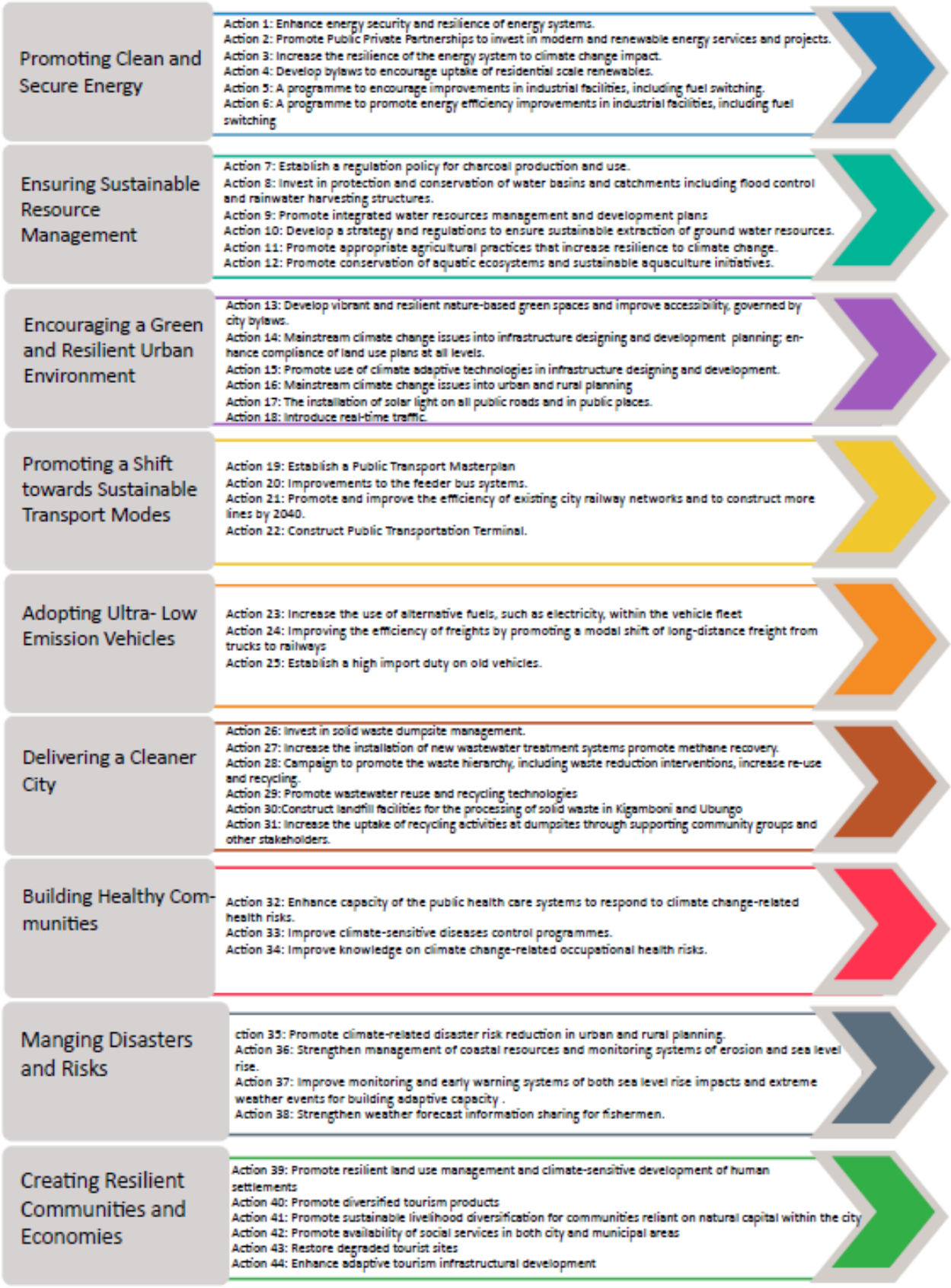
Nature plays an important role in regulating climate (See: https://nature4climate.org/). Urban nature considerations can be specifically designed to support climate action. This section draws attention to the potential synergies and co-benefits between the Dar es Salaam Climate Plan priority themes and actions and the Dar es Salaam LBSAP priority goals and targets. The figure below (Fig. 8) provides a summary of the Dar es Salaam Climate Action Plan mitigation and adaptation actions.

