

THE UNITED REPUBLIC OF TANZANIA

**PRESIDENT'S OFFICE - REGIONAL ADMINISTRATION AND LOCAL
GOVERNMENT (PO - RALG)**



THE MSIMBAZI BASIN DEVELOPMENT PROJECT



**ENVIRONMENTAL AND SOCIAL MANAGEMENT
FRAMEWORK (ESMF)**

REPORT

DECEMBER, 2021

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ACRONYMS

COVID-19	Coronavirus Disease 2019
CESMP	Construction Environmental and Social Management Plan
CoC/CEC	Code of Conduct / Code of Ethical Conduct
DMDP	Dar es Salaam Metropolitan Development Project
DUTP	Dar es Salaam Urban Transport Improvement Project
E&S	Environmental and Social
ECPRW	Tanzania Environmental Code of Practices for Road Works
EHS	Environmental, Health and Safety
EHSGs	Environmental, Health and Safety Guidelines
EMA	Environmental Management Act
EMO	Environmental Management Officer
ESA	Environmental and Social Audit
ESCP	Environmental and Social Commitment Plan
ESF	Environmental and Social Framework
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESS	Environmental and Social Standard
FDCO	UK Foreign Commonwealth and Development Office
GBV	Gender Based Violence
GIIP	Good International Industry Practice
GoT	The Government of Tanzania
GRM	Grievance Redress Mechanism
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome
HSMP	Health and Safety Management Plan
IDA	International Development Agency
LGAs	Local Government Authorities
LMP	Labour Management Procedures
MBDP	Msimbazi Basin Develop Project
MOP	Msimbazi Opportunity Plan
MSMF	Msimbazi Strategy and Management Framework
MSPA	Msimbazi Special Planning Area

NEMC	National Environment Management Council
OHS	Occupational Health and Safety
OSHA	Occupational Safety and Health Authority
PDO	Project Development Objective
PIU	Project Implementing Unit
PO-RALG	President’s Office – Regional Administration and Local Government
PPE	Personal Protective Equipment
PPPs	Public Private Partnerships
RAP	Resettlement Action Plan
RISE	Roads for Inclusion and Social Economic Opportunities Project
ROW	Right of Way
RPF	Resettlement Policy Framework
SEA	Sexual Exploitation and Abuse
SEP	Stakeholder Engagement Plan
SSESMP	Site Specific Environmental and Social Management Plan
STDs	Sexually Transmitted Diseases
TACTIC	Tanzania Cities Transforming Infrastructure and Competitiveness
TANESCO	Tanzania Electric Supply Company Ltd
TANROADS	Tanzania National Roads Agency
TARURA	Tanzania Rural and Urban Roads Agency
TMP	Traffic Management Plan
ToR	Terms of Reference
TSCP	Tanzania Strategic Cities Project
TURP	Tanzania Urban Resilience Program
ULGSP	Urban Local Government Support Program
WB	World Bank
WBCU	World Bank Coordination Unit
WCF	Workers Compensation Fund
WMP	Waste Management Plan

EXECUTIVE SUMMARY

The Government of Tanzania (GoT), through President's Office - Regional Administration and Local Government (PO-RALG) is preparing Dar es Salaam Metropolitan Development Project-Msimbazi Basin Development or Msimbazi Basin Development Project (MBDP). The proposed Project Development Objective (PDO) statement is to "To strengthen urban services and institutional capacity in the Dar es Salaam Metropolitan area in order to improve resilience, mobility, and livability; and service delivery to low income areas". The project will invest in an integrated set of mitigation measures to resolve persistent flooding in the Msimbazi basin in Dar es Salaam, with a focus on the lower Msimbazi valley flood plain area. The Project will have five broad components namely (i) Component 1: Msimbazi Basin Development Infrastructure; (ii) Component 2: Preventative resettlement of flood-prone communities; (iii) Component 3: Strengthening institutions for resilient urban development; (iv) Component 4: Project Management; and (v) Component 5: Contingent Emergency Response. The GoT intends to request from the World Bank (WB) a credit amounting to US\$ 270 million for implementation of the project in a duration of five (5) years (2022 – 2027).

This document is an Environmental and Social Management Framework (ESMF) prepared in line with the WB's Environmental and Social Framework (ESF) whose objectives are to protect people and the environment from potential adverse impacts that could arise from Bank-financed projects and promotes sustainable development. The ESF consists of the World Bank's Vision for Sustainable Development; the World Bank's Environmental and Social Policy for Investment Project Financing, which sets out the requirements that apply to the Bank; the 10 Environmental and Social Standards (ESSs), which set out the requirements that apply to Borrowers; Bank Directive: Environmental and Social Directive for Investment Project Financing; and the Bank's Directive on addressing Risks and Impacts on Disadvantaged or Vulnerable Individuals or Groups; and the World Bank Group Environmental, Health and Safety Guidelines (EHSGs).

The WB ten ESSs include: ESS1- Assessment and Management of Environmental and Social Risks and impacts; ESS2-Labour and Working Conditions; ESS3-Resource Efficiency and Pollution Prevention and Management; ESS4-Community Health and Safety; ESS5-Land Acquisition, Restrictions on Land Use and Involuntary Resettlement; ESS6-Biodiversity Conservation and Sustainable Management of Living Natural Resources; ESS7-Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities; ESS8-Cultural Heritage; ESS9-Financial Intermediaries; and ESS10-Stakeholders Engagement and Information Disclosure. Of the 10 ESSs, only ESS9 is irrelevant to the proposed MBDP. In line with the requirements of these ESSs, this ESMF has been prepared alongside other framework documents for MBDP namely Resettlement Policy Framework (RPF); Stakeholder Engagement Plan (SEP); Labor Management Procedures (LMP); and Environmental and Social Commitment Plan (ESCP).

The ESMF is to assist in ensuring that the assessments of possible environmental and social impacts risks in the project sites are thoroughly carried out to provide a guide for compliance with the project monitoring indicators during the implementation. Given the nature of the activities and technical assistance to be financed, the ESMF will cover all five project components and thdescribed in section 2.

Consistent with both WB's ESF and Tanzania's policy, legal and institutional framework, this ESMF establishes a process of how to manage the adverse environmental and social impacts and risks that may result from implementation of the proposed MBDP. It specifically establishes clear procedures and methodologies for screening subprojects, undertaking required level of environmental and social assessment; preparation of appropriate subproject level safeguard instruments {namely Environmental and Social Impact Assessments (ESIA), Environmental and Social Management Plans (ESMPs), Health and Safety Management Plans (HSMPs), Environmental and Social Audit (ESA), Traffic Management Plans (TMPs), Grievance Redress Mechanism (GRM)) etc. review, approval and monitoring of implementation of subprojects to be financed under the Project. It also specifies appropriate roles and responsibilities to implementing agencies (PO-RALG, TANROADS and participating LGAs), ESIA Consultants, Design Consultants, Supervision Engineers/Consultants, Contractors and WB. This process of compliance with both WB's ESSs and Tanzania's policy, legal and institutional framework is expected to drive the proposed MBDP towards sustainable development.

Some preliminary assessments are ongoing including the ESIA for the Jangwani Bridge; water quality and quantity assessments; a Strategic Environmental and Social Assessment (SESA) report is being prepared to systematically examine the environmental and social impacts associated with the Msimbazi Opportunity Plan; toxicology assessment of sediments from Msimbazi River etc.

US \$ 1,360,000 is an estimated cost for the implementation of the ESMF, as summarized in the table below. The cost for implementation of other safeguard documents (RPF, SEP, LMP and GRM) are presented separately in each of them. Budget for implementation of ESIA's and ESMPs will be determined during their preparations and will be included in the overall costs (BOQs) of respective subprojects.

S/N	Activity	Cost per MBDP Year (USD)					Total (USD)
		1	2	3	4	5	
1.	Implementation of ESMF	100,000	100,000	100,000	100,000	100,000	500,000
2.	ESIAs and ESMP preparations	500,000					500,000
3.	Training Needs Assessment	40,000					40,000
4.	Technical Training to WBCU	50,000					50,000
5.	Technical training to ULGAs	50,000					50,000
6.	Refresher workshops to WBCU and ULGAs			30,000			30,000
7.	Workshops to Design Consultants	10,000					10,000
8.	Workshops to Contractors and Supervision Consultants	10,000		10,000		10,000	30,000
9.	Community leaders awareness raising and sensitization	20,000	20,000	20,000	20,000	20,000	100,000
10.	Contingent training of LGAs staff	10,000	10,000	10,000	10,000	10,000	50,000
	TOTAL	790,000	130,000	170,000	130,000	140,000	1,360,000

1. INTRODUCTION

1.1. Project Background

The Msimbazi River Basin in Dar es Salaam is a strategically important area of the city for infrastructure, mobility, commerce and ecosystem services including flood control. Two of four of Dar es Salaam's main traffic arteries cross the main flood plain near the river's discharge to the sea, including the city's first operational Bus Rapid Transit (BRT) corridor. Communities at the lower reaches of the river, which tend to be poor, unplanned settlements, largely depend on close access to Dar es Salaam's central business district for their livelihoods, and benefit from social services within walking distance. The river catchment includes significant natural assets, including protected forest areas in the headwaters down to wetlands and mangrove forests in the lower reaches.

The basin is densely populated and over the past few decades has become highly polluted, experienced rampant environmental degradation, and flood-prone areas in the middle and lower reaches of the Basin have been encroached by settlements and clogged by waste, debris and sedimentation. This has resulted in a situation where annual rains result in loss of life and property, paralysis of key transport networks, and damage to critical infrastructure.

The Government of Tanzania (GoT) has embarked on three major strategic programs to reduce the vulnerability of Dar es Salaam to natural hazards and the adverse impacts of climate change, and build resilience to adapt to such impacts including the impacts on transport: the Tanzania Urban Resilience Program (TURP), the Dar es Salaam Metropolitan Development Project (DMDP) and the Dar es Salaam Urban Transport Improvement Project (DUTP). TURP is a 5-year trust fund partnership implemented by the World Bank and GoT with resources from the UK Foreign Commonwealth and Development Office (FCDO). The main objective of the TURP is to support national and local governments in Tanzania to strengthen the management of climate risk in cities. DMDP is a US\$300 million project implemented by the PO-RALG and financed by the World Bank. The main objective of the project is to improve urban services and institutional capacity in the Dar es Salaam Metropolitan area, and to facilitate potential emergency response. DUTP is a US\$ 450 million project implemented by the Tanzania National Roads Agency (TANROADS) with the objective to improve transport mobility, accessibility, safety, and quality of transport service delivery along the selected corridors in Dar es Salaam.

Addressing flooding in the Msimbazi Basin was recognized as important to urban resilience and mobility in Dar es Salaam under TURP, DMDP and DUTP, given the economic impacts the damages on property and transport infrastructure have had on the poor and vulnerable. The GoT had made past attempts at demarcating the lower Basin as non-developable hazard land as well as a proposal to develop it as a city park, but these efforts were not fully implemented. Two demolition campaigns were initiated to remove informal settlements from flood-prone areas but halted due to social opposition. Limited ad hoc dredging of the river channel to remove accumulated sediment and waste before annual rains has been carried out, but a sustainable and comprehensive management system is not yet in place. It was clear that a multi-sectoral, multi-stakeholder approach would be needed to address the complex institutional, environmental, social and technical challenges posed by regular flooding.

Starting in 2018, the GoT and World Bank facilitated a stakeholder-led participatory planning process (using a design charrette methodology) that involved more than 200 people from 59 institutions and communities. A wide range of actors including government institutions, community members and representative organizations, and technical experts, as well as various studies and activities including the development of the river profile of the Basin and modelling of flood scenarios. For 6 months, in 30 working sessions, stakeholders worked in a collaborative fashion to develop the Msimbazi Flood Mitigation Study and Msimbazi Opportunity Plan (MOP) which includes a strategic framework for open space and environmental management in the wider Msimbazi river Basin (Selander Bridge to Pugu Hills) and a more detailed conceptual plan for flood control, river revitalization, open space, and recreation for the lower Msimbazi flood plain (Selander Bridge to Kawawa Road). The MOP is summarized in the box below. The MOP is to be completed in several phases starting from the lower Basin and moving upstream, with the first phase focusing on the lower Basin.

The Msimbazi Opportunity Plan (from Executive Summary)

- a) From a hazardous area for people to the green heart and lungs of the city;
- b) From a flood hazard area to an iconic city park surrounded by prime real estate for urban development;
- c) From a liability to an asset for Dar es Salaam.

The lungs of the city

- a) The Pugu-Kazimzumbwi natural forest reserves;
- b) The wooded areas in the upper & middle Basins alongside the riverbanks; and
- c) The Mangrove forest and wetlands between Hananasif and Upanga.

Extending the surface area and quality of these eco-system elements will help Dar es Salaam improve its resilience. These interventions will: (i) improve the water retention capacity in the catchment area and help reduce vulnerability to flooding; (ii) increase carbon capture and mitigate climate change; and (iii) help the city adapt to global warming by developing a cool corridor in the city center.

The heart of the city:

- i. An iconic City Park bordering the business centre; and
- ii. Other Parks upstream

The Lower Basin between Selander Bridge and Kawawa Road becomes the location of a multi-functional city park of 400 hectares with three activity zones: (i) The river zone is a flood plain that caters for large volumes of water during peak flows after heavy rainfall events but in a controlled and non-hazardous way; (ii) The river plain is also a natural reserve of wetlands and mangrove forests, rich in biodiversity; and (iii) The terraced zone in which the first level is used for sports and leisure activities, but can accommodate occasional flooding, while a second terrace and Basin edge surrounding the Lower Basin are safe from riverine flood hazard. This is the location of 57 hectares of real estate for mixed urban functions including social housing, social amenities, offices and commercial real estate.

In November 2020, the Government of Tanzania requested financing from the World Bank and FDCO for the implementation of first phase of the MOP. Three principles inherent to the design of the Lower Basin are:

- i. Focus on conveyance to drain river water from the basin to the ocean as quickly as possible;
- ii. Create elevated terraces to guide the water and create higher edges to protect against flooding; and

- iii. Create a City Park with functional uses of the terraces and the flood plain.

The objective of the financing is to reduce impacts of flooding to settlements and critical infrastructure, and create an enabling environment for resilient urban development in targeted communities in the Dar es Salaam Metropolitan Area. It is envisioned to address these issues through investments in: Flood protection and prevention including the construction of the terraces; Resilient Transport Infrastructure to increase connectivity and mobility including upgrading the Jangwani bridge and surrounding roads to be flood free; measures to control sediment and solid waste in the river including greening and other erosion control measures and urban planning, services and management to redevelop the area to an affordable, livable area creating an enabling environment for economic development and job creation.

The investments will be implemented by PO-RALG and LGAs except for the Jangwani Bridge and its related works, which will be managed by TANROADS.

1.2. Environmental and Social Management Framework

The World Bank's Environmental and Social Policy for Investment Project Financing sets out the requirements that the Bank must follow regarding the projects it supports through Investment Project Financing. The Environmental and Social Standards set out the requirements for Borrowers relating to the identification and assessment of environmental and social risks and impacts associated with projects supported by the Bank through Investment Project Financing. The Bank believes that the application of these standards, by focusing on the identification and management of environmental and social risks, will support Borrowers in their goal to reduce poverty and increase prosperity in a sustainable manner for the benefit of the environment and their citizens. The standards will: (a) support Borrowers in achieving good international practice relating to environmental and social sustainability; (b) assist Borrowers in fulfilling their national and international environmental and social obligations; (c) enhance non-discrimination, transparency, participation, accountability and governance; and (d) enhance the sustainable development outcomes of projects through ongoing stakeholder engagement. The ten Environmental and Social Standards (ESS) establish the standards that the Borrower and the project will meet through the project life cycle, as follows:

- ESS1: Assessment and Management of Environmental and Social Risks and Impacts;
- ESS2: Labor and Working Conditions;
- ESS3: Resource Efficiency and Pollution Prevention and Management;
- ESS4: Community Health and Safety;
- ESS5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement;
- ESS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources;
- ESS7: Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities;
- ESS8: Cultural Heritage;
- ESS9: Financial Intermediaries; and
- ESS10: Stakeholder Engagement and Information Disclosure.

For the preparation of this ESMF the following Environmental and Social Standards are relevant:

- Assessment and Management of Environmental and Social Risks and Impacts;

- Labour and Working Conditions;
- Resource Efficiency and Pollution Prevention and Management;
- Community Health and Safety;
- Land Acquisition, Restrictions on Land Use and Involuntary Resettlement;
- Biodiversity Conservation and Sustainable Management of Living Natural Resources;
- Cultural Heritage; and
- Stakeholder Engagement and Information Disclosure.

It should be noted that although the MOP has already identified respective sub-projects, the exact nature of the works and further flood models (or their location) is not currently known. Therefore, the appropriate instrument to be prepared is the ESMF.

The Sub-Projects under the Msimbazi Basin Development Project (MBDP) may have adverse environmental and social impacts which must be identified and necessary measures to address them taken as part of the Project approval and implementation. Considering that the actual sites/design has not been clearly established; having the ESMF is a pre-requisite for their approval for implementation.

This ESMF has been prepared in line with the World Bank's Environmental and Social Standards (ESSs) whose details are given in section 2.2 of this ESMF. This ESMF has been prepared alongside other framework documents for the MBDP as listed below:

- Resettlement Policy Framework (RPF);
- Stakeholder Engagement Plan (SEP);
- Labor Management Procedures (LMP); and
- Environmental and Social Commitment Plan (ESCP).

1.3. Objectives of the ESMF

This ESMF sets out responsibilities for assessing, managing and monitoring environmental and social risks and impacts associated with each stage of a project as well as each component of the project in order to achieve environmental and social outcomes consistent with World Bank's Environmental and Social Standards (ESSs).

The ESMF is designed to help PORALG, TANROADs and LGAs manage the risks and impacts of the proposed project, and improve their environmental and social performance, through a risk and outcomes based approach. The desired outcomes for the project are described in the objectives of each ESS, followed by specific requirements to help achieve these objectives through means that are appropriate to the nature and scale of the project and proportionate to the level of environmental and social risks and impacts.

The ESMF shall assist the project implementers to ensure that the sub-projects are environmentally and socially sound and sustainable and that the environmental and social assessment will be proportionate to the risks and impacts of the project. It also inform the design of the project, and be used to identify mitigation measures and actions to improve decision making and manage environmental and social risks and impacts of the project throughout the project life cycle in a systematic manner, proportionate to the nature and scale of the project and the potential risks and impacts.

This ESMF ensures that all relevant National and World Bank's environmental and social requirements are adhered to address the risks and impacts of the project.

Specific objectives for the ESMF are:

- i. Assess the potential environmental and social impacts of the Project;
- ii. Establish clear procedures and methodologies at the subproject level, for screening, identification of environment and social impacts and for mitigation, monitoring and institutional measures. To guide on the preparation of appropriate safeguard instruments - Environmental and Social Impact Assessment (ESIA), Environmental and Social Management Plan (ESMP), Traffic Management Plan (TMP), Grievance Redress Mechanism (GRM) etc. - review, approval and implementation of subprojects to be financed under the Project;
- iii. Develop an ESMF Guidelines for the mitigation of the potential negative impacts and for monitoring compliance with the relevant Environment and Social Standards (ESSs) of the ESF;
- iv. Assess the capacity and training of the implementing agencies at the national and local levels, to implement the developed environmental and social management framework; and
- v. Establish the necessary funding requirements for the implementation of the ESMF.

1.4. Scope of ESMF

The ESMF is to assist in ensuring that the assessments of possible environmental and social impacts risks in the project sites are thoroughly carried out to provide a guide for compliance with the project monitoring indicators during the implementation. Given the nature of the activities and technical assistance to be financed, the ESMF will cover all five project components described in section 2.

1.5. ESMF Preparation Methodology

1.5.1. Literature Reviews

Review of relevant literature was undertaken during initial preparations and continued throughout the preparation of this ESMF. This helped in the identification of areas where further information would be needed in order to focus the preparation of the ESMF, and identification of stakeholders and pertinent issues related to the proposed project.