- In CAP theme two, "Ensuring Sustainable Resource Management": This Theme aligns strongly with LBSAP Focus Area 2, which stipulates the need for mapping green and blue infrastructure and developing the baseline information

necessary for developing sustainable use strategies and livelihood strategies (LBSAP Focus Area 3). CAP theme nine ("Creating Resilient Communities and Economies") alludes to tourism livelihood opportunities. The specific recommendation in this theme to establish a regulatory policy for charcoal production and use is directly related to the need for the sustainable use of forests in and on the periphery of Dar es Salaam City. This also aligns with LBSAP Goal 4.2 which addresses options for converting solid waste to energy (e.g. charcoal) and other alternative uses.

- CAP theme three: "Encouraging a green and resilient Urban Environment" aligns well with LBSAP Goal 2.3 which requires the prioritisation of greening efforts. Dar es Salaam is a hot city in the tropics, where temperatures are exacerbated by hard surfaces, poor building design and vehicle gases. Greening initiatives can help cool the city and so mitigate extreme heat. The call within this Theme to mainstream climate into development, land use and urban planning is well aligned with LBSAP Goal 5.1, which seeks to align urban ecosystem services and blue and green infrastructure with land use management through tools such as land use zoning.
- CAP Theme six "Delivering a Cleaner City", specifically Action 31: "Increase the uptake of recycling activities through supporting community groups" aligns with LBSAP Goal 4.1 which advocates for training at the community and household level with regards separating compostable waste. Waste is a significant issue in Dar es Salaam such that any urban climate or biodiversity strategy must incorporate waste considerations.
- CAP Theme 7 addresses "Building Healthy Communities" and climate-related public health risks. The LBSAP sets a Goal (Goal 2.3) for greening and green space development which relates to opportunities for recreation, movement and aesthetics to support mental and physical health for city dwellers.
- CAP Theme 8 "Managing Disasters and Risks" presents opportunities for climate action and urban nature action to provide mutually reinforcing benefits. Nature-based solutions can be highly cost-effective at mitigating disasters. LBSAP Goal 5.2. specifically promotes the idea to combine grey and green/blue infrastructure effectively to deliver urban services, including disaster risk control. Such approaches can be piloted especially in the context of frequent flooding in Dar es Salaam City.

Figure 8. Summary of the Dar es Salaam mitigation and adaptation actions. Source: The Dar es Salaam Climate Action Plan (2020 - 2050)



6.7 Mainstreaming, Monitoring & Evaluation

Political leadership of the Ilala Municipal Council and the national Vice President's Office (VPO): Environment Division, responsible for overseeing implementation of the Tanzania NBSAP, were engaged throughout the development of the LBSAP. This facilitated opportunities for discussion about mainstreaming and other aspects of the LBSAP and its relationship with the Tanzania NBSAP.

NBSAP-LBSAP alignment ('vertical integration')

The current Tanzania NBSAP was developed to cover the time period 2015 – 2020. Thus it will be eligible for revision at the end of 2020. One of the questions from the local perspective was how the upcoming national NBSAP revision might affect the local Ilala LBSAP. The VPO is currently preparing a report which will form the basis of the revised National Biodiversity Strategy. While there will be some changes required in the LBSAP based on the newly revised NBSAP, the VPO assured Ilala Municipal Council that the current Ilala LBSAP content is sound and will still be relevant beyond 2020.

Once finalised at the level of Ilala Municipal Council, the LBSAP document should then be submitted to the VPO: Environment Division and the document will be signed by the VPO Office. There is no obligation to submit an LBSAP to the VPO, but it is better to have the national government's blessing: The VPO will emphasise the importance of the document and this will give power to its implementation. VPO sign-off of the LBSAP will be followed by letters drafted and sent to the various district councils to promote the LBSAP product and to encourage other sub-national governments to prepare their own LBSAPs.

Apart from sign-off by the VPO, the best way for the LBSAP to interact with the NBSAP on an ongoing basis is in response to requests from VPO to the Ilala Municipal Council to provide inputs into the quarterly reports (i.e. implementation status reports). The Municipal Council should also include reports on progress on any initiatives that form part of and are relevant to the LBSAP and the goals therein.