The following documents were reviewed:

- World Bank's Environmental and Social Framework (2018);
- National legislation and national policies
- Msimbazi Opportunity Plan's (MOP) Executive Summary, and its Volumes A (Strategy and Management Framework); and B (Detailed Plan for the Lower Basin);
- The World Bank Group's City Resilience Program: Supporting Msimbazi Opportunity report Msimbazi Special Planning Area;
- Flood modelling studies;

- Project Brief; Project Concept Note (PCN); and Project Appraisal Document (PAD).
- Background literature of the relevant environmental and social conditions of four participating municipal councils (MCs) of Ilala, Kinondoni, Temeke, Kisarawe and Ubungu; and
- Recently approved ESMF prepared in line with World Bank's Environmental and Social Framework (ESF) including ESMF for Tanzania Cities Transforming Infrastructure and Competitiveness (TACTIC) project and ESMF for Roads for Inclusion and Social Economic Opportunities (RISE) Project.

1.5.2. Site Visits and Inspections

Site visits and inspections were conducted to assess the type of stakeholders to be involved for each sub-project. It provided an opportunity to realise the uniqueness of stakeholders within every basin sections (mentioned in the MOP), so as to reduce their likelihood of facing challenges during the project implementation. Site visits also aimed at witnessing existing environmental and social conditions of all sections within the Msimbazi Basin from lower to upper basin as well as likely impacts for each anticipated activity within each section. Inherently, this prompted and allowed for preliminary simultaneous interviews/discussions with some key stakeholders like local leaders, / community members and any other stakeholders that will be directly affected by the project.

1.5.3. Stakeholder Consultations

Capitalizing on the GoT and World Bank facilitated stakeholder-led participatory planning process (using a design charrette methodology); stakeholders' consultations were conducted to all key stakeholders from the upstream of the Msimbazi River to the lower Msimbazi Basin to obtain their perceptions and opinions on the proposed MBDP as presented in section 8. Below is a list of stakeholders consulted.

Table 1: Tentative List of Key Stakeholders Consulted

S/N	Government Departments, Agencies, Authorities and NGOs	Number of Participants		
		Male	Female	Total
1.	ANOVA Consulting	1	0	1
2.	Architects Association of Tanzania	2	1	3
3.	Ardhi University	4	0	4
4.	BORDA	2	2	4
5.	CDR-International	4	1	5
6.	DASUDA	7		1
7.	DAWASA	3	1	4
8.	DAWASCO	1	0	1
9.	Department for International Development, UK	2	1	3
10.	East Africa Assembly	1	0	1
11.	ECORYS	4	0	4
12.	Hananasif	3	2	5
13.	Hananasif, Kawawa sub ward	1	2	3
14.	Hananasif, Mkunguni A subward	2	0	2
15.	Hananasif, Mkunguni B subward	1	0	1
16.	Humanitarian Open Street map	2	1	3
17.	Ilala Municipal Council	18	1	19
18.	Jangwani, Mtambani A subward	1	1	2

S/N	Government Departments, Agencies, Authorities and NGOs	Number of Participants		
		Male	Female	Total
19.	Jangwani, Mtambani B subward	3	0	3
20.	JBA Consulting	1	1	2
21.	Kigamboni Municipal Council	1	1	2
22.	Kigogo, Kati subward	3	0	3
23.	Kigogo, Mbuyuni subward	2	0	2
24.	Centre For Community Initiatives	2	1	3
25.	Kigogo, Mkwajuni subward	2	1	2
26.	Kigogo, Ward Council	0	3	3
27.	Kinondoni Municipal Council	4	1	5
28.	Kisarawe District Council	0	3	3
29.	Korea Eximbank	2	0	2
30.	LECIDE	1	0	1
31.	Magomeni Ward	0	1	1
32.	Magomeni, Dosi subward	2	0	2
33.	Magomeni, Idrisa Subward	3	0	3
34.	Magomeni, Mapipa subwar	3	0	3
35.	Magomeni, Suna subward	2	1	3
36.	Magomeni, Mtambani subward	1	0	1
37.	Mchikichini Ward	1	0	1
38.	Mchikichini, Ilala Kota subward	1	2	3
39.	Mchikichini, Msimbazi Bondeni subward	1	1	2
40.	Ministry of Lands, Housing and Human Settlements Development	5	3	8
41.	Ministry of Natural Resources and Tourism	2	0	2
42.	Ministry of Water and Irrigation	2	3	5
43.	Mzimuni Ward	0	1	1
44.	Mzimuni, Idrisa subward	1	0	1
45.	Mzimuni, Mwinyi Mkuu subward	3	0	3
46.	National Environment Management Council	5	4	9
47.	National Housing Corporation	1	0	1
48.	National Land Use Planning Committee	3	3	6
49.	Nipe Fagio (Yong Ambassadors)	7	4	11
50.	President's Office for Regional and Local Government	6	1	7
51.	PPF Pension Fund	0	1	1
52.	Prime Minister's Office	2	1	3
53.	Regional Administrative Secretariat	2	1	3
54.	SenseGuide	0	1	1
55.	Sering International	1	1	2
56.	TANROADS	3	0	3
57.	Tanzania Forest Service	2	0	2
58.	Tanzania Forestry Research Institute	1	1	2
59.	Tanzania Freight Forwarders Association	1	0	1
60.	Tanzania Green Building Council	1	0	1
61.	Tanzania Freight Forwarders Association	1	0	1
62.	Tanzania Green Building Council	1	0	1
63.	Tanzania Meteorological Agency	2	0	2
64.	Tanzania Private Sector Foundation	1	0	1
65.	Temeke Municipal Council	2	0	2

S/N	Government Departments, Agencies, Authorities and NGOs	Number of Participants		
		Male	Female	Total
66.	Town Planners Registration Board	1	0	1
67.	Ubungo Municipal Council	2	0	2
68.	Upanga, Charambe subward	2	0	2
69.	Vice Presidents Office	2	0	2
70.	Wami-Ruvu Basin Water Office	1	1	2
71.	Watumshi Housing Company	1	0	1
72.	WEMA Consult	5	2	7
73.	World Bank	12	5	17
74.	Magomeni, Mikumi subward	1	0	1
75.	COWI Consult	2	0	2
76.	Dar es Salaam City Council	7	13	20
77.	DART	3	0	3

1.5.4. Identification and Evaluation of Impacts

Potential direct environmental and social impacts are a result of interactions between sub-projects activities with the relevant baseline aspects (valued environmental receptors). The potential impacts were identified through:

- i. Identification of project activities /aspects causing impacts;
- ii. Establishing affected environmental and human components (valued receptors). were determined to include: vegetation, wetlands (rivers, lakes, etc.), soil, land stability, water quality and quantity, ambient air quality, employment and livelihoods, vulnerable groups, infrastructure, public safety and occupational health and safety;
- iii. Review of issues and concerns raised by stakeholders;
- iv. Recognition of an element by law, policy regulation or official decision;
- v. The use of professional/expert judgement or experience in the field; and
- vi. Superimposing baseline conditions onto the project components for impact identification, evaluation and development of mitigation and/or enhancement measures.

1.5.5. ESMF Report Format

Table of Contents for this ESMF is in line with the World Bank's Draft Guidance for Preparation and Implementation of ESMF.

1.5.6. Stakeholders Workshop(s) on Draft ESMF

Stakeholders' workshop(s) on Draft ESMF report will be organized and facilitated by TARURA/WBCU. Selection of participants (see **Annex 1**) will be based on the preliminary findings of the Draft ESMF report as well as discussion between the Consultant and TARURA/World Bank Coordinating Unit (WBCU). The workshop(s) will serve as a platform for giving feedback to the consulted stakeholders on how their views, concerns and recommendations were incorporated into the ESMF report as well as clarifying key issues and the way forward. This workshop will be done as part of the disclosure.

2. PROJECT DESCRIPTION

2.1. Project Development Objective

The proposed Project Development Objective (PDO) statement is to “To strengthen urban services and institutional capacity in the Dar es Salaam Metropolitan area in order to improve resilience, mobility, and livability; and service delivery to low income areas”. The following are proposed as PDO-level indicators:

- (a) *Improved Resilience*: Resilience of infrastructure and settlements to flooding (return period-years);
- (b) *Improved Livability*: Number of people within 2 km travel distance of newly constructed park and facilities (#);
- (c) *Improved Mobility*: Average time of lost connectivity of Morogoro Road during flood events (hours); and
- (d) *Improved Service Delivery in Low Income Communities*: Number of people in low-income communities with improved services (#).

2.2. Project Components

The project will invest in an integrated set of mitigation measures to resolve persistent flooding in the Msimbazi basin in Dar es Salaam, with a focus on the lower Msimbazi valley flood plain area. The project duration is 5 years (2022 – 2027).

Component 1: Msimbazi Basin Development Infrastructure (~US\$ 234 million equivalent, Years 1-5)

Component 1 is a program of investments focusing on integrated solutions to reduce flooding and enhance public use opportunities of the lower Msimbazi valley. The four subcomponents work synergistically to improve the hydraulic capacity of the river, build resiliency of key transport infrastructure, regenerate valuable land assets for public recreation and urban development, and reduce degradation of the Msimbazi watershed.

Subcomponent 1.1: Flood control interventions (~US \$70 million, Years 2-5)

This subcomponent will address key priorities for flood control infrastructure in the lower Valley to address riverine flooding. These interventions will begin downstream at the river’s outlet to the Indian Ocean, proceeding upstream until just beyond Kawawa Road.

Key investments include (a) recontouring the lower basin flood plain area including channeling and terracing- these works will recontour the riverbed to improve conveyance and construct multiuse terraces to accommodate floods; (b) sediment management activities including the construction of sediment traps in the middle and upper basin and development and implementation of a sediment monitoring and management plan; (c) construction supervision, analytics and designs for future investments, including flood modeling, feasibility studies, and detailed designs

to support flood control investments for the middle and upper catchment and future operations in the Series of Projects.

Subcomponent 1.2: Resilient transport infrastructure (~US \$95 million, Years 1-3)

This subcomponent will improve key transport infrastructure to protect public transit assets and minimize mobility disruptions during the rainy season. Investments will focus on the BRT Phase I corridor on Morogoro Road, which crosses the Msimbazi River at Jangwani Bridge, as well as rehabilitation of additional key transport assets that connect with the BRT system and city center.

Key investments include (a) rehabilitation of the Jangwani Bridge to accommodate flash flood events, including construction of a raised and widened multi-span bridge (390m) and raised embankments (680m) as well as excavating the riverbed during the construction phase to improve stormwater conveyance – in addition to dedicated BRT lanes, widening of the bridge will include pedestrian and cycling lanes and green areas that will accommodate non-motorized transport; (b) relocation of the Jangwani BRT bus depot and demolition of the current facility; (c) widening culverts of Selander bridge at the Msimbazi outlet to the sea to improve hydraulic conveyance and aid in tidal flushing of the mangrove forest (complementing forest rehabilitation activities under Subcomponent 1.4); and (d) connector roads that improve connectivity in the basin.

Target roads and bridges are mentioned in the table below.

Table 2: Target Roads and Bridges to be Upgraded/Rehabilitated

	Activity Description
1.	Rehabilitation and Upgrading of Barakuda - Majichumvi Road (3.5 km) – Ilala MC
2.	Rehabilitation and Upgrading of Majumba Sita - Segerea Road + Bridge (3.0 km) – Ilala MC
3.	Rehabilitation and Upgrading of Kijiwe Samli - Relini Road (1.2 km) – Ilala MC
4.	Rehabilitation and Upgrading of Kimara - Makoka (3.71 km) – Ubungo MC
5.	Biafra - Best Bite Road (1.36 km) – Kinondoni MC
6.	Construction of Hana Nasif Bridge and Approach Roads (11 km) – Kinondoni MC
7.	Pugu-Majohe- Mbondole- Kivule Hospital (12.6 km) – Ilala MC
8.	Umoja Tabata (4.3 km) – Ilala MC

Subcomponent 1.3: Msimbazi city park and redevelopment area (~US \$51 million, Years 3-5)

Subcomponent 1.3 will finance interventions to implement and sustain the land uses for the flood plain and flood control terrace levels in the lower Msimbazi Basin that will be constructed using infill material from works under Component 1.1.

Key investments include: (a) Msimbazi wetland and city park development, which will include a wetland park for stormwater attenuation and filtration and improved river embankments as well as walking paths; sports and recreation facilities; and amenities including landscaping, footpaths, public toilets and public gathering areas; (b) Constructing sites and service infrastructure to enable a mixed-income and mixed-used, low-carbon urban development in a 57-hectare land portfolio that will be created on the upper-level terrace. This will lay the foundation to reduce unplanned low- density urban development, avoiding long-term commitment to a higher-carbon built environment. This will include infrastructure services such as roads, drainage, street lighting,

wastewater management, utilities services, and open spaces, and will be complemented by institutional strengthening and transaction advisory services for land value capture and other public private partnerships that will be supported under Component 3.

Subcomponent 1.4: Watershed management through greening, erosion, and litter management (~US \$18 million, Years 2-5)

This subcomponent focuses on addressing the environmental and social challenges that contribute directly to the reduced carrying capacity of the river through restoring ecosystem services and reducing waste in the river system.

Key investments include: (a) mangrove restoration and conservation, including natural regeneration of the at-risk forest through sediment and solid waste removal, infrastructure to manage flows, and forest management. Information, education and communications (IEC) activities will include a visitor center, a wetland and mangrove forest boardwalk linked with the Msimbazi city park, educational outreach, and IEC campaigns on mangrove conservation; (b) upstream erosion prevention and greening including reinforcement of riverbanks at critical locations in the main channel and tributaries of the middle and upper basin, urban greening along riverbanks and tributaries, widening bridges and rehabilitating roads that inhibit water flow and exacerbate sedimentation, and reforestation using labor intensive public works (LIPW); (c) a solid waste management and litter control program, which will focus on reducing the volume of solid waste entering the Msimbazi river through improved cleaning and collection services that will include equipment; cleanup of identified informal dumpsites; communications programs related to waste management; and retrofitting drainage systems to collect waste.

Component 2: Preventative resettlement of flood-prone communities (~US\$ 20 million equivalent, Years 1-5)

This component will support the preventative resettlement of low-income flood-prone communities in the lower Msimbazi and implementation of the Resettlement Policy Framework and Resettlement Action Plan that builds on the inputs from communities during the stakeholder engagement process. Key activities to alleviate flood risk in vulnerable communities will include (i) implementation of the Resettlement Action Plan that prioritizes options for *in situ* and *in-kind* resettlement options, to be financed by the IDA credit, (ii) a Livelihood Restoration Program, (iii) implementation support, including case management for relocated households and RAP monitoring.

Component 3: Strengthening institutions for resilient urban development (~US\$ 8.50 million equivalent)

This component focuses on strengthening institutions, building capacity and facilitating coordination for management of the Msimbazi basin, including the investments and assets created under the project, the surrounding urban area and the watershed.

Institutional strengthening support will be provided for: (a) Msimbazi Special Planning Area (MSPA), established that would implement land use plans in the area, coordinate and ensure

maintenance (including the park and urban areas), capital improvements, emergency management and government services are provided to the area; and ensure enforcement of development and environmental regulations. The authority would be established during the project and become functional once the works are done; (b) Basin-wide management, which will include technical assistance to develop a Msimbazi Basin Watershed and environmental protection plan; establish development and infrastructure policies to reduce erosion and increase groundwater recharge (e.g., greening, sustainable urban drainage and erosion control); enforcement of water quality regulations in the watershed; and planning and design of infrastructure interventions for services (e.g., water and sanitation, drainage, drainage, solid waste). These activities would be supported and overseen by a designated technical working group under the project steering committee; (c) Dar es Salaam Local Authorities (DLAs), will support the institutional strengthening of the DLAs to support service delivery, urban development controls and environmental management in support of their associated roles in the Msimbazi Special Planning Area, surrounding urban areas and watershed. The project will finance training and institutional strengthening including urban planning, development controls, and basic service delivery including solid waste management. These activities would be supported and overseen by a designated technical working group under the project steering committee.

Component 4: Project Management (~US\$ 7.50 million equivalent)

This component will finance the direct costs of management and operation of the project to ensure smooth delivery and compliance with World Bank policy and guidelines. It will provide support to the President's Office – Regional Administration and Local Government (PO-RALG), Tanzania National Roads Agency (TANROADS, under the Ministry of Works), the Dar es Salaam City Council Project Implementation Unit (PIU), and DLA PIUs for continual project supervision, environmental and social monitoring, fiduciary management and auditing, office operating costs, and stakeholder coordination. It will also facilitate other implementing government departments (eg Tanzania Forestry Service) responsible for specific subcomponents to implement and coordinate their respective activities. Given the large number of stakeholders and criticality of stakeholder engagement in both planning and implementation of the project activities, this component will also finance public communications activities.

Component 5: Contingent Emergency Response (US\$ 0 million equivalent)

A project-specific Contingent Emergency Response Component (CERC) is included to facilitate access to rapid financing through the reallocation of uncommitted project funds in the event of an eligible crisis or emergency at the request of the Government of Tanzania. Specific details about this component (including activation criteria, eligible expenditures, specific implementation arrangements, and staffing) will be part of the Contingent Emergency Response Manual prior to the implementation of CERC's activities.

2.3. Project Geographical Location

The Msimbazi basin, with an area of 271 km², covers nearly one fifth of the Dar es Salaam city's land area and is home to an estimated 1.6 million inhabitants (27% of the city's total population).¹

¹ The Msimbazi Opportunity : Transforming the Msimbazi Basin into a Beacon of Urban Resilience : Executive Summary (English). Washington,

The basin stretches from the headwaters in the Pugu forest reserve, then continues eastward along an increasingly urbanized stretch as the river approaches its outlet to the ocean (Figure 1 below). The lower basin is a wide floodplain and wetland in the heart of Dar es Salaam near the city center, once a robust mangrove forest estuary which, while still intact, has died back in recent years. Two of four of Dar es Salaam's main traffic arteries cross the main flood plain near the river's discharge to the sea, including the city's first operational Bus Rapid Transit (BRT) corridor. Communities at the lower reaches of the river, which tend to be low income and reside in unplanned settlements, largely depend on close access to Dar es Salaam's central business district for their livelihoods, and benefit from social services within walking distance.

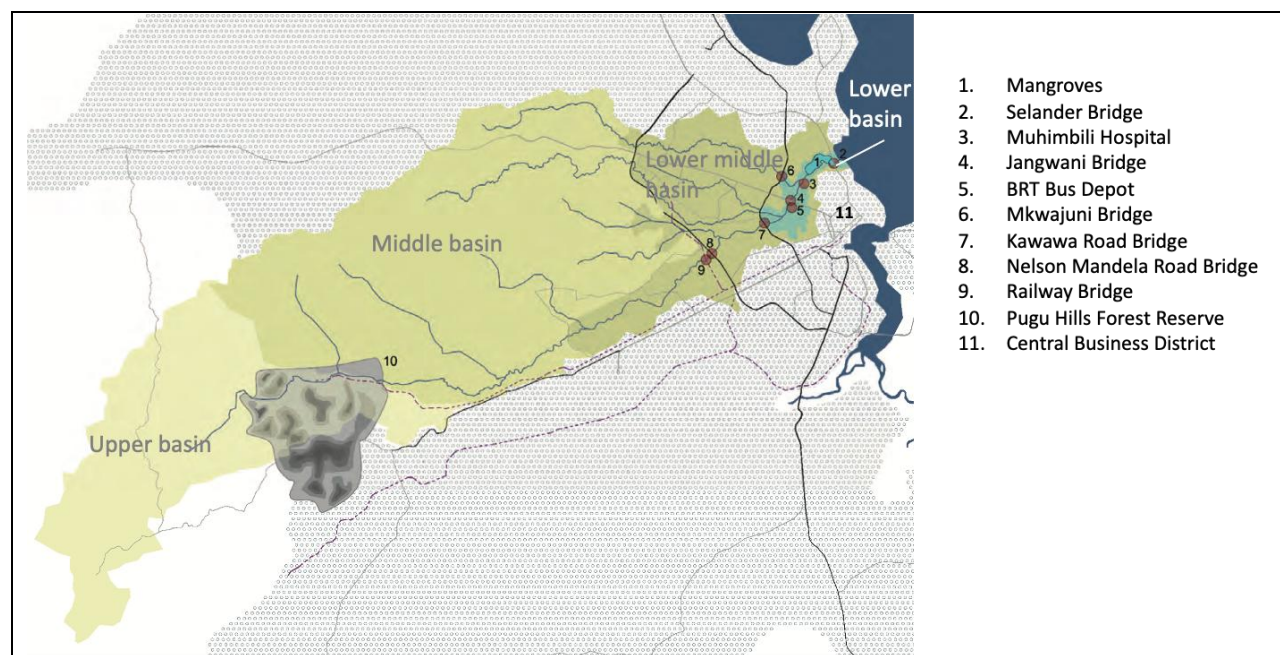


Figure 1: Msimbazi Catchment and Places of Interest

Source: MSMF-Volume B, 2019

The proposed MBDP will be implemented in the Lower Msimbazi Basin from Selander Bridge to Kawawa Bridge as well as the upstream of Msimbazi that covers the Pugu Hills. This ESMF covers the project's five components. Administratively, the project covers the local government authorities (LGAs) of Kisarawe District Council in the Coast Region (the catchment area), Ilala, partly Ubungo and Kinondoni municipal councils in the Dar es Salaam Region.