The Ilala MC LBSAP is the first LBSAP for Tanzania and will therefore be a model for other sub-national governments in Tanzania. Thus there is a responsibility for the Ilala Municipal Council to be proactive in the implementation of the Action Plan to showcase that it can be done. One of the major opportunities for mainstreaming will be through the actions identified in this LBSAP. The actions create opportunities for vertical as well as horizontal and cross-sectoral partnerships to achieve common goals as they relate to the LBSAP goal and actions.

Mainstreaming within the Ilala Municipal Council

The finalised LBSAP document will be presented, by ICLEI, following the request of the Ilala MC technical officials, to the Municipal Management Team. The Management Team consists of 10 - 15 members, all Heads of Departments and Sections.

Ilala MC requested some focus on implementation at the end of this presentation and options on how implementation can be supported. For example, some activities may already be supported by the Municipal Council and it may be possible to motivate for funding and commitment from other levels of government: regional and national as well as donor and project funding; and writing collaborative proposals for donor funding.

Monitoring and Evaluation

Monitoring and evaluation are an important part of implementation. The purpose of monitoring and evaluation is to track progress with the implementation of actions and projects; measure the efficiency and effectiveness of interventions; and determine what adjustments, changes or corrective actions may be needed and when.

The Ilala Municipal Council LBSAP still needs a monitoring and evaluation framework that links operational goals (not defined in this version of the LBSAP) with the actions as identified. This internal monitoring and reporting system will facilitate clear progress toward local (i.e. Ilala-level) goals as well as progress in the context of obligations to supporting the achievement of the goals of the Tanzania national NBSAP.

One approach that could be used to develop a monitoring framework is the 'Theory of Change'. According to this approach, the Council can use the actions and goals expressed in this LBSAP to define the necessary **inputs** into actions/activities (e.g. staff, skills, funding, training), it can be used to structure **outputs** (i.e. activities and participation) and to define **outcomes**, which can be broken down into short-term (i.e. 1 year), medium-term (2-3 years) and long-term (more than 3 years) outcomes. The activities can be used to articulate an activity plan and the activities, together with the outcomes, can be used to articulate an evaluation and monitoring framework. Outputs are usually observable and can typically be measured by simple, direct measures or counts, e.g. number of trainees, number of trees planted. Results for beneficiaries, (i.e. Outcomes) are generally not easily observable and therefore need indicators, which are measures that signal that change has happened.

There are also a number of good resources to assist with this process and that are specifically geared for supporting the monitoring and evaluation of biodiversity and development projects:

- Monitoring and Evaluation: Tools for Biodiversity Conservation and Development projects. SANBI Biodiversity Series 11: Online: https://www.sanbi.org/wp-content/uploads/2018/04/biodiversity11monitoreval.pdf

- Guidelines for Monitoring and Evaluation for Biodiversity Projects. World Bank. 1998. Online: ell as progress in the context of obligations to supporting the achievement of the goals of the Tanzania national NBSAP.

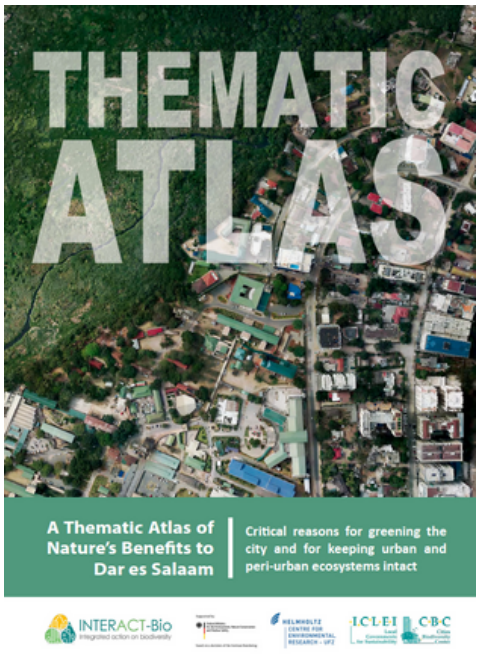
- Defining Outcomes & Indicators for Monitoring, Evaluation, and Learning in USAID Biodiversity Programming. USAID. August 2016. Online: https://usaidlearninglab.org/sites/default/files/resource/files/biodiversity_howtoguide3_508.pdf