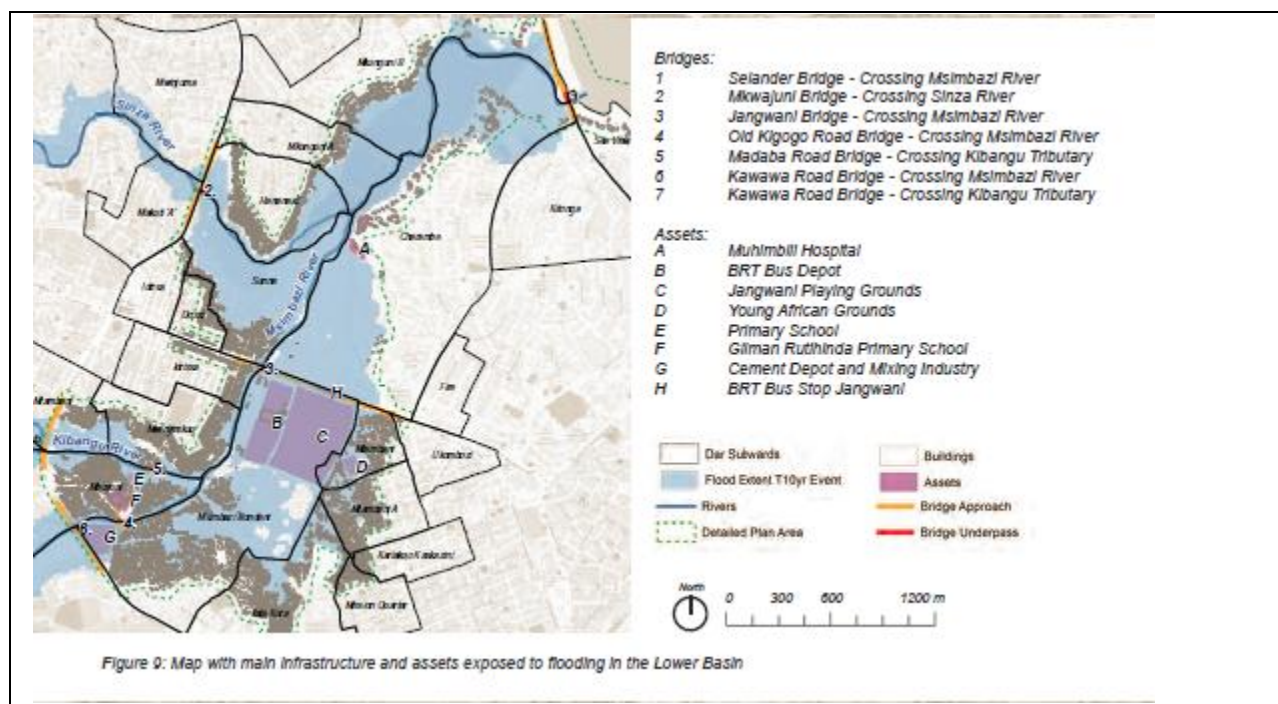


Figure 2: Map with Main Infrastructure and Assets Exposed to Flooding in Lower Msimbazi Basin

Source: MSMF-Volume B, 2019

2.4. Project Beneficiaries

The immediate beneficiaries of the project will be the approximately 50,000 inhabitants of the Msimbazi River Basin. These inhabitants will benefit from reduced flood risk, urban services and amenities from the proximity to the park and related developments. The population of Dar es Salaam (6.3 million people) will benefit through improved urban spaces, connectivity and less traffic disruptions.

2.5. Project Financing

The DMDP 2 - Msimbazi Basin Development Project, is intended as a first implementation phase of the Msimbazi Opportunity Plan (MOP) to reduce impacts of flooding to settlements and critical infrastructure, and create an enabling environment for resilient urban development in targeted communities in the Dar es Salaam Metropolitan Area. The preliminary cost estimate of the activities is \$280 million, \$270 million from World Bank and \$10 million from the Government of Tanzania.

3. LEGAL AND INSTITUTIONAL FRAMEWORK

Tanzania has a number of policies, laws and regulations and has an administrative framework for the management of environmental and social issues enshrined in the National Constitution. Tanzania has various Acts, Regulations and guidelines on environmental and social issues relevant to the proposed MBDP. Tanzania is also a signatory to and has ratified various international conventions on environmental and social sustainability. Some of the laws, regulations and guidelines that are relevant to the environmental and social management of the proposed MBDP are briefly described in the succeeding subsections.

3.1. Summary of National Policies and Strategies

Several national policies and strategies are applicable to the proposed MBDP.

Table 2: Applicable National Policies and Strategies

	Policy	Relevant sections
1.	National Environmental Policy, 1997	The policy requires that development projects be done in a way that does not compromise environmental integrity. It is mandatory to undertake EIA before any development project likely to have significant environmental impacts is given the go-ahead. Section 28 and 29, which states that in all projects, environmentally sound technologies (that is, those that generate no or low waste or protect environment) should be used. Section 56 (f), requires that workers' health shall be adequately protected from environmental health hazard. The proposed project shall ensure mitigation of the adverse impacts during project implementation.
2.	National Land Policy of 1997	The policy recognizes the need for protecting environmentally sensitive areas. It stresses protecting the environment and natural ecosystem from pollution; degradation and physical destruction. Important sections of the policy relevant to the proposed project in Iringa are section 2.4 (on use of land to promote socio-economic development; section 2.8 (on protection of land resources), section 3 (iii) and section 4 (on land tenure). For instance, section 3 (iii) states that "the Owner has the right to subdivide or lease the land etc. so long as these actions do not violate land use policies as stipulated by zoning regulations and local by-laws". This sub-section is relevant and provides guidance to the proponent's terms of occupancy, land use and land use change along the project corridor. Some of proposed subprojects will involve land acquisition and therefore the compensation shall be effected prior to the project implementation.
3.	National Water Policy of 2002	Section 5 (v) of the policy is relevant to the project. Subprojects shall abide by the regulatory instruments and procedures at all administrative levels in order to ensure there is no potential or actual water conflict among users and/or uses. Water policy issues particularly in water resources management underscore the disaster management from accidental pollution of water sources (Clause 4.8.4). The policy stresses on the sustainable use of water to maintain environmental flow which is essential for riparian biodiversity, wetland systems, and the freshwater-seawater balance in deltas and estuaries. This can be accomplished by controlled exploitation of water and treatment of wastewater (effluent) before emptying it into the environment.
4.	National Employment Policy of 2003	The major aim of this policy is to promote employment mainly of Tanzania nationals. Relevant sections of this policy are (i) 10.1-10.5 which describe strategies for promoting employment, section (ii) 10.6 which deals with employment of special groups i.e. women, youth, persons with disabilities, and section (iii) 10.8, which encourages foreign investors to employ competent Tanzanian nationals as opposed to expatriates. The contractor and operator will abide by the employment policy and ensure that all qualified nationals are afforded equal opportunities for employment.
5.	National Health Policy of 2003	The policy puts more emphasis on protecting workers from all health hazards that occur in industries, estates and plantations. It is the responsibility of the employers or

	Policy	Relevant sections
		developers to offer medical and preventive health services to their employees according to guidelines given by the respective Ministry.
6.	The National Occupational Health and Safety Policy of 2010	The policy which is employer-specific, gives a road map on the requirements for the occupational health and safety in work places and on how to promote the working capacity of the staff.
7.	National HIV and AIDS Policy of 2001	The policy recognizes HIV/AIDS as an impediment to development in all sectors, in terms of social and economic development with serious and direct implications for social services and welfare. All stakeholders must be actively involved in the fight against HIV/AIDS. The proposed project will result into population influx during the implementation. In this regards the contractor shall be required to prepare the HIV/AIDS awareness program aimed at promoting awareness of HIV/AIDS among its service providers, communities and its employees.
8.	National Women and Gender Development Policy, 2000	The key objective of this policy is to provide guidelines that will ensure that gender sensitive plans and strategies in all sectors and institutions are developed. While the policy aims at establishing strategies to eradicate poverty, it puts emphasis on gender quality and equal opportunity of both men and women to participate in development undertakings and to value the role-played by each member of the society. On employment strategies for women, Section 30 of the Policy requires presence of equal employment opportunities between men and women depending on required qualifications at all levels. In addition, there should be records of exact number of women and men at levels in order to assist monitoring and follow-ups, and presence of less bureaucratic special system in the provision of business licences especially to women working in the informal sector.
9.	The National Strategy for Growth and Reduction of Poverty (NSGRP) II (2015)	The NSGRP-II paper recognizes that infrastructure especially reliable road connectivity is critical for the attainment of the NSGRP II which was launched in 2010 and Sustainable Development Goals which were laid down by the United Nations in 2015. These SDGs are such as Goal No.1 to end poverty, Goal No. 2 on zero hunger, Goal No. 3 to ensure Health life and promote wellbeing for all at all ages, Goal No. 5 on Gender equality and Goal No. 9 on Industry, Innovation and Infrastructure which fosters the importance to build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation. The proposed TACTIC Project will contribute to reduction of poverty for both men and women and address issues of gender discrimination and GBV. Once the roads and markets are constructed various other activities such as transportation and marketing of agricultural products will be enhanced thereby increasing employment and revenues and eventually improving livelihoods. The NSGRP also recognizes the role of other sectors in poverty eradication and the need for mainstreaming environment as one of the crosscutting issues in the sector.

3.2. Summary of National Laws

The MBDP is set within the context of a range of national environmental and social management legislations as summarized in Table 3 below.

Table 3: Pertinent Legislations for MBDP

	Legislations	Summary of the most relevant requirements
1.	The Constitution of Tanzania (1977, as amended, 1998)	The Constitution of Tanzania (1977, as amended, 1998) provides that every person has the right to own property and the right to have his or her property protected in accordance with the law (GOT Constitution 1977)
2.	Environmental Management Act (EMA) No. 20 of 2004	This is a principal law that governs all environmental matters in the country. Section 81 of the Act refers to the obligation to undertake ESIA by the project Proponent at his/her own cost prior to commencement or financing of a project

	Legislations	Summary of the most relevant requirements
		or undertaking. The Act prohibits any development to be initiated without an ESIA Certificate. This is ESMF establishes the process for complying with this requirement.
3.	Land Acquisition Act, No 47 of 1967	This Act governs compensation and acquisition for public purposes in Tanzania. Sections 4 to 10 provide conditions to be considered, specifying requirements prior to the acquisition of the land such as preliminary investigation for the land to be taken, issuing notice of intention to take land and the mode in which notices will be made. A RPF has been prepared to guide land acquisition likely to occur during MBDP implementation.
4.	Land Act No. 4 of 1999	The Land Act No. 4 of 1999 is the principal law regarding all land matters such as the management of land, settlement of disputes and related aspects other than the Village Land Act No. 5 of 1999 that specifically deals with “village land” matters.
5.	The Land Use Planning Act No. 6 of 2007	This Act governs matters that are related to the preparation, administration and enforcement of land use plans. It provides for the procedures for preparation, administration and enforcement of land use plans; to facilitate an orderly management of land use, empower land occupiers and users to make better and more productive use of lands, to enhance security and equity in accessing land and its resources.
6.	The Occupational Health and Safety Act No. 5 of 2003	The law requires employers to provide a good working environment to workers in order to safeguard their health and ensure safety at the workplace. The employers need to perform medical examinations to determine fitness before engaging employees. Employers must also ensure that the equipment used by employees is safe and shall also provide personal protective equipment (PPE) as appropriate. This shall be adhered to by all consultants and contractors who will be employed under MBDP. Compliance to this Act will also be important alongside WB ESHS Guidelines which have always insisted among other things prevention of accidents on sites of construction. During implementation of MBDP all contractors will be required to strictly adhere to the Occupational Health and Safety Act to ensure that no accident or fatality occur and that all social concerns surrounding communities in construction areas, such as issues of HIV/AIDS, pregnancies, gender discrimination and GBV are well addressed.
7.	The Workers Compensation Act No. 20 of 2008	The Act governs adequate and equitable compensation for all employees on grounds of injury, rehabilitation for occupational illnesses or injury and compensation to dependents and relatives upon fatality. Under this Act, the proponent shall be obliged to compensate employees in the case of injuries, death, and diseases while rendering their services to the employer/developer. It is therefore the responsibility of the project proponent to make sure that all requirements of this Act and working standards are adhered to in order to ensure a safe working environment for workers and prevent accidents and other occupational health and safety risks.
8.	Water Resources Management Act No.11 of 2009	Article 39 elaborates on the need to prevent pollution and the penalties to be taken against one who pollutes water resources. Section 63(1) stipulates that a Discharge Permit is required for any person who wishes to discharge effluents from any commercial, industrial or agricultural source or from any sewerage works or trade waste systems or from any other source into surface water or underground strata. The discharge permit is to be granted by a Water Officer. The Act also contains two schedules which set standards for receiving waters and effluents. The Act also emphasizes the need to protect aquatic biological diversity stipulating a need for integrated planning and management of ground and surface sources.
9.	The Employment and Labour Relations Act No. 6 of 2004	This Act requires the Proponent to observe all core labour rights and related matters including establishing basic employment standards, providing a framework for collective bargaining, and providing for the prevention and

	Legislations	Summary of the most relevant requirements
		settlement of disputes. A LMP has been prepared to guide labour issues under MBDP.
10.	The HIV and AIDS (Prevention and Control) Act No.28 of 2008	This Act requires the employer, in consultation with the responsible Ministry, to establish and coordinate a workplace programme on HIV/AIDS for employees under the proponent's control and such programme shall include the provision of gender-responsive HIV/AIDS education, the distribution of condoms and support for people living with HIV/AIDS.
11.	Public Health Act, 2009	The central theme of this Act is to provide for the promotion, preservation and maintenance of public health with a view to ensuring the provisions of comprehensive, functional and sustainable public health services to the general public and to provide for other related matters. Major issues addressed in this Act include operation of housing and hygiene, human settlements, solid and liquid waste, food and nutrition, control of diseases and workers' health.
12.	The Roads Act No. 13 of 2007	This Act has a total of ten parts which among other things describe about road management, roads classification and declaration, execution of road works, restriction of use of roads and financial provision on undertaking various road activities. Other issues described in the Road Act are offences, penalties and recovery as well as road safety and road of access. This Act also provides description on initiation of the road agency TANROADS to deal with road construction and management within the country. Although this Act was approved and came to being about ten years earlier than TARURA establishment it is however envisaged that some parts of the Act will be used by PO-RALG/TARURA in executing MBDP activities. The TARURA establishment order gives functions and responsibilities of TARURA which among other things will be to develop and maintain rural and urban roads network, which coincide with Part three of the Road Act on road classification and declaration.

3.3. Summary of National Regulations

Table 4 below summarizes applicable regulations for the proposed MBDP.

Table 4: Relevant Regulations and Guidelines for MBDP

	Key Regulations	Summary of the most relevant requirements
1.	Environmental Impact Assessment and Audit Regulations of 2005 and its amendments of 2018	The Environmental Impact Assessment and Audit Regulations No.349 of 2005 were made pursuant to Section 82 (1) and 230 (h) and (q) of the Environmental Management Act Cap 191 of 2004 and its amendment in 2018. The regulations provide the procedures and requirements for undertaking EIA for various types of development projects with significant environmental impacts. In addition, the Regulations provide a list of projects that qualify for Environmental Assessment procedures in Tanzania. Regulation 46(1) classifies projects into two types: (i) Type A Projects requiring a mandatory ESIA; and (ii) Type B projects requiring a Preliminary Environmental Assessment (PEA). The First Schedule lists typical examples of Type A and B projects. The Regulation was amended in 2018 and project categorization was changed to Type A, Special category, Type B1 and B2 based on the risky levels. Most of the MBDP subprojects may fall under the category of projects that require mandatory ESIA as per the new categorization.
2.	The Environmental Management (Water Quality Standards) Regulations, 2007	The applicant for a water right is obliged to indicate the likely impact on the environment and comply with prescribed effluent or receiving water standards, which are not below the standards specified in the regulations if the water right or permit is granted. Other sections of this Regulation is 18 (1) that relates to "duty to comply with environmental quality standards" which stressed the importance of complying to the standards outlined in

	Key Regulations	Summary of the most relevant requirements
		these regulations such as the prohibition of the discharge of hazardous substances, and any other harmful materials.
3.	Environmental Management (Air Quality Standards) Regulations, 2007	Section 8 (1) of the regulations clearly prohibits release of hazardous substances, chemical, gas or mixture containing gaseous and hazardous substances into the environment unless the release or emission is permitted under these regulations.
4.	Environmental Management (Hazardous Waste Management) Regulations, 2009	The first schedule of the regulations provides categories of wastes controlled by these regulations and schedule two provides a list of hazardous and non-hazardous wastes. The third schedule in the regulations is a list of hazardous characteristics. In relation to road subprojects, hazardous wastes are associated with the project during the construction and operation phase. During any transportation and/or management of hazardous waste, Contractors will oblige to the requirements of the Regulations.
5.	Environmental Management (Solid Waste Management) Regulations, 2009	These Regulations provide guide for waste management in Tanzania. It requires waste disposal and management to be guided by Precautionary principle, Polluter pays principle and the producer extended responsibility principle. Schedule 1 of the Regulations highlights the types of waste and recommended modes of treatment for the same. To mention a few, schedule 1 suggests that plastic waste should be recycled, and any chemical industrial solid waste should be incinerated at high temperatures. The contractors under TACTIC will comply with these Regulations when dealing with solid waste.
6.	Environmental Management (Standards for the Control of Noise and Vibration Pollution) Regulations, 2015	These regulations are set to provide for the implementation of sections of the EMA (2004) related to noise and vibration pollution. The maximum permissible noise levels for some activities are specified in the First Schedule of the regulations. And specific to construction sites is 75 dBA and 65 dBA during the day and night, respectively.
7.	The Roads Management Regulations of 2009	This Regulation is made under the Roads Act No. 13 of 2007. This Regulation clarifies various issues described in the Roads Act by giving details on their implementation arrangements. Issues underlined in Roads Management Regulations are those related to management of roads such as general control of roads, control of use of roads, road management, road of access, prohibited activity, closure of road for urgent action, obstruction to other road users, obstructing road or drain or water course and stopping or clogging drain to mention few. The issue of road width and reserve is also described where each road category is given its width to be reserved as per the requirement of the Road Act of 2007. The MBDP's road subprojects will use this regulation especially in determining the width of roads which has always caused confusion in road construction especially when it comes to compensation in urban areas.
8.	Environmental Code of Practice for Road Works of 2009	The purpose of this Environmental Code of Practice for Road Works is to define environmental criteria to be applied in Tanzania during the feasibility, design, construction and operation of road infrastructure. It is important to have criteria to safeguard the environment to be applied during road construction in order to minimize indirect and cumulative environmental impacts that are involved in the road sector development and management include: loss of biodiversity; resettlement; land degradation; induced development; deforestation; pollution of air, water and soil; roads safety and human health. The preparation of this Environmental Code of Practice for Road Works follows the enactment of the Road Sector (Environmental Protection) Regulations made under section 61(2) of the Roads Act (2007) and the enactment of the Environmental Management Act (2004) to enforce environmental management issues and ESIA requirement in the country. Being in the road construction, and due to the fact that TARURA is a new