Section 7:
Tools to support the implementation of the Ilala Municipality LBSAP

7.1 Thematic Atlas of Nature's Benefits to Dar es Salaam

The Thematic Atlas for Nature's Benefits in Dar es Salaam emerged from a need for a methodology to support the strategic prioritisation of green open space in Dar es Salaam (Karutz et al., 2019. Available online). The central frame of the atlas is based on ecosystem services thinking, which highlights the social benefits of green open space and vegetated areas in a city. Each 'theme' in the atlas represents an urban challenge, such as rising urban heat or flooding. Spatial images are then used to link the location of urban issues with the location of existing green spaces and the ecosystem services provided by those green open spaces. Together, these aspects provide a logical and spatially explicit basis for prioritising a City's investment in green open space.

The Atlas concepts are very well aligned with several goals in this LBSAP. The Atlas serves to promote awareness of the benefits of urban nature (Ilala LBSAP Goals 1.1 and 1.2). The mapping and analyses that Ilala stakeholders identified as priorities (Focus areas 2, 3 and 4) need to be conducted at a scale that is appropriate for Ilala, but The Thematic Atlas provides a broad scale basis which can inform the design of those tasks.



7.2 Illustrated Map of biodiversity in Dar es Salaam

The illustrated map of nature's benefits in Dar es Salaam was based on the biodiversity theme and map of the Thematic Atlas of Nature's Benefits in Dar es Salaam. This map shows the wealth of remaining biodiversity in Dar es Salaam and the benefits to people. The purpose of the map is to inspire conservation and wise use of resources. A copy of the map can be downloaded from here: https://iclei.org/en/media/download-a-free-illustrated-natural-asset-map-of-dar-es-salaam

The illustrated map tool links strongly to the Ilala LBSAP Goals 1.1. and 1.2. These goals relate to raising awareness of the benefits of nature. The format of the map lends itself especially to use in primary, secondary and tertiary education systems but is also designed to inspire city and municipal officials to appreciate the benefits of nature to urban societies.

7.3 Global Guidelines for vertical integration of biodiversity strategies and action plans

Effective subnational and local implementation of the National Biodiversity Strategies and Action Plans (NBSAPs) and the Convention on Biological Diversity (CBD) in general depends on two interconnected elements: the capacity of each level of government to develop, execute and monitor their own biodiversity strategies and action plans or related instruments that mainstream biodiversity into their wider objective and cover the obligations of an NBSAP, and the coordination mechanisms between these levels, including synergies across levels of government in planning BSAPs. Guidelines were developed to this effect: “Guidelines for an integrated approach in the development and implementation of national, subnational and local biodiversity strategies and action plans.” The development of these guidelines was supported by the Japan Biodiversity Fund, is a collaboration between the ICLEI Cities Biodiversity Center (CBC) and the Secretariat of the Convention on Biological Diversity (SCBD).

The mandate for these Guidelines originates from COP 12, decision XII/9, in which the Executive Secretary of the CBD was requested "to assist Parties and subnational and local governments, and their partners, to more effectively integrate the contribution of subnational and local governments into the implementation of the Strategic Plan for Biodiversity 2011–2020". These Guidelines are, therefore intended as a tool to advance the subnational and local implementation of NBSAPs, provide guidance on how to make best use of subnational and local authority knowledge in compiling and implementing NBSAPs, and coordinate planning, governance and monitoring mechanisms between different levels of government to optimize synergies. A companion volume to these Guidelines provides background information, including an overview of the current status of BSAP development at national and subnational levels, and outlines the key findings of the consultative process followed in developing these Guidelines. The Guidelines and Companion Volume can be downloaded here: https://cbc.iclei.org/project/bsap-guidelines/

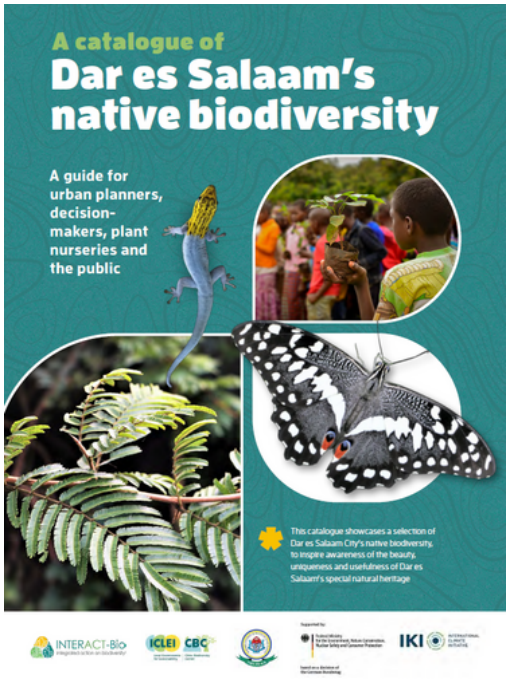
7.4 The Economics of Ecosystems and Biodiversity (TEEB) Manual for Cities

The Manual for Cities builds upon the TEEB reports, tailoring information specifically for cities, drawing on ICLEI and the International Union for Conservation of Nature's (IUCN's) Local Action for Biodiversity Pioneer Project. The manual highlights how a focus on ecosystem services and their valuation can create direct benefits for cities. It also provides stepwise guidance on how to do this illustrated by in-depth case studies. The Manual can be downloaded here: http://www.teebweb.org/publication/teeb-manual-for-cities-ecosystem-services-in-urban-management/

The TEEB manual can be used to support several of the goals in this LBSAP. The TEEB is issue driven and it makes links between ecosystem services and urban issues. So for example, the issues of enhanced livelihoods (Goal 3.1) and efforts to reduce compostable waste (Goal 5.1), are identified in this LBSAP as key issues. The TEEB manual can be used to define the ecosystem services that can help address these issues. The TEEB can also be used to guide the assessment of ecosystem services. This aligns well with Goal 2.2 which seeks to determine the current condition of existing green spaces in Ilala Municipality. The TEEB manual can also support the process of prioritising green space and urban nature for protection and restoration efforts as expressed in Goal 4.3 in the Ilala LBSAP.

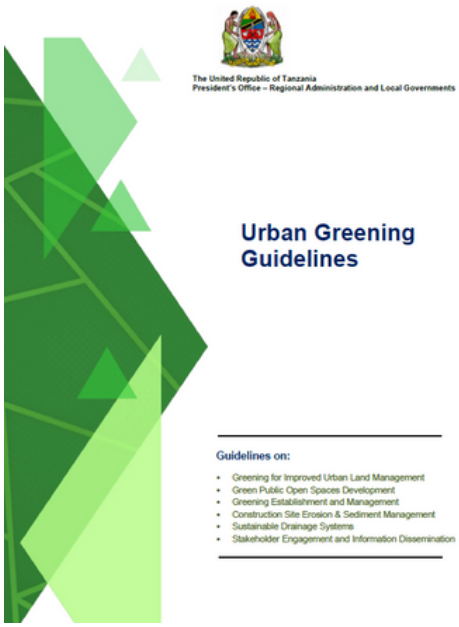
7.5 Dar es Salaam biodiversity catalogue

The Biodiversity catalogue is the first attempt at showcasing a selection of iconic biodiversity elements and species that are endemic and indigenous to Dar es Salaam and the coastal forest zone of Tanzania. The major focus of this tool is on plants and providing guidance on plant and tree species selection when planting to achieve defined social benefits (i.e. ecosystem services) in the city, such as shade, aesthetic beauty, food and medicine. The overall aim of this work was to create awareness of the rich indigenous natural heritage of Dar es Salaam and to provide guidance on how to incorporate these elements into urban greening projects. Available online here.