	Key Regulations	Summary of the most relevant requirements
		entity and hence lacking important documents to guide its implementation of E&S issues, it is important for them to adopt this document and implement it during implementation of the MBDP.
9.	The Occupational Safety and Health (General Administrative) Rules, 2015.	These regulations, among other things, have rules that requires registration of the workplace; establishment of Health and Safety Committees at workplaces; Handling of Hazardous Chemical Substances; Display of substituted notices and signs; etc. Contractors who will be contracted to implement MBDP's investment sub-projects shall be required to comply with these rules.
10.	The Occupational Health and Safety (Building and Construction Industry) Rules, 2015.	These regulations requires contractor to comply with the requirements of these Rules that provide the assurance of health, safety and welfare of all persons engaged in-(a) building operations or works of engineering construction undertaken by him; or (b) in any activity incidental to and at the site of the building operations or works of engineering construction or construction work. The regulations have rules on Duties and Responsibilities; Risk Assessment; Safety Measures; Health and Welfare; Keeping of Records; Safety in Vehicles; Working Platforms; Fall Protection; Lifting Operations; Excavations Shafts and Tunnels; Demolition; and Offences and Penalties. Contractors who will be contracted to implement MBDP's investment sub-projects shall be required to comply with these rules.
11.	The Occupational Safety and Health (Lifting Appliances and Gears) Rules, 2015.	These regulations have specific requirements on Permission to install and use lifting appliance; Particulars of lifts, escalators or passenger conveyors; Inspections and Tests of hoist or lift; Maximum load of a hoist or lift; Chain, ropes and lifting tackles; Examination of chain, ropes and lifting tackles; Cranes and other lifting machines; Maximum working load; Reporting of plants due for inspection; Maintenance; Register of chains, ropes, other lifting tackles cranes and other lifting machines; Record keeping; and Offences and Penalties. Contractors who will be contracted to implement MBDP's investment sub-projects shall be required to comply with these rules.
12.	The Occupational Safety and Health (First Aid and Welfare Facilities) Rules, 2015.	These regulations have specific requirements on Basic requirements; First aid attendant qualifications; First aid procedures; Information on post exposure; Sanitation; Accommodation for clothing; Change-rooms; Dining room; Prohibition; Seat; Condition of rooms and facilities; First aid attendant; First aid records; Multiple employer workplaces; First aid attendant responsibilities; and Offences and penalties. Contractors who will be contracted to implement MBDP's investment sub-projects shall be required to comply with these rules.

3.4. Requirements of World Bank Environmental and Social Standards

The 10 Environmental and Social Standards (ESSs), together with their Annexes, set out the requirements for Borrowers relating to the identification and assessment of environmental and social risks and impacts associated with projects supported by the Bank through Investment Project Financing. The Bank believes that the application of these standards, by focusing on the identification and management of environmental and social risks, will support Borrowers in their goal to reduce poverty and increase prosperity in a sustainable manner for the benefit of the environment and their citizens.

The standards: (a) support Borrowers in achieving good international practice relating to environmental and social sustainability; (b) assist Borrowers in fulfilling their national and

international environmental and social obligations; (c) enhance non-discrimination, transparency, participation, accountability and governance; and (d) enhance the sustainable development outcomes of projects through ongoing stakeholder engagement.

Table 5 below describes the application of ESSs to the proposed MBDP.

Table 5: Application of World Bank's ESSs to the Proposed MBDP

ESSs	Yes/No	Application
ESS 1: Assessment and Management of Environmental and Social Risks and Impacts	Yes	The Project will exert site-specific environmental and social impacts which will be managed through this ESMF. Site-specific ESIA's and ESMPs will be prepared to recommend E&S measures to be incorporated into designs of the specific subprojects.
ESS 2: Labor and Working Conditions	Yes	A number of project workers will be employed for the implementation of the project including construction of different investment subprojects. Project workers will be provided with information and documentation that is clear and understandable regarding their terms and conditions of employment. The information and documentation will set out their rights under national labor and employment law (which will include any applicable collective agreements), including their rights related to hours of work, wages, overtime, compensation and benefits, as well as those arising from the requirements of this ESS. This information and documentation will be provided at the beginning of the working relationship and when any material changes to the terms or conditions of employment occur. In order, to ensure fair treatment of workers, the Project will ensure that terms and conditions of employment (hours, rest periods, annual leave, non-discrimination and equal opportunity in recruitment and employment), respect for workers organizations, inclusion of redundancy plans, the prohibition of forced labor and of worst forms of child labor, occupational health and safety, including use of Personal Protective Equipment (PPE), and operation of a worker grievance mechanism for workers to address employment-related concerns, including sexual harassment, are aligned with the requirements of national law and ESS2. To protect workers, the project will ensure the application and implementation of all appropriate Occupational Health and Safety (OHS) measures, to avoid and manage the risks of ill health, including in relation to COVID-19, accidents and injuries. Labour Management Procedures (LMP) have been prepared to ensure these requirements of ESS2 and national law are observed and included in the specifications for contractors. The project will manage any labor influx and work camps for project workers in accordance with the provisions ESS2 and ESS4. As the situation permits and depending on the public health circumstances, the project will ensure compliance with national law, policies and protocol requirements as well as World Health Organization and World

ESSs	Yes/No	Application
		Bank guidance ² regarding the COVID-19 situation in relation to stakeholder consultations, project worksites and related areas.
ESS 3: Resource Efficiency and Pollution Prevention and Management	Yes	Implementation of most of the investment subprojects will involve construction activities that will generate dust, erosion, sediments, solid and liquid wastes that will be properly managed via ESIA's and ESMPs. More or less similar impacts are likely to be experienced during operation phases and will be managed by the same tools as well as operation and maintenance plans.
ESS 4: Community Health and Safety	Yes	Construction activities (excavation, vehicle operations, work at height, use of chemicals, use of crane or other heavy equipment etc.) may have irreversible effects of disability or fatality to community. Localized negative impacts (like dust emissions, accidents, etc.) to sensitive receptors such as schools, religious buildings and community centers will need to be managed. The Project will require Contractors to prepare appropriate plans for emergency preparedness and response, management and safety of hazardous materials, traffic and road safety, security personnel, etc. as per the requirement of ESS4. Implementation of the Project is likely to trigger influx of workers or job seekers and their followers into a sub-project areas. If a significant labor influx does occur, the project will develop and implement a Labor Influx Management Plan in line with ESS2, and ESS4. The project workforce could facilitate an increase in the transmission of HIV and other communicable diseases to members of the local/host communities. Implementation of the sub-projects. As the situation permits and depending on the public health circumstances, the project will ensure compliance with national law, policies and protocol requirements as well as World Health Organization and World Bank guidance³ regarding the COVID-19 situation in relation to stakeholders consultations, project worksites and related areas.
ESS 5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Yes	Land acquisition, restrictions on land use and involuntary resettlement are likely during the implementation of the Project. The RPF will provide guidance on RAP preparation. The project shall minimize land acquisition and its accompanying measure of resettlement wherever possible especially during detailed engineering designs for roads, drains, and other community facilities to be upgraded/constructed.
ESS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources	Yes	Unless it is meant to enhance protection and/or conservation, no sub-projects will be financed inside or near protected areas and sensitive habitats. Sub-projects will be screened for potential direct and indirect impacts on natural habitats.

² World Bank Technical Note: Public Consultations and Stakeholder Engagement in WB-supported operations when there are constraints on conducting public meetings. March 20, 2020; and “ESF/Safeguards Interim Note: COVID-19 Considerations in Construction/Civil Works Projects”, April 7, 2020.

³ World Bank Technical Note: Public Consultations and Stakeholder Engagement in WB-supported operations when there are constraints on conducting public meetings. March 20, 2020, and “ESF/Safeguards Interim Note: COVID-19 Considerations in Construction/Civil Works Projects”, April 7, 2020.

ESSs	Yes/No	Application
ESS 7: Indigenous People/Sub-Saharan African Historically Underserved Traditional Local Communities	No	This ESS is not relevant to the Project.
ESS 8: Cultural Heritage	Yes	The Project will be implemented in 4 LGAs in Dar es Salaam and Pwani regions, all with different cultural backgrounds. Elements of cultural heritage are found in some of the LGAs such that there potential for cultural heritage resources to be found unexpectedly (chance finds) during construction. Chance finds procedures will be included in the Specifications for the contracts – see Annex 11 .
ESS 9: Financial Intermediaries	No	This ESS is not relevant to the Project.
ESS 10: Stakeholders Engagement and Information Disclosure	Yes	A Stakeholders Engagement Plan (SEP) has been prepared to guide implementing agencies on how to provide stakeholders with timely, relevant, understandable and accessible information, and consult with them in a culturally appropriate manner, which is free of manipulation, interference, coercion, discrimination and intimidation.

3.5. Institutional Framework for Environmental and Social Management

3.5.1. Environmental and Social Management Authorities

The administrative and institutional arrangements for environmental management in Tanzania that are relevant to various projects including the MBDP are stipulated in the Environmental Management Act (EMA) No. 20 of 2004. In the Act, NEMC and DoE are key institutions among seven spelt in the Act with regard to the management of environmental issues. Part III, Section 13(1) of EMA (2004) states that the Minister responsible for the environment shall be overall in-charge of all matters relating to the environment and shall in that respect be responsible for ensuring adequate implementation of the Act, regulations and other guidelines necessary for the promotion, protection and sustainable management of environment in Tanzania.

The legal institutions for environmental management in the country are outlined below.

i. National Environmental Advisory Committee

The National Advisory Environmental Committee is comprised of members with experience in various fields of environmental management in the public and private sector and in civil society. The committee advises the Minister on any matter related to environmental and social management.

ii. Minister responsible for Environment

Issue guidelines and designate duties to various entities; approval by issuing of decision letter / EIA Certificate for development projects; delegate responsibility for EIA authorization to Director of Environment, LGAs and Sector Ministries.

iii. Director of Environment

Coordinate, advise, assess, monitor and report environmental related aspects and activities; responsible for environmental policy and legal formulation and implementation; integration of environmental considerations into development policies, plans, programmes, strategies and

projects; undertake strategic environmental assessment. The Director provides advice to Minister for approval of Environmental and Social Impact Assessment report (ESIA) and issuance of ESIA Certificate.

iv. National Environment Management Council (NEMC)

Undertake enforcement, compliance, review and monitoring of environmental impact assessment. NEMC role is to initiate /develop procedures and safeguards for the prevention of activities which may cause environmental degradation; provide advice and technical support to different stakeholders; enforce and ensure compliance of the national environmental quality standards.

Under the EMA, NEMC has specific roles and responsibilities in the undertaking ESIA for new development projects (Part III – XI); Environmental Audit for existing development projects (Part X); and Environmental Monitoring and Reporting (Part XI). NEMC is empowered to establish specific offices or to appoint or designate officers to effectively perform its functions.

a. Registrar of EIA Expert /Firm of Experts /Environmental Auditor/Environmental Inspectors

Register and keep registry of qualified firms/individuals authorized to offer services in undertaking ESIA, Initial and Control Environmental Audit Environmental Inspection, ESIA training and other technical support.

b. Environmental Inspector (Appointed or Designated)

Empowered to enter on any land, premise or facility of the project for the purpose of inspection, to examine records and to make enquiries on the project or for the purpose of monitoring the effects of activity carried out on that land, premise or facility upon the environment.

c. NEMC Zonal Offices

Headed by Zonal Managers replicate all functions and departments of NEMC including overseeing Compliance and Enforcement; ESIA; Research and Planning etc. There are 7 NEMC zonal offices namely:

1. Lake Victoria Zone covering Mwanza (center), Geita, Mara, Shinyanga and Simiyu;
2. Northern Zone covering Arusha (center), Kilimanjaro, and Manyara;
3. Southern Zone covering Mtwara (center), Lindi, and Ruvuma;
4. Southern Highlands Zone covering Mbeya (center), Njombe, Iringa and Songwe;
5. Central Zone covering Dodoma, the Capital City (center), Singida and Tabora;
6. Eastern Zone covering Dar es Salaam (center), Pwani, and Tanga; and
7. Western Zone covering Kigoma (center), Katavi and Kagera.

v. Sector Ministries

Responsible for all sector-specific environmental matters within the Ministry including participation in Cross-Sectorial Advisory Committee for review of ESIA Reports; review and verification of Environmental Audit Reports, monitoring on-going projects, and submit Monitoring reports to NEMC.

vi. Regional Secretariat

Assist the Regional Commissioner; oversee/advise implementation of national policies, enforcement of laws and regulations at regional level. EMA, Cap. 191 Section 34 confers

additional roles to the Regional Secretariat to coordinate all environmental matters within respective region.

vii. Local Government Authorities (City, Municipal, District, Township, Ward, Village, sub-village “Mtaa and Kitongoji”)

Perform basic functions including promoting social and economic wellbeing and development of areas and people within jurisdictions including relevant to environmental and social management. EMA, Cap. 191 Section 37 confer additional functions for the environment committees; give general powers to the LGAs including to undertake inquiries and investigations, summon any person, resolve conflicts among various parties, inspect and examine any premise, order to remove substance or article harmful to the environment and prosecute or sue any violator.

d. LGA Environment Management Officer (EMO) (designated / appointed)

Enforce, advise the Environment Management Committee, gather/ manage information, and report on state of local environment. EMO are tasked to monitor the preparation, review and approval of environmental impact assessment for local investments.

e. LGA Standing Committee on Urban Planning and Environment

The Committee is established under Section 42 (1) of the Local Government (Urban Authorities) Act, 1982 as a standing committee responsible for urban planning. EMA cover additional functions for the environment committee, include overseeing proper management of environment within an urban area.

f. Standing Committees of Economic Affairs, Works and Environment of a Township

Established under Section 96(1) of the Local Government (District Authorities) Act, 1982 while EMA, Cap. Additional functions for the environment committee include overseeing proper management of environment within a township.

viii. Registered EIA Expert /Firm of Experts /Environmental Auditor/Environmental Inspectors

Are qualified firms/individuals authorized to offer services in undertaking EIA, Initial and Control Environmental Audit Environmental Inspection, EIA training and other technical support.

ix. Other Actors as per EIA and Audit Regulations, 2005

g. Investor/ Developer / Project Proponent

Oversee and meet costs of Environmental assessment and implementation of ESMP/EMoP; undertake Initial Environmental Audits and Environmental Control Audit, Self-auditing during implementation of ESMP; undertake Baseline Survey before project implementation as basis for undertaking effective monitoring.

h. General Public

Empowered by EMA and ESIA Regulations to participate in all environmental management matters concerning them and at all stages of the ESIA process specifically to raise issues and concerns and to appeal when dissatisfied.

From the description of legal institutions for environmental management given above, PO-RALG/TARURA and LGAs will required to deal with management of MBDP’s environmental

and social issues as *Sector Ministry, Regional Secretariat, LGAs, and Investor/ Developer / Project Proponent*. A Steering Committee will be created to agree on actions and decisions pertaining implementation of the MBDP. The Steering Committee will be in place by Project Effectiveness and will meet at least biannually. This Steering Committee will be comprised of PO-RALG, TARURA, Ministry of Works Transport and Communication and Ministry of Finance and Planning. WBCU will also present the development sub-projects to be implemented under component 2 to Regional Secretariats, under the chairmanship of the Regional Commissioners, to ensure continuing political buy-in by regional stakeholders in each of the participating LGAs.

The WBCU will have management oversight and reporting responsibilities for all components of the Project. WBCU will integrate the financial and technical progress reports including E&S and Health and Safety aspects from each of the agencies being funded and carry out the overall monitoring and evaluation, and impact evaluation for the Project. LGAs as subprojects implementing agencies, will prepare annual work plans incorporating E&S and Health and Safety aspects and budgets to be submitted to the WBCU for approval by the Project Steering Committee.

3.5.2. Land Management Authorities

i. Minister Responsible for Lands / Land Use Planning

Sole authority over all land matters: duty of formulation and implementation of Land Policy and Act; issuing permit for using land (other than village or reserved land); urban planning and use and development of land; designate any Body or Organ as a planning authority and to declare any area of land to be a planning area.

ii. Commissioner for Lands

Sole authority responsible for land administration: principal administrative officer and professional officer and advisor to the government in land matters at all levels; has power to delegate the powers to officers at Local Authority to work and comply with his/her directives.

iii. Qualified Valuers

Land (Assessment of the Value of Land for Compensation) Regulations, 2001 (Regulation 5) directs that every assessment of the value of land and unexhausted improvement (properties / assets) is done by a qualified Valuer.

iv. Chief Valuer

Land (Assessment of the Value of Land for Compensation) Regulations, 2001 (Regulation 6) directs that every assessment of the value of land and unexhausted improvement (properties / assets) is done by a qualified Valuer is verified by the Chief Valuer of the Government or Representative.

3.5.3. Other Authorities Relevant Authorities

i. Tanzania Electric Supply Company Limited (TANESCO)

Under the Ministry of Energy and Minerals, its core functions are generation, transmission, distribution, supply and use of electric energy. At so many location TANESCO use road reserves for transmission infrastructure.

ii. Energy and Water Utilities Regulatory Authority (EWURA)

In the electricity sector to regulate transmission and distribution of petroleum and natural gas; in the water sector responsible for (i) licensing and regulating water supply and sanitation services (ii) establishing standards, guidelines and tariffs chargeable in relation to water supply and sanitation services (ii) Monitoring water quality.

iii. Water Basin Authorities

Established to manage water resources in nine (9) water basins: Pangani River Basin, Rufiji River Basin, Lake Victoria, Wami-Ruvu, Lake Nyasa, Lake Rukwa, Internal Drainage Basin to Lake Eyasi, Manyara and Bubu depression, Lake Tanganyika, Ruvuma and Southern Coast.

iv. Water and Sewerage Authorities

These are urban based, established to offer water supply and sanitation services in respective urban centers. The authorities issue permits for discharging liquid wastes.

v. Tanzania National Roads Agency (TANROADS)

Issue approvals or permit for undertaking physical works on roads or road reserves, issue permit for extraction of construction minerals, issue permit for using roads above set limits (tonnage, width etc.).

vi. Occupational Health and Safety Authority (OSHA)

Oversee safety, health and welfare of persons at work, carries out all workplace inspections; hygiene surveys and measurements, occupational health examinations of workers, offer advice on ergonomics and scrutinize workplace drawings.

vii. Ministry of Home Affairs, Fire and Rescue Services Force

Protection against fire hazards, to issue permit for use of fire-fighting equipment's, Inspection of fire equipment commissioning of fire protection and detection system installed, to perform research on fire hazards and fire incidences.

viii. Workers Compensation Fund (WCF)

Workers Compensation Fund (WCF) is a social security scheme established under the Workers Compensation Act No. 20 of 2008. The Fund is responsible for compensating workers who suffer occupational injuries or contract occupational diseases arising out of and in the course of their employment. In case of death of workers, the Fund is responsible for compensating dependants as per set criteria. The Scheme is operated under social security and insurance principles.

ix. Tanzania Commission for Aids (TACAIDS)

Prevention and control spread of HIV/AIDS, to promote advocacy and education on HIV/AIDS, to protect human and communal rights of people infected with and affected by HIV/AIDS.

4. BASELINE ENVIRONMENTAL AND SOCIAL CONDITIONS

Baseline environmental and social conditions of the Msimbazi basin is largely based on a detailed Msimbazi Strategy and Management Framework (MSMF) of January 2019.