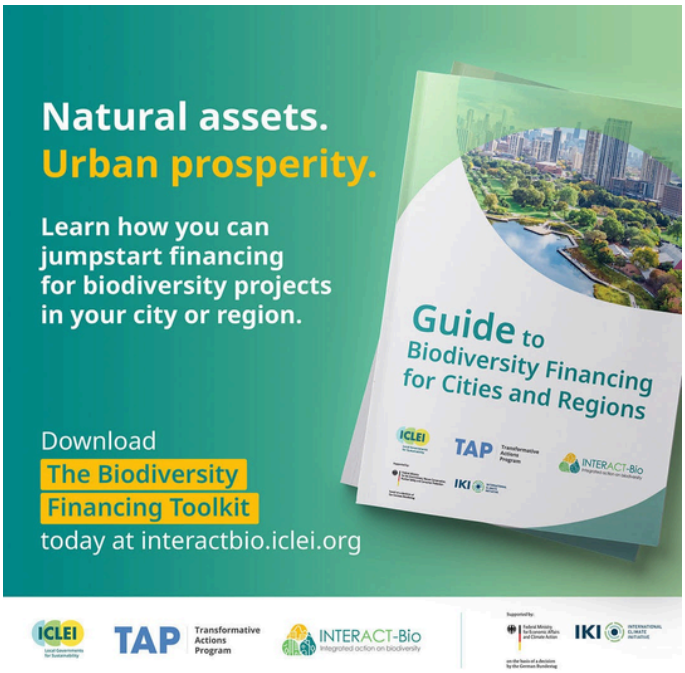
7.6 Tanzania Urban Greening Guidelines

The Tanzania Urban Greening Guidelines were not yet published at the time of writing. This will be an important resource in future as it addresses the decisions and tools around the operations of urban greening. In particular, it deals with greening in relation to grey infrastructure projects and thus provides an excellent entry point for identifying synergies with biodiversity and ecosystem services that provide municipal services alongside grey infrastructure interventions. Important themes in the Guidelines that provide entry points for the LBSAP goals are Open Space Development, Sustainable Urban Drainage Systems (SuDS) and erosion control.



7.7 Tanzania Urban Greening Guidelines

The Biodiversity Finance toolkit developed by ICLEI offers (1) A biodiversity finance decision-making tree, (@) A catalog of biodiversity financing and technical assistance opportunities for 2023-2024 and (3) A Guide to Biodiversity Financing for Cities and Regions.



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Annexure
Stakeholder validation workshop (April 2024) feedback

Key take-away messages/themes

1. Urban biodiversity initiatives can contribute at different scales, from small, urban gardens, to large catchment-scale projects. The LBSAP can and should be used to facilitate a range of projects at different scales and demonstrating spatial and functional connectivity (e.g. between land, coastal and marine) between them, where possible. Stakeholders also expressed the need for a typology of urban nature-based interventions and a toolkit that shows how different tools can support diverse interventions.
2. Lack of policy alignment and institutional and operational integration between key sectors can negatively affect projects with biodiversity goals. In this exercise, land-coast-marine connections, waste water, settlement planning and roads development were identified as critical opportunities for improved alignment to support biodiversity initiatives.
3. Mtaa, community and household-level initiatives (and other existing institutional structures such as village-level Beach Management Units), i.e. local-level involvement and awareness are critically important for project success and long-term behaviour change. This aspect seems to be often overlooked when designing projects and interventions.

1. Expanding and enhancing LBSAP Focus areas and goals

- Education and awareness: Advocate capacity building campaigns to stakeholders in urban greening projects including plant nursery operators who lack expertise on plant species implications on urban biodiversity, but sells a lot of exotic plants to the community.
- Education and awareness: Consider educational assets and the link to conserving endemic tree species, e.g. ‘minaki’ – a tree species endemic to the Pugu Forest.

- Recent study conducted by the Urban Biodiversity Hub, which evaluated various LBSAPs primarily from Europe and the US [4]. The assessment focused on themes such as society, consumption, ecosystems, and climate. Interestingly, many of these plans scored poorly in addressing human wellbeing and species exploration, areas that are crucially covered in goal 2.4 regarding species exploration in the Dar es Salaam LBSAP. It seems there's room for enhancement, particularly in goal 5 concerning wellbeing. One suggestion is to explicitly include green open public spaces in the LBSAP.
- Include open spaces and gardens more explicitly as green infrastructure in the LBSAP. Need more narrative but also a graphic on how different tools can work jointly.
- Would be ideal to have a schematic showing how various tools and toolkits can support the LBSAP goals. And for example, explaining how small-scale interventions can support the broader goals of the LBSAP.
- While the LBSAP highlights solid waste management in goal 4, it's important to address the significant threat posed by sewage to fragile ecosystems like the Msimbazi River. There appears to be a missed opportunity to incorporate explicit measures and methodologies for wastewater (sewer) management. Poor water quality is also a threat to critical marine habitats (coral reefs and seagrass meadows) offshore from Ilala.
- The Urban Planning and Development Control Strengthening project [UPDCSP] carried out by the President's Office-Regional Administration and Local Government [PO-RALG] through the Dar es salaam Metropolitan Development Project and funded by the World Bank, involved training 450 participants including officials at various levels of government from national to ward and sub ward level on various modules. The module on Improving the quality of urban plans included training on the use of various types of plans such as the conservation area plan which incorporates nature-based solutions within urban planning frameworks. Additionally, the components discussed in the training included the minimum requirements and approval procedures for operationalizing the conservation area plan. This content was also included in a guideline for decision makers which was validated by national level institutions in 2022 to support government actors in improving urban planning practices through a coordinated and multi-stakeholder approach.
- Urban planning response: Problem of unguided urban land development, i.e. lack of control. Should be a major area of attention. Very little land remaining for Biodiversity.