4.1. Setting of the Msimbazi Basin

Originating in Pugu hills and Kazimzumbwi Forest Reserves in Kisarawe District, Coast Region, the Msimbazi River and its tributaries flow through the heart of Dar es Salaam, the commercial capital of Tanzania. The city's population growth is one of the fastest in the world and an estimated 70% of urban development is unplanned.

The Msimbazi Basin covers an area of 271 square kilometers and is the home of 27% of the city population. In the riverine areas, and 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 after heavy rainfall.

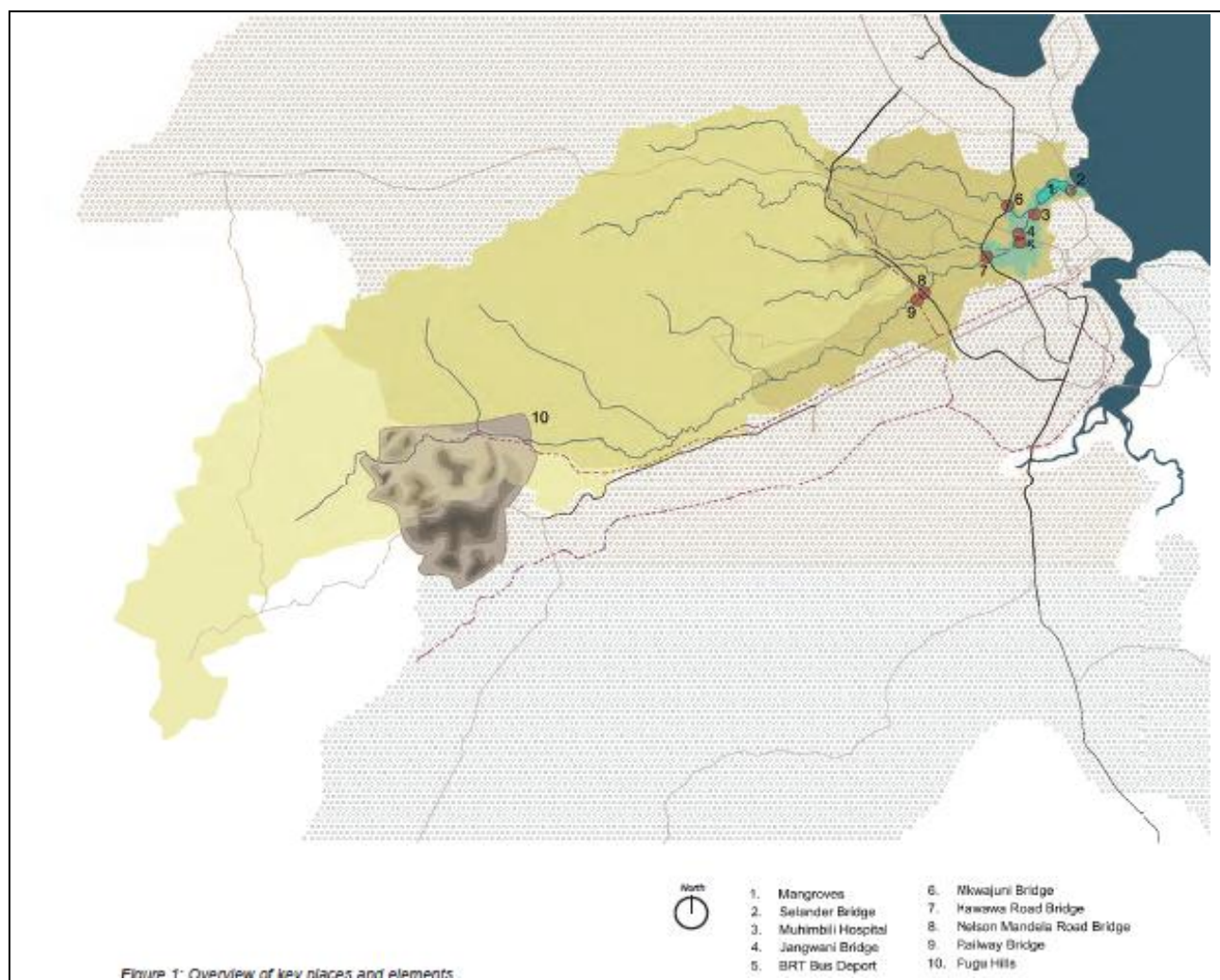


Figure 3: Overview of Key Places and Elements of the Msimbazi Basin

Source: MSMF-Volume A, 2019

4.2. Importance of the Msimbazi Basin

The Charrette stakeholder team, informed by scientific research, professional knowledge and community experience, established that the Msimbazi Basin could perform at least eight vital functions for the city of Dar es Salaam.

- i. Discharge stormwater;
- ii. Provide drinking and grey water;
- iii. Offer space and suitable conditions for biodiversity rich coastal forest and mangrove vegetation;
- iv. Provide safe and healthy locations for settlement along the edges of the river plains;
- v. Include space for public and private infrastructure assets;
- vi. Provide space for serviceable roads and bridges that cross the Msimbazi Basin as essential transport corridors;
- vii. Offer lands for growing healthy food in the flood plains for the city population; and
- viii. Provide public, open-access, spaces for sports and leisure activities.

Because the ecosystem is out of its natural equilibrium, the performance quality of the Msimbazi Basin on these functions is low. Restoring this equilibrium will significantly benefit the city and especially the vulnerable communities that make up most of the people living in the Msimbazi valleys and lower plains.

4.3. Key Activities in the Area

Key activities include residential, commercial, partly agriculture, social services, transport services (roads, deport), conservation of mangroves, open areas.

4.4. Types of Tenure, Categories of PAPs/Beneficiaries Including Vulnerabilities

The following are found in the project area:

- Individual PAPs who own structures, land, some permanent crops of which some of these structures are used either for residential or commercial purpose. Commercial activities vary but mostly small scale business as well as rental business. PAPs land ownership/type of tenure also varies with others having legal ownership, others have encroached and other that are within the flood prone area but own the land.
- Another major category of PAPs are tenants residing in houses that are within the flood prone area
- Vulnerable groups: There is the case of vulnerable people, such as widows, single mothers, child-headed households, handicapped people, HIV/AIDS victims, and the elderly persons as they require special assistance to cope with the impacts. This category of vulnerable people will be explicitly identified in the census and the details of their social economic condition be captured.
- Government parastatals that include service providers these include TANROADs who owns some of the roads to be affected and DART who owns the Deport that has to be relocated. Others are utility companies that include TTCL for communication, TANESCO for electricity supply and DAWASA for clean water supply and sanitation

- Another group includes institutions or individuals who run and operate social services such as schools, mosques and churches.

It is anticipated that the project will affect about 3000 households and about 2000 tenants.

4.5. Historical Context of the Msimbazi Basin

In the past, a large part of the Msimbazi's upper and middle catchment was natural forestland. The thick vegetation cover protected the underlying soil from erosion during heavy rains. Although rivers like Msimbazi are never static as they tend to change gradually over years and decades, the absence of severe erosion and extreme sedimentation kept the river in a relatively stable natural state.

During the 1800 and 1900s, flooding was not unusual – in fact, the area owes its fertility to the nutrient-rich deposits that were left behind from past floods. In the late 1980's and early 1990's, rural-urban migration gradually began to affect the land use around the river. The city continued to expand, and the area near the middle and lower basins proved attractive for migrants from rural areas (MSMF, 2019).

The El Niño rains of 1997-1998 are often regarded as the beginning of extreme flooding in the Msimbazi. Since then, the flooding events have become more frequent and more severe with significant flooding events in 2009, 2010, 2011, 2014, 2015, 2017, and 2018.

Planning and land administration systems have been unable to keep up with the rapid growth. Although the 1979 Dar es Salaam Master Plan designated the Msimbazi Basin as hazard land, and the Environmental Management Act established a protective zone of 60-meters from a rivers' high-water marks, land use restrictions have gone largely unenforced. There were no physical demarcations on the ground and the legal process required for officially designating a hazardous area was not followed.

Unplanned development is the norm; on average, unplanned areas are said to account for over 70% of the land in Dar es Salaam. Existing planning systems are applied almost exclusively to surveyed plots or planned areas, which represent only 30% of urban land. Although Local Authorities are technically responsible for the regulation and management of unplanned settlements, the tools and resources available to achieve this are not effective nor sufficient. Development in unplanned and therefore unserviced areas generally occurs without any review or approval by Municipal Urban Planning offices.

4.6. The River System, Flood History and Changing Flood Dynamics

The Msimbazi is a natural rain fed river and the morphology of its basin, sub-basins and river plains shows its long history of flooding events. The Tanzania Meteorological Agency started rainfall measurements in 1961 and the heaviest event thus far was recorded in 2011. Heavier than usual precipitation continued in the March-April-May rainy season in the years 2014 to 2016. In 2017 and 2018 the floods occurred in both the long rainy season from March to May, and the short rainy season from October to November. The most recent floods took place in October 2017, January 2018, March 2018, and again in April 2018, resulting in the Regional Commission of Dar es Salaam announcing a state of emergency.

Heavy rainfall events are often characterized by concentrated bursts of downpours. The gauged hourly rainfall intensities show that peaks of more than 50 mm/h are not unusual⁴.

The river system responds very quickly to rain bursts. Within three hours after the rainfall, the river downstream experiences peak discharges causing the system to overflow and become hazardous for the areas around the river. The inundation depths can reach two meters or more with inundation periods which at some locations last for several days.

Flooding occurs as a result of both surface flooding and riverine flooding. Surface flooding occurs when an extremely heavy downpour of rain saturates urban drainage systems and the excess water cannot be absorbed. Riverine flooding occurs when rivers burst their banks after sustained or intense rainfall. In the Msimbazi Basin, surface flooding mainly occurs in the highly densified urban areas at slightly higher grounds relative to the level of the river, whereas riverine flooding mainly occurs in the lower lying areas around the river (such as in the Lower Basin and the Vingunguti area in the Lower Middle Basin).

Floods induce uncontrolled erosion and sedimentation in the river plains. With increased flow velocities of the river, particularly during floods, levees and embankments are susceptible to erosion as the soil particles can get transported more easily. At locations where there is more room for water to flow, as in larger flat flood plains, the flow velocities will reduce and the transported silt and sand particles will settle again. Generally, most erosion is in the upper and middle catchment areas, whereas sedimentation takes place in the lower catchment. It is estimated that about 100,000 m³ of sediment is being transported during an extreme flood event, which is approximately the same amount of sediment being transported annually without flood events⁵. Sedimentation results in a raised level of the riverbed and the floodplains. For most silted areas, this will increase the flood vulnerability because channels, bridges, culverts and other means of water conveyance will have a lower hydraulic capacity, which ultimately results in larger flood extents and flood levels.

4.7. Population Dynamics

The population growth of Dar es Salaam is one of the highest in the world and for the next decade an average growth rate of 4.3% per year is assumed. Dar es Salaam's estimated population for the year 2018 is 6 million people. It is expected to reach megacity size, with more than 10 million people, by 2030. District population data (2011) from the most recent Census (2012) show that 1.2 million people (27% of the city population) lived in the wider Msimbazi catchment (**Table 6** below). Extrapolation of this data with the current 6% growth rate suggests that the catchment's population is currently close to 1.6 million. Using the population growth projections (3%) of the Bureau of Statistics, the Msimbazi Basin which has a rain catchment area of 271 km² could become the home of 2.5 million people in 2030. That is twice as many as in 2011.

⁴ TAHMO stands for Trans-African Hydro-Meteorological Observatory. This project aims to create a dense network of 20,000 hydro-meteorological monitoring stations throughout sub-Saharan Africa. It is an initiative of TU Delft

⁵ Dr. Kees Sloff (Deltares) and Mr. Adri Verwey (World Bank), (April 30 – May 4, 2018). Aide Memoire - Technical Mission – Role of morphological (sediment deposition and erosion) processes in the Msimbazi River.

Table 6: Population in the Msimbazi Catchment

Population data (2012) in the Msimbazi Catchment						
Lower Basin		Ngombe catchment area		Kibangu Catchment		Misimbazi catchment
Hananasifu	37,115	Kijiitonyama	58,132	Ubungo Kisiwani	28,008	Tabata 74,742
Upanga	24,643	Mwanyamala	50,560	Kikogo	57,613	Vingunguti 106,946
Kesutu	8,308	Makumbusho	68,093	Mabibo	85,735	Segerea 83,315
Kariakoo	13,780	Manzese	70,507			Ukonga 80,034
Magomeni	24,400	Ubungo	28,008			Pugu 49,422
Ila la estate	31,083	Sinza	40,546			
Jangwani	17,647	Tandale	54,781			
Buguruni	70,585	Ngugumbi	36,841			
Sub-total	227,561	Sub-total	407,468	Sub-total	171,356	394,459
						1,200,843

Source: MSMF, January 2019

Analysis using satellite and aerial images from 2005, 2013 and 2015 find the vast majority (78%) of buildings falling within either the lower Msimbazi flood plain or the 60m buffer protected under the Environmental Management Act were built before 2005. Observation of location of the buildings constructed from 2005 to 2013 and 2013 to 2015 suggest a concerning trend toward development on even higherrisk lands. With time, new construction has moved closer to the river and permanent wetlands. While this area has technically been designated as a hazard land as per the 1979 Dar es Salaam Master Plan, past actions by both national and local governments, as well as public utilities, have to some degree tacitly condoned development on this land. This context further demonstrates the complexity and sensitivity of land tenure claims and prospective resettlement efforts.

4.8. Urbanization Pressure and Forest Exploitation

Human activities and especially deforestation and urbanization have diminished the natural water retention capabilities of the land in the Msimbazi Basin and this causes increased stormwater runoff. This is the main reason why the rivers and streams that make up the river system experience increasingly frequent flooding. Tree cover in and around the Basin has drastically declined. Trees have been cut at alarming rates to clear land for agriculture, urban expansion and provide cooking fuel, leaving bushland which has just 10% of the rainwater infiltration and soil fixing capacity of a forest. One study has found that over a 15-year period, closed forest canopy in Pugu and Kazimzumbwi Forest Reserves decreased by over a quarter (25% and 31%, respectively). Indeed, most of the forest cover in Pugu Forest Reserve has been lost; of the reserve's 2,180 hectares less than 400 hectares can be considered true forest. Similarly, in the case of Kazimzumbwi Forest Reserve, only 900 hectares out of 4,887 can now be classified as actual forest [Tanzania Forest Service, E.M. Nashanda (20 July 2018)].

As Dar es Salaam's urbanization advances and its natural vegetation is converted into impervious surfaces such as roofs and pavement, natural infiltration has diminished and rivers are lacking the water that once recharged them and kept them running year-round. The Msimbazi is reported to be one of seven rivers originating in Pugu and Kazimzumbwi forests which were perennial during 1975 but which have since dried up and become only seasonal. At some points of the year, the only water in the river is industrial discharge and household waste water; upstream sections are completely dry, while downstream sections have low levels of visibly polluted water.

Restoration of a continual flow of water is critical to the health of the rivers' human users and to downstream wetland and mangrove ecosystems. The elimination of pollution will be a long-term effort, and dilution is the only immediate treatment for the river's high levels of toxicity before wastewater collection and treatment are available.

4.9. Soil Erosion and Increased Sedimentation

Slope erosion and bank erosion processes are common throughout the Msimbazi Basin. The steep gradient of the upper basin provides a major source of sediment supply and a temporary storage location until the next flood event. Meanwhile, sediment input from basin sides and floodplain areas is strongly influenced by the level of urbanization and land-use type, confining the channel in many parts of the basin.

The siltation of the river channels and floodplains in the lower reaches of the catchment has dramatically reduced the hydraulic capacity of the river. The river channels have become shallower and narrower, and the elevation of the floodplain has risen markedly. The build-up of sediment is particularly extreme underneath the bridges which intersect the valley. This hampers flood waters from discharging into the ocean, which causes serious inundation in the Lower Basin and contributes to increased flooding further upstream.

Erosion and sedimentation are integrally linked with the velocity of water flow. In areas where the flow is fastest (due to a steeper grade of the river bed and the absence of infrastructure such as bridges that might provide a damming effect), levees and embankments are prone to erosion. The sediment that has been eroded upstream is then deposited in locations where the velocity of the water is reduced. This occurs where the river's gradient becomes less steep, or where there are bridges or other infrastructure, for example as in flat floodplains such as Jangwani or at the confluence of the Sinza and Msimbazi channels.

Sand mining practices aggravate erosion in the upper and middle valleys. This leads to higher sedimentation deposition in the Lower Basin area and contributes to changes in the river course. Increased susceptibility of the soil to erosion due to land use change is inextricably having effect on erosion and sedimentation processes downstream. In the Msimbazi catchment upstream conditions can quickly impact conditions downstream. Torrential downpours upstream cause flash floods downstream within 3 hours. Typically, rivers carry sediment at a moderate pace of a few kilometers per year; sediment travel in the Msimbazi is estimated to be in the order of 30 km per year, which suggests that impacts in the upper catchment can affect the entire river in just one or two years.

4.10. Mangrove Forest at the Msimbazi Outlet to the Indian Ocean

The heavy sedimentation of the Msimbazi River has resulted in burying the air roots of the mangroves and this "asphyxiation" negatively affects the health of the trees. High tide now intrudes only a few hundred meters from the sea (whereas in the past it reportedly reached as far as Jangwani Bridge). Sediment has accumulated to a height that is above tidal levels; this means that much of the wetland area that borders the river channel remains dry even at high tide. The effect is that sea water no longer reaches the mangroves that are further inland, and large sections of the mangrove forest have died off. Information on the health of the mangrove forest reserve is scant. Little is known about the number of species, the number of mangrove trees, and their vitality.

Although protected by the 2002 Forest Act and the prohibition on cutting down the mangroves is diligently enforced, the mangrove protected area is not officially physically demarcated [Institute of Marine Science, Dar es Salaam University, (2016)].

4.11. Infrastructure Barriers

Most of the road crossings over the valley have relatively low and narrow bridge underpasses (e.g. box culverts). Combined with blockages from solid waste and siltation, this creates insufficient hydraulic capacity during times of peak flow. Some of the crossings cause a damming effect during flood events, delaying water conveyance and sometimes creating backwater that causes a pooling effect and/or the passing of water above the bridge deck.

Infrastructure barriers, such as bridges, and sedimentation are linked in a negative feedback loop in which sedimentation narrows bridge openings, thus reducing the hydraulic capacity of the river. Conversely as this situation worsens, the bridge causes water flows to slow, thus increasing sedimentation.

4.12. Solid Waste Management

Solid waste management is a serious challenge throughout Dar es Salaam. Solid waste generation is increasing as the urban population grows. Total generation of solid waste is estimated at 1kg per person per day, which translates into more than 6,000 tons per day in 2015 for the city. That is equivalent to approximately 1.8 million tons per year [Msimbazi Stakeholders Team, (2018)]. Although an estimated 60-70% of waste is composed of organic materials [Draft Dar es Salaam Master Plan, (2018)] only nominal amounts are currently composted.

In the absence of a comprehensive solid waste management system, the bulk of waste is disposed of illegally. In 2012, only an estimated 37 percent of the total waste generated in Dar es Salaam was systematically collected and disposed of, while the balance was dumped on empty land, along roads, and/or into water bodies [Breeze, 2012.]. Communities within the Msimbazi Basin rely heavily on informal waste collectors. These individuals charge less than formal solid waste removal service providers, but they often dump waste illegally.

There are grassroots efforts to address the waste problem. The civil society organisation Nipe Fagio has conducted community awareness-raising and cleanup events in various Mitaa within the Msimbazi Basin over the past five years, including various events in 2018 but much more needs to be done.

Flood waters transport the abundant solid waste downstream, where it gets trapped in bridge and culvert openings and mangrove tree roots. This waste accumulates together with sediments, leading to reduced flow capacity and flooding upstream of the roads and bridges and other manmade infrastructure barriers in the Msimbazi Basin.

4.13. Storm Water and Sanitation Infrastructure

Dar es Salaam has a very limited stormwater drainage system. Amongst the roadside drains that do exist, more than 50% are in poor condition, and many are blocked by solid waste and siltation. Infrastructure networks and systems for managing sanitary waste are also extremely limited. Only 13% of the city's population has access to sewerage services. The remaining 87% use on-site

sanitation systems, primarily pit latrines (Dar es Salaam Region Socio-Economic Profile, 2012). Many households in unsurveyed areas connect their toilets to stormwater drains, further exacerbating the area's drainage problems.

Informal methods for disposal of sanitary waste contribute to the severe contamination of flood waters. Interviews with sanitation-focused NGOs and businesses confirm that illegal discharge into rivers and wetlands is common. Another common emptying method is the intentional flooding or unplugging of latrines during heavy rains, which flushes waste out of the pit and into neighborhoods and water courses.

Especially in dry season, when the Msimbazi has low flows, the water is highly contaminated. "Industrial pollution and wastewater have destroyed a freshwater ecosystem – substantial sections of the river are now incapable of supporting fish populations that had been present until recent years"⁶.

Analysis⁷ of the river water quality found that the most polluted stretches of the Msimbazi downstream from Vingunguti and its tributaries had:

- pH as high as 12 (compared to the legal standard of 8.5), a level which causes severe burns to skin.
- Chromium (VI) at 75 times the legal limit for waste water discharges (chromium VI is very toxic, causing cancer and birth defects with long term exposure).
- Indicators of disease-causing fecal contamination which exceed the World Health Organization limits for safe use of waste-water in agriculture.

The sources of river pollution include municipal wastewater stabilization ponds at Vingunguti, textile and other industries, abattoirs, leachate from former dump sites, sewers and drainage from houses near the riverbanks which are channeled directly into the river, pit latrines which leach waste or which overflow during rains, transportation runoff (oil and petrol), agricultural runoff (pesticides, fertilizers), and solid waste dumped directly into river. Poor water quality is a health concern all through the year. Hundreds of farmers grow leafy greens and other vegetables in the river basin, and garden plots are irrigated with water from shallow wells. The vegetables are sold in bulk to middle men who distribute the produce throughout Dar es Salaam.

4.14. Urban Heat Stress: A Growing Threat

The average maximum duration of heat waves in Dar es Salaam is predicted to increase from 6 to 16 days by 2050. The events of 5 days of lasting heat could increase from 3 to 24 times in 2050. The amount of 2-week hot weather events will double over the same period. Expert advice is to develop strategies for mitigating heat waves effects to enhance the resilience of the population⁸.

4.15. Climate Change Effects

Main climate change parameters that have the potential to impact on the living conditions in the

⁶ Joseph, J. and N. Hepworth, Dar es Salaam's Urban Rivers: pollution and flood impacts of the Msimbazi, Ubungu, Luhanga and Tenge Rivers, Water Witness International, 2014

⁷ Based on samples taken at thirteen sites, Joseph and Hepworth, (2014); and Chanzi, (2017)

⁸ CLUVA (2013). Nyed, P.K. Herslund, Deliverable 3.4 – Map of high risk areas for selected case areas (Dar es Salaam), Copenhagen University

Msimbazi Basin are: i) changes in rainfall characteristics and ii) changes in temperature. Changes in sea level rise will have no significant impact for the Msimbazi Basin. The information available on these factors comes from research done in the period 2011-2015⁹. Generally, it is expected that the extremes will be more extreme and more frequent, which for the Msimbazi catchment area can result in dryer dry periods and wetter rainy seasons (and in particular more intense rainfall events). This in turn results in smaller baseflows of the rivers during the dry seasons and further aggravates the frequency and severity of the water rushes and more floods.

4.16. Effects of Flooding and Pollution on Population

The nature and pattern of flooding has changed dramatically over the past two decades, as has the pattern of human settlement. Development in earlier decades was in more elevated areas which were not so prone to flooding, but construction in recent years is concentrating in areas that are very low-lying, some of which exhibit wetland characteristics year-round. The combination of high-risk settlements with extremely dynamic river morphology puts thousands of lives at immediate risk.

In the face of regular flooding, Msimbazi area residents find household-level solutions to strengthen their own resilience. Residents in flood-prone areas are well-versed in how to live with annual cycles of flooding and have developed their own informal adaptive measures. Examples include physical modifications like retaining walls, raising foundations, or temporarily migrating until floods recede¹⁰. Generally, evacuation is considered a measure of last resort.

Through the Charrette process, in combination with spatial analysis and numerical flood simulations, it became evident that the main vulnerabilities are:

- i. Injuries and loss of lives, damage to houses and personal belongings, and interruptions in income earning activities (livelihood losses) as a result of flooding. The areas are characterized largely by informal, unplanned and informal human settlements and small businesses that dwell in the flood plains or on the slopes of the river valleys;
- ii. Damage to infrastructure assets and interruptions in urban mobility/connectivity because of flooding of the bridges that cross the river valley and public infrastructure built in the flood plain; and
- iii. Damage to ecosystem-services and loss of biodiversity because the sediments transported by the floods deposit in the Lower Basin silt up the mangrove forest and natural wetlands.

Comprehensive information on the cost to society (economic value) of these damages was not collected for this MSMF. However, studies show that average annual costs of flooding in urban settings can be considerable. Recent World Bank studies highlight the economic impact that such events have on the city with a modelled Expected Annual Loss of USD 47.3 million in the

⁹ CLUVA (2013). Nyed, P.K. Herslund, Deliverable 3.4 – Map of high risk areas for selected case areas (Dar es Salaam), Copenhagen University

¹⁰ World Bank (2015). 'Climate Risk and Resilience in Urban Tanzania', A Policy Note, June 2015; and World Bank (2015), Project Appraisal Document: Dar es Salaam Metropolitan development project.

Msimbazi Basin alone¹¹. A complementary strategic assessment of the climate resilience of the city's transport infrastructure estimates that reconstruction costs per event are between USD 5.5 to USD 6.1 million. In addition, freight delays are shown to have an estimated financial impact of between USD 200,000 to over USD 400,000 to carriers, depending on the intensity of the rainfall event. Ancillary indirect costs also include a backlog of freight movements affecting marine transport, storage fees, and reliability of inventory.

About 5% of the buildings in the Msimbazi Lower Basin are vulnerable in the sense that they have experienced riverine flooding at least once since 2011. The percentage of buildings that are vulnerable to flooding is even higher, up to 10%, when the buildings affected by pluvial flooding are also counted. Jangwani, Mchikichini, Magomeni, Kigogo and Vingunguti wards have the largest percentages of affected buildings; exceeding 30% of the total number of buildings in the ward.

In the Lower Basin, the bridge most vulnerable to flooding is the Jangwani Bridge on Morogoro Road. During extreme events the bridge and the road are often blocked during and after flash flood events, interrupting transport by cutting the main connection between Dar es Salaam's City Centre and the city's outskirts. Other heavily affected bridges are the Kawawa Road Bridge and the Nelson Mandela Road Bridge which both cross the Msimbazi River, and Mkwajuni Bridge which crosses the Sinza River tributary main channel.

4.17. Vulnerable Assets

Constructed assets within and around the valley include the city's transport network, health facilities, housing and businesses. In the Msimbazi Basin dozens of bridges and culverts cross the river's main channel and its tributaries. Both of Dar es Salaam's two ring roads cross the valley in multiple locations. Morogoro Road, one of four trunk roads connecting the city's Central Business District to its periphery, crosses the river at the Jangwani wetlands. Another of the city's four main transport arteries, Ali Hassan Mwinyi Road, crosses the Msimbazi. The Dar es Salaam Area Rapid Transit bus depot, which provides parking and maintenance facilities for the fleet of over 200 busses, is located just upstream of Morogoro Road. Muhimbili National Hospital is mainly located on high ground which is not within the river's flood plain, but the property's steep embankment has experienced severe erosion, which threatens some of the hospital's facilities.

4.18. Vulnerable Infrastructure in the Msimbazi Lower Basin

Main infrastructure assets of Dar es Salaam cross the Msimbazi River and its tributaries, including the Morogoro Road, Kawawa Road, Nelson Mandela Road and the national railway track. Other main assets in the flood plains are the DART depot, a cement industry depot and a logistics/industrial park adjacent to Nelson Mandela Road. It is difficult to overestimate the negative impact that a further doubling of the population and human activities would have on the river itself, on infrastructure assets and on the flood risk vulnerability of the communities that live in and around the Msimbazi Basin (**Figure 4** below).

¹¹ Return on investment in Green Urban Development: Amelioration of flood risk in the Msimbazi River catchment, Dar es Salaam, Tanzania. (2016)

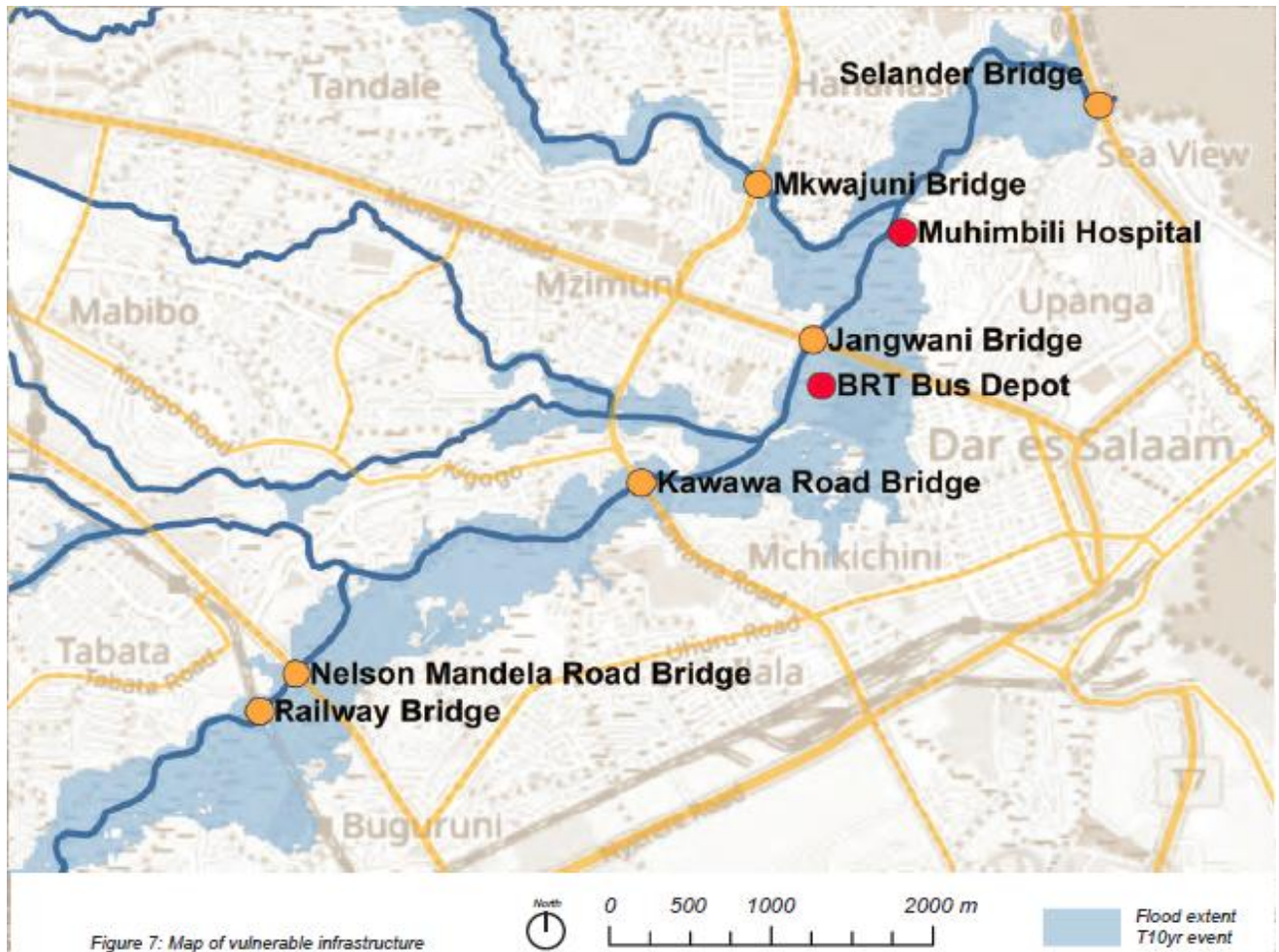


Figure 4: Map of Vulnerable Infrastructure

Source: MSMF, 2019

4.19. Community Vulnerability and Resilience

From the information on community resilience specific to the Lower Basin was collected with a narrative-based survey of 180 community members, collected for the MSMF, 2019, the community narratives showed that most people who have experienced flooding would like to relocate but cannot afford to do so. Moreover, 35% would like to stay within their Mtaa neighborhood because they value the Msimbazi Lower Basin location for its proximity to the city center, hospital and other conveniences.

4.20. Disaster Preparedness, Early Warning and Emergency Evacuation Plans

Flooding in the Msimbazi Basin is characterized by a very short response time between the rainfall event and the subsequent floods, giving affected communities and businesses little response time. Some actions have proven effective to reduce community vulnerability. With support from TURP the Early Warning System is being improved and capacity building has started for disaster risk management, disaster response plans and emergency evacuation plans, with coordination at Mtaa level.

4.21. The Situation of Gender Based Violence in Tanzania

Gender Based Violence (GBV) has been defined as “any harmful act that is perpetrated against a person’s will and that is socially ascribed (gender) differences between males and females. GBV has a greater impact on women and girls, as they are most of often the survivors and suffer of great physical damage than men when victimized (Odunga, 2021). The term GBV¹² is often used interchangeably with the term “Violence against Women” (VAW). Literature has revealed that the major root cause of gender based violence is discrimination perpetuated by customs, cultural and traditional settings that place women and the girl child at a lower level of social relations. According to the Global 2015 Human Development Report, 35% of women globally have experienced physical or sexual intimate partner violence, which impacts on women’s empowerment.

From a situation analysis of National Plan of Action to End Violence Against Women and Children (NPA-VAWC), violence is a daily reality for large numbers of women and children in Tanzania. In Tanzania, almost four in ten women have experienced physical violence, and one in five women report experiencing sexual violence in their lifetime (from the age of 15).¹⁶ Spousal abuse, both sexual and physical, is even higher (44%) for married women. According to the 2010 Demographic Health Survey, 39% of women age 15-49 have ever experienced physical violence since age 15 and almost one-third of women (33%) aged 15-49 experienced physical violence in the 12 months prior to the survey. Disaggregated data for GBV among women in the regions indicated that, in Dar es Salaam where the proposed MBDP is located, prevalence of physical and sexual violence against women aged 15-49 years was 31.8% and 24.1% respectively (NBS, 2011).

¹² Some examples of gender based violence include; physical violence such as beating, punching, pushing, grabbing, maiming and killing with or without weapon, FGM etc among others; psychological violence includes verbal abuse, scolding, isolating, verbal humiliation, gesture, annoyance, slandering and disgracing; sexual abuse includes the following; rape, dishonesty in relationship, forced unprotected sex, touching of private parts of a person without his/her consent, etc; economic abuse include lack of voice in economic rights affecting one, working for less pay, failure to own property that one deserves, trafficking of persons, denial of basic necessity e.g. food, denial of education as a basic right, and early marriages. Examples of health abuse (violence) include lack of right to access health delivery in hospitals, denial of funds for attending health services by parent or guardian, etc.

5. ANALYSIS OF ENVIRONMENT AND SOCIAL IMPACTS AND RISKS

This section presents a project components, the corresponding impacts and the risk rating and the respective mitigation measures (options) for the construction and operation phases. Rating has been performed in the absence of mitigation measures for negative impacts and mitigations (options) are provided for negative impacts only.

5.1. Component 1: Msimbazi Basin Development Infrastructure

Sub-Projects	Project Phase	Risks & Impacts	Rating*	Mitigations (Options) – for negative impacts only
		Positive impacts		
Flood control interventions/infrastructures: Recontouring the lower basin flood plain area including channeling and terracing, sediments management/traps and monitoring; flood modelling & detailed design support	Operation	Controlled flooding from improved conveyance and enhanced public use opportunities of the lower Msimbazi valley	H	NOTE: Generic mitigation measures provided for negative impacts only
Resilient transport infrastructure: construction of raised and widened multi-span Jangwani Bridge (390m); riverbed excavation during construction; relocation of the Jangwani BRT bus depot and its demolition, widening culverts of Selander bridge; connector roads that improve connectivity in the basin	Operation	Improved BRT Phase I transport infrastructure including protection of the public transit assets and/or facilities and associated ancillaries along the corridor	H	
	Operation	Minimized frequent public mobility and transit disruptions during the rainy seasons along BRT Phase I corridor especially at Jangwani area; and improved connectivity roads within the basin	H	
	Operation	Improved stormwater conveyance in the basin in addition to the dedicated BRT lanes	H	
	Operation	Enhanced non-motorized transport through introduction of pedestrian and cycling	H	

Sub-Projects	Project Phase	Risks & Impacts	Rating*	Mitigations (Options) – for negative impacts only
		lanes and green areas that will accommodate non-motorized transport		
	Operation	Improved hydraulic conveyance and aid in tidal flushing of the mangrove forest complementing forest rehabilitation due to widening of Selander bridge culverts	H	
Msimbazi city park & redevelopment area: Msimbazi wetland and city park development; sites and service infrastructure for low-carbon urban development on 57ha land	Operation	Sustenance of the land uses for the flood plain and flood control terrace levels in the lower Msimbazi Basin	H	
	Operation	Improved stormwater attenuation and filtration through establishment of the wetland park including river embankments	H	
	Operation	Creation of public sports and recreation facilities/centre and improved urban livability in Msimbazi city park	H	
	Operation	Promotion of the local tourism activities and income generation in Msimbazi city park. Tourism attraction from IEC campaigns and links with Msimbazi city park	H	
Watershed management (greening, erosion and litter management): mangrove restoration and conservation; upstream erosion prevention and greening; solid waste management and litter control program	Operation	Improved carrying capacity of the river through restoration of the ecosystem services and reducing waste in the river system through sediment and solid waste control and management. The volume of solid	H	

Sub-Projects	Project Phase	Risks & Impacts	Rating*	Mitigations (Options) – for negative impacts only
		waste entering the Msimbazi river will be reduced though improved cleaning and collection services		
	Operation	Upstream erosion control, water flow and sedimentation through reinforcement of riverbanks at critical locations in the main channel and tributaries; greening, widening roads, bridges	H	
	Operation	Enhanced ecosystem services from mangroves restoration and greening campaign	H	
	Operation & Construction	Opportunities for local employment opportunities and income generation from direct and indirect employments, services and materials provision	H	
	Operation	Development of an iconic urban green space for Dar es Salaam	H	
	Operation	Improved stormwater drainage for the <i>Mitaa</i> bordering the Msimbazi Special Planning Area (MSPA)	H	
	Operation	Increased property values and revenue for City and central government through urban redevelopment	H	
	Construction & Operation	Skills development and technology transfer	S	
		Negative Risks and Impacts for all sub-projects		
	Construction	Risk of soil erosion resulting from inadequate spoil management leading to siltation/sediment	S	Engineering erosion control measures such as gabions for steep slopes protection and reinforcement, installation

Sub-Projects	Project Phase	Risks & Impacts	Rating*	Mitigations (Options) – for negative impacts only
		transport from construction sites. This may happen especially during riverbed excavation and other construction activities along the river banks/embankments, bridges and culverts construction		of proper hydrological structures in all susceptible locations, controlled excavations and siltation Discharge points to be carefully chosen to avoid inundation in the nearby settlements, institutions, commercial and industrial premises, and creation of gullies Install silt traps to prevent sediments from surface water source
	Construction	Risk of contamination of the groundwater and surface water resources from construction activities – spills, leakages, spoilt materials transportation and disposal, and turbidity from dredging in/close to streams	H	Development and implementation of the Waste Management Plan and Spill Prevention and Contingency Plan (SPCP) to provide guidance and response mechanism to accidental unplanned events such as oil spills Establishment of the bunding walls (secondary containment) of at least 110% Remediation/cleaning of the contaminated sites will be done soon after completion of the civil works Avoid construction of workers camp site facilities close to surface water sources Avoid washing of construction equipment and vehicles near the water sources Effluents generated at the camps and various construction activities shall not be discharged into adjacent rivers, streams
	Construction	Disposal of dredged and/or excavated materials. This involves	H	Development and implementation of the