[4] Pierce JR, Drill S, Halder MD, Tan MMJ, Tiwari A and López Guijosa PA (2021). Scaling Biodiversity Conservation Efforts: An Examination of the Relationship Between Global Biodiversity Targets and Local Plans.Front. Conserv. Sci. 2:752387. doi: 10.3389/fcosc.2021.752387

- Urban Planning should include disaster risk and flooding (due to poor drainage).
- On Goal 5.1: Building permit approvals to include greening aspects at plot level development, could enhance efforts to connect urban green patches and so enrich biodiversity and ecosystem networks.
- Reviving lost biodiversity areas, e.g. encroached wetlands and lakes (consider relocations and compensation).

2. Suggestions that relate to projects and new project selection criteria

- Comment: There is an opportunity to link focus area 1 and 4 by raising awareness of the crucial connections between land and ocean i.e. poor waste management on land has downstream impacts on ocean health. This creates livelihood and wellbeing impacts for people reliant on fisheries-based livelihoods and has implications for food and nutritional security for the wider DSM population.
- Also looking at the scalable applications of this all the way from a residential garden, mtaa-level projects and small urban forests to large projects like the Msimbazi catchment project shows the broad scope that green infrastructure solutions can provide to the city. Need to understand how to enhance NBS at various scales. Need to identify (e.g. a typology?) of green infrastructure solutions and having access to a toolkit that guides decisions re which interventions work best in defined land uses. Scale aspects should be unpacked.
- When planning interventions, incorporate critical biodiversity areas, e.g. the endemic East African coastal forests and the existing forest reserves.
- BRT (Bus Rapid Transit) roads built but with no tree planting component. Missed opportunity.
- Prioritise community-level and neighbourhood-level projects and also metro- or city-wide projects

3. Institutional arrangements to advance the LBSAP & projects

- Identify opportunities for harmonising environmental efforts and urban planning institutions. Policy reforms needed as part of the process to integrate biodiversity projects with urban planning.
- Beach Management Units are a village level institution that can also provide support for LBSAP activities in the coastal zone.
- Institutional support should be linked to who is doing what, and stakeholders mandate and roles should be mapped. The land use planning unit should closely be engaged, e.g. city and municipal town planners as being mandated to do planning in the country.

- Ensure community awareness and involvement in planning and from the onset – this will affect the success of projects. Also assess willingness of local communities to contribute to initiatives. Consider community-level projects and projects that can influence livelihoods. Community-level working groups and bylaws to enforce and maintain projects.
- Policy reforms to link/integrate all urban projects with biodiversity aspects.
- Need for alignment between plans such as the LBSAP and other plans, frameworks and legislation, e.g. Consider marine reserves that fall under Dar es Salaam city and integrated coastal zone management plans.
- Stakeholders need to know more about what the city is doing so that stakeholders can know how to be involved and how to contribute.
- The LBSAP starts to involve sectors. Diverse institutions can contribute. Need a mechanism (e.g. committee) to plan/direct joint and diverse contributions.
- Capacity building at the Mtaa level could be a good project in itself, e.g. bylaw development.
- Be sure to make use of directives from top level government and regional administration.
- There are existing committees (to address various issues) at the Mtaa management level. But communities and household levels, also very important to work with these levels of society.
- Institutional arrangements to leverage existing structures. Challenge is to maintain institutional fora as this needs financing. It is also possible to institutionalise working groups within existing institutions (e.g. Mtaa management/school boards), then no resources needed.
- Need a site/issue/project specific approach to determining institutional collaborations and defining diverse interests.
- Need mandate mapping.

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