Sub-Projects	Project Phase	Risks & Impacts	Rating*	Mitigations (Options) – for negative impacts only
		ccollection, transportation and disposal of potentially large quantities of contaminated sediments and solid waste		Dredging Management Plan
	Construction	Risk of disruption of the aquatic resources (benthos) and water flow from construction activities like bridges, piles, riverbed excavation river widening/deepening of river channel through dredging and other construction activities	S	Dredging management plan to consider aquatic habitats in all sensitive locations Avoid introduction of invasive species, control and reduce their further spread Avoid indirect effect of run-off erosion, sedimentation from roads and contaminations Development and implementation of the recommendations from project's Biodiversity Action Plan
	Construction	Loss of vegetation and land degradation due to borrow pits, quarries, and construction sites	M	Confining the construction activities within the existing reserve and designated areas Vegetation clearance to be limited only to the specific space required for construction Minimum disturbance to the vegetated areas outside the project footprint Landscaping and vegetation restoration Translocation of the species of the conservation concern if affected by project Avoid establishment of the new borrow and quarry sites, by utilizing existing approved/licenced borrows Develop and implement Borrow Pits and Quarry Operation and

Sub-Projects	Project Phase	Risks & Impacts	Rating*	Mitigations (Options) – for negative impacts only
				Reinstatement Plan (BPQORP)
	Construction	Elevated ambient air emissions/exhaust including dust causing nuisances to the surrounding families, religious buildings and businesses, especially to sensitive receptors (children, elders); and construction workers	M	Dust suppressive agents such as water to be used/sprinkling along excavated routes Activities producing excessive dust levels to be confined within working areas Fine earth materials such as sand, dredged materials and murrum to be covered during haulage to prevent spillage and dusting Excavated soils will be compacted in order to reduce the amount of dust spreading by wind Use of dust screens or nets to confine works areas adjacent to key sensitive receptors Administer adequate Personal Protective Equipment (PPE) Haulage trucks to have tailgates that close properly and tarpaulins to cover materials being transported Vehicles, equipment and machinery operations to be of acceptable standards Timely and proper maintenance of machinery, equipment and vehicles to keep the fumes emissions as low as possible
	Construction	Emission of undesirable noise levels due to the machinery and equipment especially in areas with health centres, homes for the elderly and schools; and construction workers	M	A construction noise and vibration management plan will be developed Establish and maintain a buffer from sensitive receptors for noise and vibration damage control along the construction corridor and material sourcing areas

Sub-Projects	Project Phase	Risks & Impacts	Rating*	Mitigations (Options) – for negative impacts only
				Limit noise level during construction within works areas Activities that generates excessive noise will be limited to daytime hours Maintain proper function of equipment and comply with required standards Noise suppression devices are properly maintained, and mufflers will be affixed to construction equipment in use Vehicle and machinery operations to be of acceptable standards (national and international) Vehicles and machinery to be fitted with noise silencers such as mufflers
	Construction	Risk of cracking of houses and other nearby structures due to vibrations from operating heavy machinery	M	Vehicle and machinery operations to be of acceptable standards (national and international) Proper choice and location of plant and machinery coupled with vibration reducing strategies Maintain adequate buffer zone Residents will be notified before activities are undertaken that could generate significant levels of vibration
	Construction	Temporary disruption of traffic flow and delays from traffic jam during construction of the Jangwani Bridge, connector roads within the basin and dredging activities in densely populated <i>Mitaa</i>	S	Development of the Traffic Management Plan (TMP) Provision of alternative routes, detours Public sensitization and information dissemination through media Early warning system and information dissemination regarding the work plan for construction activities

Sub-Projects	Project Phase	Risks & Impacts	Rating*	Mitigations (Options) – for negative impacts only
				along sections with sensitive blocked receptors
	Construction & operation	Occupational health and safety risks and hazards	H	Develop and implement the Health and Safety Policy, and the Health and Safety Management Plan (HSMP) Regular induction training course on health, safety, security and environment to all workers before beginning of construction activities Develop and practice an emergency response plan, with the conduct of induction and refresher trainings, the latter of which will involve programmed emergency tests Regular induction training course on health, safety, security and environment to all workers before beginning of construction activities
	Construction & operation	Community health and safety including traffic accidents in areas with sensitive receptors such as schools, institutions, communities	H	Design to consider safety issues related to traffic accidents especially near settlements and urban centres and in all accidents-prone sections Establishment of the support mechanism for the movement of the vulnerable groups such as disabled people including wheelchair users, children, students, patients Development of the Traffic Management Plan (TMP) Minimizing pedestrian interaction with construction vehicles Collaboration with local communities and responsible authorities to

Sub-Projects	Project Phase	Risks & Impacts	Rating*	Mitigations (Options) – for negative impacts only
				improve signage, visibility and overall safety of roads, particularly along stretches located near schools or other locations where children may be present
	Construction	Disruption of public utilities e.g. water, communication, electricity, etc. due accidental cutting of the infrastructure or during unavoidable relocation of the infrastructure during construction	S	Identification and mapping of the utilities to be affected, specific areas along the corridor and groups that are likely to be affected directly Development of the Utility Relocation Plan (URP) Liaise with utility owners to provide early warning to the communities about any possible disruption in service provision for the different utilities Feasible alternatives should also be provided during temporary absence of service
	Construction	Risk of disruption of local activities and social networks during construction	M	Access to existing non-affected businesses adjacent to RoW to be maintained by creating temporary driveways, and/or providing alternate access points. Accesses to be restored after construction Early warning system and information dissemination regarding the work plan for construction activities along sections with sensitive blocked receptors
	Construction	Interrupted accessibility to dwellings and businesses during construction	M	
	Construction & operation	GBV and SEA risks among workers and between workers and host communities	H	Development and implementation of the Gender Action Plan (GAP) Develop and implement Child Abuse Protection Plan (CAPP) and Gender Based Violence Action Plan (GBVAP) that will contain and address

Sub-Projects	Project Phase	Risks & Impacts	Rating*	Mitigations (Options) – for negative impacts only
				Protection Against Sexual Exploitation and Abuse (PSEA) Continuous awareness campaigns to the surrounding communities and construction workers on gender-based violence, sexual exploitation and child abuse in relation to HIV/AIDS, STDs and other gender impacts Developing and implementing Code of Ethical Conduct for the construction workers
	Construction	Social exclusion of poor people and other vulnerable populations due to redevelopment activities particularly	M	An inclusive, transparent and gender-sensitive recruitment process to be established and implemented Equal employment to be provided to both women and men regarding gender and equity Vulnerable groups to be given consideration in the employment opportunities Livelihood restoration strategies will be extended to the vulnerable groups and their income levels monitored closely during the implementation process
	Construction	Labour conditions and welfare especially construction workers	S	Provision of labour and accommodation facilities as per required WB and national standards Development and implementation of the Influx Management Plan (IMP) Deploy locally available labour to avoid causing a further influx of newcomers into <i>mitaas</i>

Sub-Projects	Project Phase	Risks & Impacts	Rating*	Mitigations (Options) – for negative impacts only
	Construction	Risk of child and forced labour	M	No under-age children/students will be employed Strict policies and recruitment screening mechanism prohibiting child labour and any other forms of forced labour Recruitment protocol for project labour to necessitate the presentation of identification documentation for confirmation of candidates' age (use of national IDs, voter's registration cards, driving licenses, passport, introduction letter from Mtaa authority etc.) Due diligence, monitoring and audit of the suppliers and service providers to ensure child labor is absent within the project's supply chains Employment records will be disaggregated by age and sex
	Construction	Risk of new transmissions on HIV/AIDS, STDs and other infectious diseases like TB and COVID-19	H	Accommodate the current district/municipality HIV/AIDS program in-order to make the use of district health officers in sensitization Developing and implement a Comprehensive HIV/AIDS Management Plan covering biomedical, behavioral and structural aspect of HIV/AIDS program Compliance to the national and WHO Guidelines on COVID-19 Prevention in Construction Development and implementation of the project's COVID-19

Sub-Projects	Project Phase	Risks & Impacts	Rating*	Mitigations (Options) – for negative impacts only
				Response Plan (CRP), and Project Continuity Plan (CPC) that will be linked with the project's Environmental and Social Management System (ESMS)
	Construction	Risk of deterioration of local roads due to heavy equipment and traffic detours	H	Periodic maintenance of the local roads and haulage routes Appropriate transportation of the heavy equipment and machinery e.g. use of low bed trucks
	Construction	Potential damage to cultural heritage resources	L	Detailed survey, identification and proper storage of the heritage resources collected Instituting Chance Finds Procedure during construction

5.2. Component 2: Preventative Resettlement of Flood Prone Communities

Sub-Projects	Project Phase	Risks & Impacts	Rating*	Mitigations (Options)
		Positive impacts		
Implementation of the Resettlement Action Plan	Pre-construction	Minimized involuntary resettlement, livelihoods assets loss and disruption through prioritized options for <i>in situ</i> and <i>in-kind</i> resettlement options in the redevelopment plans	H	
Livelihood Restoration Program	Construction & Operation	Improved and/or restored livelihoods of the low-income flood-prone communities in the lower Msimbazi	H	
Implementation support, including case management for relocated households and RAP monitoring.				
		Negative risks and impacts		
	Construction	Relocation resulting into loss of productive assets including land, properties and crops	H	Design and construction to minimize and/or

Sub-Projects	Project Phase	Risks & Impacts	Rating*	Mitigations (Options)
				avoid extra land acquisition Implementation and monitoring of the detailed RAP Livelihood restoration and improvement programs should be timely implemented
	Construction	The need to relocate informal vendors, informal parking (mainly motorcycles) either permanently or temporarily for the period of construction	S	Provide ample time e.g. 3-4 months for the business owners, <i>bodaboda</i> , <i>bajaji</i> , mobile vendors and other micro-entrepreneurs to look for alternative business premises
	Construction	Grievances and public anxiety or discontent in compensation and livelihoods	S	Development and implementation of the Grievance Redress Mechanism (GRM) Timely dissemination of relevant project information regarding land acquisition Involvement of PAPs directly to entire process from design, implementation, monitoring and valuation
	Construction	Risk of gender-based violence and/or sexual abuse during relocation process	H	Sensitization campaigns to be undertaken, information about land take and acquisition will be disseminated to the right people Establishment of communication channels in form of hotlines across all mobile network service providers and e-mail addresses to enable PAPs to

Sub-Projects	Project Phase	Risks & Impacts	Rating*	Mitigations (Options)
				convey any queries, fears and concerns to designated attendants to be addressed accordingly, in line with the project grievance mechanism.
	Construction	Potential disruption of livelihood activities and existing social fabrics and networks within communities	H	Livelihood restoration and improvement programs should be timely implemented Accidental and/or temporal damaged properties adjacent to the RoW unforeseen construction actions the property shall be compensated as per the entitlement matrix developed in the RAP
	Construction	Social impacts on host areas and remaining communities	M	Development and implementation of the Grievance Redress Mechanism (GRM) Continuous and transparent key stakeholder engagement at all levels throughout the project as guides in the SEP
	Construction	Social exclusion of poor people and other vulnerable populations due to redevelopment activities	M	Provision of resettlement support (from respective municipal authorities) to economically and/or physically displaced PAPs who are categorized as vulnerable
	Construction	Spread of HIV/AIDS, STDs and other infectious diseases like TB and COVID-19	H	Accommodate the current district/municipality HIV/AIDS program in-order to make the use of district health officers in sensitization

Sub-Projects	Project Phase	Risks & Impacts	Rating*	Mitigations (Options)
				Developing and implement a Comprehensive HIV/AIDS Management Plan covering biomedical, behavioral and structural aspect of HIV/AIDS program Compliance to the national and WHO Guidelines on COVID-19 Prevention in Construction Development and implementation of the project's COVID-19 Response Plan (CRP), and Project Continuity Plan (CPC) that will be linked with the project's Environmental and Social Management System (ESMS)

5.3. Component 3: Strengthening Institutions for Resilient Urban Development

Sub-Projects	Project Phase	Risks & Impacts	Rating*	Mitigations (Options)
Establishment of Msimbazi Special Planning Area (MSPA) authority	Construction & Operation	Capacity building and strengthened institutions in facilitating and ensuring smooth coordination in the management of the Msimbazi basin, investments and assets established by the Project including the surrounding urban area and the watershed	H	
	Operation	Establishment of the autonomous MSPA Authority that will be overall responsible for: implementation of land use plans in the area, operation and maintenance of the park and its urban areas, capital improvements, emergency management and government services are provided to the area; and ensure enforcement of development and environmental regulations	H	

Sub-Projects	Project Phase	Risks & Impacts	Rating*	Mitigations (Options)
Basin-wide management (technical assistance to develop a Msimbazi Basin Watershed and environmental protection plan)	Construction	Development of the infrastructure policies to reduce erosion and increase groundwater recharge (e.g., greening, sustainable urban drainage and erosion control, enforcement of water quality and sanitation regulations in the watershed)	H	
Institutional strengthening of the DLAs to support service delivery, urban development controls and environmental management	Construction & Operation	Coordinated and streamlined efforts including training support to the DLAs in performing their associated roles in the MSPA and its surrounding urban areas and watershed including basic service delivery	H	

5.4. Component 4: Project Management

Sub-Projects	Project Phase	Risks & Impacts	Rating*	Mitigations (Options)
Financing of the direct costs of management and operation of the project	Construction & Operation	Enhanced smooth delivery of the Project and compliance with the national and World Bank policy and guidelines at all levels and phases of the Project	H	
Support to PO-RALG, TANROADS, PIU, DLA PIUs	Construction & Operation	Capacity building and Project sustainability from continual project supervision, environmental and social monitoring, fiduciary management and auditing, office operating costs, and stakeholder coordination	H	
Facilitation of other implementing government departments (e.g. TFS) responsible for specific subcomponents to implement and coordinate their respective activities	Construction & Operation	Increased public awareness and stakeholder engagement from transparency and on-going public communication activities	H	
Public communications activities				

5.5. Component 5: Contingent Emergency Response

Sub-Projects	Project Phase	Impacts	Rating*	Mitigations (Options)
A project-specific Contingent Emergency	Construction & Operation	Facilitated access to rapid financing through the reallocation of uncommitted	H	

Response Component (CERC) is included		project funds in the event of an eligible crisis or emergency at the request of the Government of Tanzania		
Specific details about this component (including activation criteria, eligible expenditures, specific implementation arrangements, and staffing) will be part of the Contingent Emergency Response Manual prior to the implementation of CERC's activities	Construction & Operation	Risk of absence of and/or delayed access to the funds during crisis	H	Development of the Fast-Track options in case of emergencies

5.6. Cumulative Impacts (Overall)

Overall impacts and considerations

- Flood control and management along Msimbazi valley;
- Improved mobility within the BRT Phase I corridor and its feeders, connector roads and the City at large;
- Enhanced livability & green spaces and efficient urban land use;
- Improved public access to urban spaces;
- Improved incomes and access to various socio-economic and livelihood activities from improved mobility;
- Carbon-free and non-motorized movement;
- Reduced fatalities & accidents associated with Msimbazi flooding;
- Economic gains from less infrastructure assets damage;
- Ambient air quality improvement at Msimbazi park – greening, ecosystem services restoration;
- Development of an iconic urban green space for Dar es Salaam;
- Reduced loss of lives;
- Increased property values and revenue for City and central government through urban redevelopment;
- Enhance resilience and efficiency of the urban area within the Msimbazi basin; and
- Demonstrate feasibility of local bioclimatic urban design in the Msimbazi valley that can be replicated in other cities.

5.7. Impact and Risks Associated With Technical Assistance Activities

Component 3 supports Technical Assistance (TA) activities, including the participatory land use planning which will have potential environmental and social implications. Table 7 below presents a summary of relevant requirements for TA activities, including requirements for specific instruments which need to be prepared in line with the World Bank's Advisory Note on Technical Assistance and the ESF.

Table 7: Management of E&S Impacts and Risks for TA for MBDP

Type of TA	Technical Assistance Activities	Screening	ESF requirements
Type 1: Supporting the preparation of future investment projects (whether or not funded by the Bank).	Not applicable		
Type 2: Supporting the formulation of policies, program, plans, strategies or legal frameworks	i. develop a Msimbazi Basin Watershed and environmental protection plan; establish development and infrastructure policies to reduce erosion and increase groundwater recharge (e.g., greening, sustainable urban drainage and erosion control) ii. Enforcement of water quality regulations in the watershed; and planning and design of infrastructure interventions for services (e.g., water and sanitation, drainage, drainage, solid waste).	Analysis of potential E&S issues and risk of the plan following the ESF requirements	TORs for the proposed studies will be prepared to ensure that the planning process includes adequate assessment of environmental and social implications and that the advice provided through the TA for addressing those implications is consistent with the ESF. TA studies supporting regulations should apply strategic environmental and social analysis (SESA) tools and cumulative impact assessments.
Type 3: Strengthening borrower capacity Building	Institutional strengthening of the Dar es Salaam Local Authorities (DLAs) to support service delivery, urban development controls and environmental management in support of their associated roles in the Msimbazi Special Planning Area, surrounding urban areas and watershed. The project will finance training and institutional strengthening including urban planning, development controls, and basic service delivery including solid waste management.	Usually this does not have potential adverse environmental and social implications or risks	To review the activities towards which the capacity building is being directed, and determine the extent to which these relate to matters covered by the ESF. TORs for the proposed TA to prepare the controls will be prepared to ensure that the controls are consistent with the ESF.

6. PROCEDURES FOR ENVIRONMENTAL AND SOCIAL ASSESSMENT

6.1. Environmental and Social Process

Figure 4 below presents an environmental and social management process that should be followed throughout the project cycle from sub-project selection to implementation.

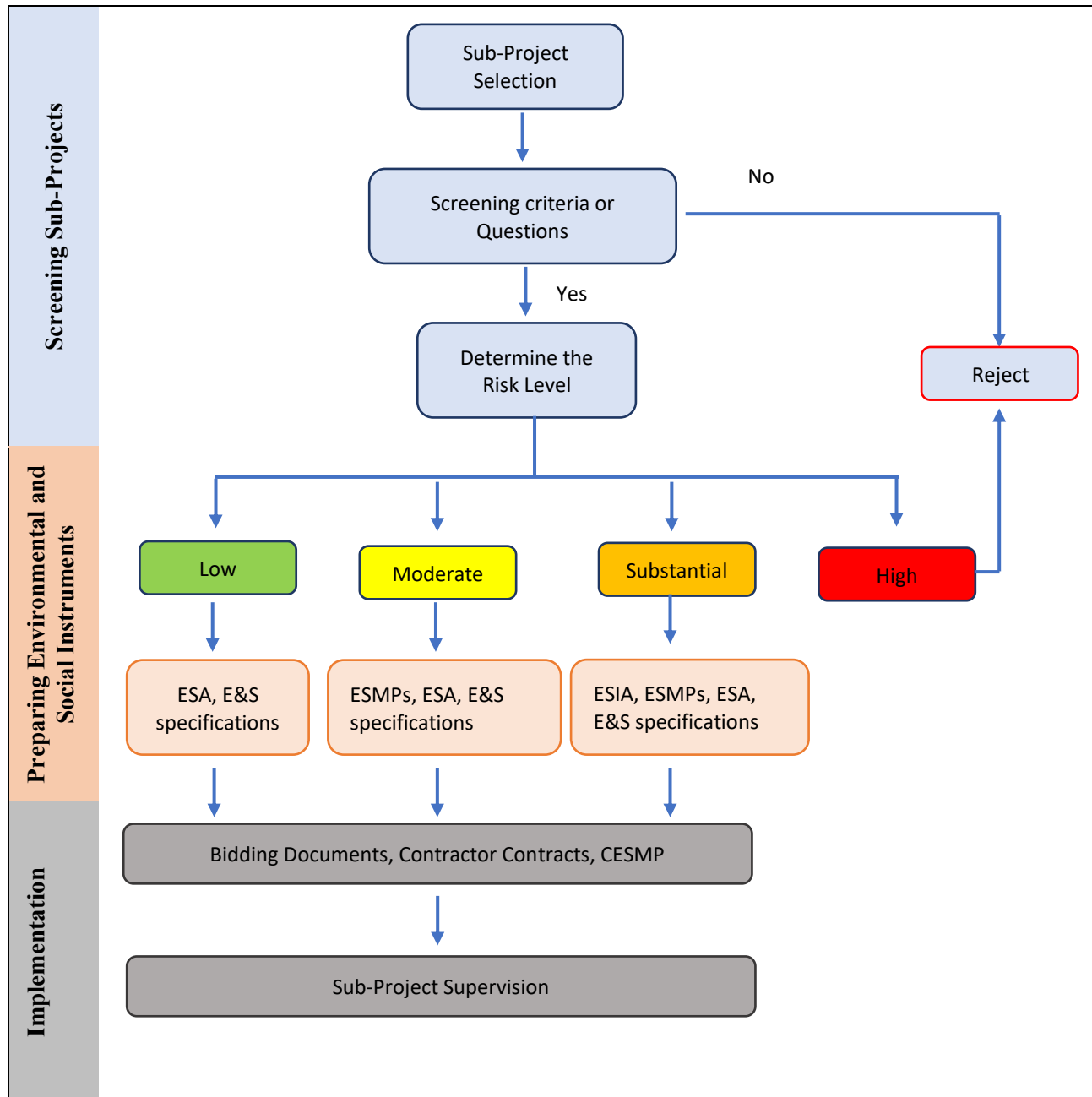


Figure 5: Environmental and Social Management Process for MBDP

6.2. Screening Criteria and Screening Checklist

Annex 4 contains a Screening Form for Potential Environmental and Social Issues. Each proposed subproject should be screened based on a series of criteria/questions. This form is to be used by

the executing agency (WBCU) and/or the Project Implementation Unit (PIU) and relevant local institutions to screen potential environmental and social risk levels of a proposed subproject under the Project. The screening will determine the relevance of Bank ESS, propose its environment and social risk levels, and the instrument to be prepared for the sub project. The screening should be carried out at the feasibility stage and feed into the feasibility and design studies.

6.3. Consultation during the Screening Process

The WBCU and/or the PIU will consult or involve the implementing agencies in completing Screening Form. In compliance with national requirement, the consultation may take a form of engagement with the relevant authorities like NEMC.

6.4. Determination of the Impacts and Risks Analysis of Sub-Projects

By cross referencing the scale of civil works to be carried out and the sensitivity of the site, the risk level of the sub-projects is determined. Based on the risk category of the sub-project the nature of the environmental and social effort required for managing the impacts during implementation can be identified. The process is described below and should be undertaken by the WBCU.

i. Assessing Site Sensitivity

Sites sensitivity is assessed based on the location of the sub-project. Using available information such as maps showing key features such as national parks, protected areas, forests, rivers, etc.; topographic maps; cultural heritage maps; planning records; literature review and site visits, the WBCU should determine the sensitivity of the proposed sub-project based on the criteria given in **Table 8** below.

Table 8: Site Sensitivity of the Sub-projects

Sensitivity	Description
Very Sensitive	1.1 High possibility of environment degradation taking place (deforestation, soil erosion, water resources depletion, hunting, etc.) due to the project 1.2 Project is within 1 km from ecologically sensitive habitats or critical ecosystems (significant wetlands, mangroves, protected areas, national parks, natural forests, wildlife sanctuaries, rivers and lakes) and with possibility of induced impacts on sensitive ecosystems and ecologically sensitive habitats 1.3 Mountainous topography (>35% of slope) 1.4 Located in areas vulnerable to natural disasters (floods, landslides, droughts, earthquake, etc.) 1.5 Presence of places of significant cultural and historical interest along the RoW or at the proposed material sites. 1.6 Land acquisition and physical and /or economic displacement of more than 10 affected persons per sub-project
Moderately Sensitive	2.1 Slight possibility of environmental degradation taking place (deforestation, soil erosion, water resources depletion, hunting, etc.) due to the sub-project 2.2 Sub-project is 1-5 km from ecologically sensitive habitats or critical ecosystems (wetlands, mangroves, protected areas, national parks, natural forests, wildlife sanctuaries, rivers and lakes) 2.3 Wavy topography (15-35% of slope) 2.4 Located in areas with moderate risk to natural disasters (floods, landslides, droughts, earthquake, etc.) 2.5 Suspected presence of places of significant cultural and historical interest near the RoW or at the proposed material sites. 2.6 Possibility of induced impacts on sensitive ecosystems and ecologically sensitive habitats because they are located in the sub-project area of influence

Sensitivity	Description
	2.7 Land acquisition and physical and /or economic displacement of between one and 10 affected persons per sub-project.
Low Sensitivity	3.1 Low possibility of environmental degradation taking place (deforestation, soil erosion, water resources depletion, hunting, etc.) due to the sub-project 3.2 Sub-project is greater than 5 km from ecologically sensitive habitats or critical ecosystems (wetlands, mangroves, protected areas, national parks, natural forests, wildlife sanctuaries, rivers and lakes) 3.3 Flat topography 3.4 Located in zones at no risk to natural disasters (floods, landslides, droughts, earthquake, etc.) 3.5 Absence of places with cultural and historical significance in the area of influence 3.6 No induced impacts 3.7 No Land acquisition and or physical and /or economic displacement.

ii. Identifying the Environmental and Social Risk Level

The environmental and social risk level or category is a function of the (i) scale of the sub-project, and (ii) site sensitivity. Based on **Table 9** below, the E&S risk category of the projects should be determined by the WBCU. The Risk classification is based on the definitions provided in the World Bank Environmental and Social Directive for Investment Project Financing given in **Annex 5**.¹³

Table 9: Environmental and Social Risk Level or Category

Sub-Project Grade	Site Sensitivity		
	Very Sensitive	Moderately Sensitive	Low Sensitivity
I	H	S	M
II	S	M	L
III	M	L	L

H: High Risk; S: Substantial Risk; M: Moderate Risk; L: Low Risk

6.5. Determination of the Environment and Social Assessment Requirements

Once the risk level has been identified, the level of environmental and social effort for managing the E&S risk for each sub-project should be determined based on **Table 10** below. All sub-projects with impacts on land as a social impact – details of mitigation have been elaborated in the RPF and further RAPs will provide details for handling each subproject.

Table 10: Determination of Environmental and Social Efforts to be undertaken

Risk Level	Level of E&S Effort
High/Substantial	ESIA and ESMP will be prepared for the sub-project by independent consultants WBCU to follow environmental and social specifications for contractors C-ESMP
Moderate	Site-specific ESMP or ESA WBCU to follow environmental and social specifications for contractors CESMP
Low	ESA, E&S specifications for contractors will be prepared by WBCU

Substantial risk: Sub-projects should undertake an ESIA including assessment of induced impacts. For identified impacts, an ESMP should be developed. Sub-projects should follow the E&S specifications for contractors. The ESMP and E&S specifications for Contractors should be

¹³ The WB Environmental and Social Directive for Investment Project Financing can be accessed at <https://policies.worldbank.org/sites/ppf3/PPFDocuments/Forms/DispPage.aspx?docid=4299690b-e96c-44a1-9117-8c7bc51dde70&ver=current>

included in the bidding documents. The contractor should prepare CESMPs based on the ESMP requirements. The contractor should follow the E&S specifications for Contractors during construction.

For Moderate risk Sub-projects: Site-specific ESMPs should be developed. Impacts can be identified during the alignment walk and avoidance and mitigation measures should be provided in the site specific ESMPs. During construction by following good practices using the E&S specifications for contractors with oversight by the supervision engineer/consultant the impacts can be managed. The contractor should prepare CESMPs based on the requirements in the site-specific ESMPs.

For Low risk Sub-projects, the impacts can be managed through the E&S specifications for contractors with oversight by the Supervision engineer/consultant. MBDP subprojects, if any.

The Msimbazi basin is an ecologically sensitive area that has been largely under persistent anthropogenic degradation for some decades now. The 1979 Dar es Salaam Master Plan designated the Msimbazi Basin as hazard land, and the Environmental Management Act established a protective zone of 60-meters from a rivers' high-water marks. Accordingly, all the sub-projects with major civil or structural works under component 1 and component 2 of the proposed MBDP have substantial impacts and risks (**Table 11** below). However, the ESMF covers all project activities including the requirements for TA, CERC etc.

All sub-projects with substantial risks shall be required to obtain environmental clearance or EIA certificates by undergoing *Procedures for Carrying out EIA and Environmental Audit* (included in **Annex 4**) which is recently being managed via NEMC's EIA Online System¹⁴ since Nov 2020.

Table 11: Grouping of ESIA Studies for Sub-Projects under MBDP

	Name of Sub-Project	Location in Msimbazi Basin	Implementor Responsibility for ESIA
1.	Flood Control Interventions	Lower Msimbazi Basin	PO-RALG
2.	Raising and widening of Jangwani Bridge	Lower Msimbazi Basin	TANROADS
3.	Rehabilitation and Upgrading of Barakuda - Majichumvi Road (3.5 km); Majumba Sita - Segerea Road + Bridge (3.0 km); Kijiwe Samli - Relini Road (1.2 km); and Umoja Tabata (4.3 km).	Upper Msimbazi Basin	Ilala MC
4.	Rehabilitation and Upgrading of Kimara - Makoka (3.71 km) ¹⁵	Upper Msimbazi Basin	Ubungu MC
5.	Rehabilitation and Upgrading of Biafra - Best Bite Road (1.36 km) and construction of Hana Nasif Bridge and Approach Roads (11 km)	Lower Msimbazi Basin	Kinondoni MC
6.	Pugu-Majohe- Mbondole- Kivule Hospital (12.6 km)		Temeke MC

¹⁴ <https://eia.nemc.or.tz/pms/web/vig.eu>

¹⁵ Can be combined with roads and bridge sub-projects in Ilala MC.

	Name of Sub-Project	Location in Msimbazi Basin	Implementor Responsibility for ESIA
7.	Erosion/Sedimentation/Litter Control and Urban Greening interventions including labor intensive approaches	Upper, middle and lower	PO-RALG
8.	Redevelopment Works, Sites and Services interventions	Lower Msimbazi Basin	PO-RALG

6.6. Environmental and Social Assessment Documents

6.6.1. Preparing ESIA and ESMP

An ESIA along with an ESMP shall be prepared based on the outlines given in the **Annex 5**. As per the Tanzania's EIA and Audit regulations of 2005 and Amendments of 2018, ESIA study will be preceded by a scoping study whose aim is to identify key environmental and socioeconomic issues to be considered in the undertaking of ESIA study. As set out in the Third Schedule to the EIA and Audit (Amendment Regulations, 2018, an outline of a Scoping Report is given in **Annex 6**). The objectives of the scoping study are to:

- i. Identify key environmental and social issues for detailed ESIA study;
- ii. Identify key stakeholders to be consulted;
- iii. Identify project alternatives;
- iv. Identify project boundaries;
- v. Identify information requirements;
- vi. Identify expertise requirements for detailed ESIA study; and
- vii. Prepare draft ToR for the full ESIA study.

Preparation of ESIAs/ESMPs is the responsibility of the WBCU/implementing agencies and must be approved by the World Bank prior to finalization of the project design. ESIAs will address direct, indirect, induced and cumulative impacts. ESIA and ESMPs will have to be submitted to NEMC after WB approval for obtaining certification. Preparation of ESIA/ESMP includes stakeholder engagement and public consultation processes as detailed in the SEP to be documented in the reports and reflected in subproject designs. The WBCU/implementing agencies should provide the Design consultants with the ESIAs (for sub-projects with substantial risks) and ESMPs so that the E&S mitigation measures identified are included in the design and budgeted.

6.6.2. Developing ESMPs

Through a detailed site screening, environmental and social checklists should be prepared for the subprojects that won't require preparing ESIA along with an ESMP. These checklists are meant to:

- Identify physical, environmental, and social issues along and around the subproject site;
- The instrument where each measure will be included (design, resettlement plan, bidding documents, etc.); and
- The agency responsible for implementation.

The screening will require a site visit and some consultation and that the decision on risk classification and type of assessment is being done by qualified personnel and consulted with the Bank and stakeholders.

Issues to be addressed during site screening include (but not restricted to):

- Slope stability, earth cuts;
- Erosion;
- Drainage, stream crossings, bridges;
- Direct and indirect effects on houses and businesses (noise, dust, limitations on access);
- Potential hot spots for road safety (junctions, crossing of communities, etc.);
- High gradients;
- as of special safety concern (bridges, road segments with significant precipices);
- Sensitive receptors such as schools, clinics, health centres, hospitals, religious places;
- Privately owned structures such as fences;
- Animal crossing such as for cattle;
- Roadside community economic activities (markets, informal vendors, informal parking areas);
- Quarries, borrow pits, and access roads to these sites;
- Asphalt plants;
- Workers' camps; etc.

For each problem identified and evaluated, mitigation measures must be identified. These may include:

- Slope stabilization;
- Erosion and sediment control and re-vegetation;
- Land acquisition/Resettlement (if taking place then RPF will be followed);
- Construction of areas for the relocation of roadside activities;
- Relocation and reconstruction of affected community infrastructure;
- Extra wide shoulders, independent lanes in certain hot points (community crossings);
- Special signs and traffic calming measures;
- Special design in critical junctions including animal crossings;
- Temporary or permanent relocation of community economic activities (if taking place then RPF will be followed);
- Special measures for sensitive receptors such as schools and health centres;
- Measures for scenic areas and community values;
- Recommendations for construction schedules;
- Quarry site and borrow pits management plan which will include restoration of disturbed areas, temporary access roads etc;
- Workers' camp management plans;
- Site specific ESMPs for the Asphalt plants; etc.

Based on the issues identified during site screening, site specific ESMPs should be prepared covering issues that warrant special attention during construction such as traffic, protection of sensitive receptors, noise etc. or be included in the design (areas for relocating economic activities, measures for addressing school children safety). Conducting the site screening and preparing the site specific ESMPs is the responsibility of the WBCU and needs to be approved by the World Bank prior to finalization of subproject designs.

6.6.3. Undertaking Environmental and Social Audit

As it stands, the project has no mention of financing existing facilities. However, given the nature of the project, should at any stage be deemed necessary to involve existing facilities, then Environmental and Social Audit (ESA) shall be undertaken for such facilities and confirm only those with no significant outstanding issues are eligible for the project support. The aim of the audit is to identify significant environmental and social issues in the existing project or activities, and assess their current status, specifically in terms of meeting the requirements of the ESSs. As per the requirements of ESS1 and Tanzania's EIA and Audit Regulations, **Annex 7** contains an indicative outline of ESA report. Conducting ESA is the responsibility of the WBCU and needs to be approved by the World Bank prior to the financing of existing facilities.

6.6.4. E&S Specifications for Contractors

The E&S specifications for contractors are meant to guide the contractor to follow good environmental and social practices during construction. WBCU and the design consultants are responsible for including these specifications in the special conditions of contract, and ensuring that they are built into unit rates or listed as items in the BOQs. For Substantial and Moderate risk sub-projects, Contractors should follow the Environmental and Social Specifications given in **Annex 8** and World Bank Group Environment, Health and Safety Guidelines (EHS)¹⁶. For all Low risk sub-projects, contractors should follow these Environmental and Social Specifications.

6.7. Review and Clearance of Safeguards Documents

All safeguard documents prepared by Consultants and approved by the implementing agencies (PO-RALG, LGAs and TANROADS) will have to be submitted to NEMC after WB review and approval for obtaining certification as per national EIA procedures.

6.8. Monitoring and Project Supervision

The WBCU and PIU will have dedicated teams for monitoring and supervision of compliance with safeguard requirements at different levels.

Monitoring shall focus on two main areas:

- a. compliance monitoring by the WBCU and PIU to measure the effectiveness of subproject ESMPs, compliance with monitoring indicators, and to verify the measures identified in the ESMP and included in the clauses for contractors are being implemented; and
- b. ensuring that measures have been taken to include public participation in the decision making process. Such measures include that subproject implementation staff and communities should ensure that mitigation measures as outlined in subproject ESMPs are effectively implemented to address identified issues and concerns.

Good supervision practice should focus on ensuring that in a selected sample of type of sub-projects: (a) there is timely and efficient implementation of agreed ESSs measures; (b) staff at the subproject level have received adequate and appropriate training and technical support; (c) the process of selecting subprojects is genuinely participatory; (d) the subproject ESMP is being

¹⁶ WBG EHS Guidelines -

https://www.ifc.org/wps/wcm/connect/Topics_Ext_Content/IFC_External_Corporate_Site/Sustainability-At-IFC/Policies-Standards/EHS-Guidelines/

implemented in conformity of the ESSs and loan agreement; (e) sub-project staff and the communities “own” the subprojects and are actively participating in or monitoring subproject implementation; (f) channels for complaints and seeking redress are well- understood and are dealt with promptly and fairly in order.

6.9. Reporting Arrangement

A series of environmental and social safeguard tools have been designed for the use of the implementing agencies, specifically for ensuring implementation of environment, social, health and safety (ESHS) during sub-projects implementation throughout the project cycle.

The tools or instruments that have been prepared to oversee E&S issues during the project cycle are ESMF, RPF, LMP, SEP, ESCP as well as ESIA and ESMPs at project levels. The ESIA and ESMPs are among the safeguard tools to be prepared for specific subprojects that entail the following three level outputs: (a) Client Environmental and Social Monitoring Report (C-ESMR); (b) Contractors’ Environmental and Social Progress Reports (ESPR); and (c) Environmental and Social Completion Report (ESCR).

a. Client’s Environmental and Social Monitoring Report (C-ESMR)

The ESMR is first level of important project monitoring reports prepared by Client (PIT) after review of Contractors’ Environmental and Social Progress Report (ESPR) and undertaking site monitoring. As part of compliance monitoring, the WBCU and PIT shall develop E&S checklist as management instrument to be used for monitoring of compliance with safeguard requirements. The ESMR will assist the Client and WB to determine status and levels of Contractors compliance to ESIA, ESMP, ESF and other national laws. The report will be shared with the WB and other stakeholders for review.

b. Contractors’ Environmental and Social Progress Reports (C-ESPR)

The ESPR is the second level of environmental and social progress reports as per contractual obligations that should be developed by Contractors during works execution (monthly and quarterly progress reports) for the whole project periods for the WBCU and PIT to be able to follow up and monitor the Contractors’ implementation of the environmental and social mitigation measures identified in the ESMPs and other safeguards instruments which are prepared for specific sub-projects. The ESPR will contain basic information about project information, project implementation stage, monitored parameters, the Contractors’ staffing, construction materials, waste management, OHS issues, GRM issues, mitigation measures undertaken, the environmental and social challenges as well as recommendations to the Client. The report will be shared with the WB and other stakeholders for review.

c. Project Environmental and Social Completion Reports (P-ESCR)

The ESCR is the third level and final environmental and social management report that should be developed by the Contractors and approved by Supervision Consultants once the works are done, in order to review the compliance of all the environmental and social measures identified in the ESIA and ESMPs and other safeguards instruments developed for specific sub-projects. The ESCR will contain project ESHS strengths and weaknesses, lesson learned, recommendations and conclusion so as to help the Client to improve performance and compliance in future projects. The report will be shared with the WB and other stakeholders for review.

7. INSTITUTIONAL ARRANGEMENT AND CAPACITY BUILDING

7.1. Project Implementation Arrangements

Implementation of this ESMF requires involvement of several stakeholders each with different but interrelated roles and responsibilities to ensure sound environmental and social management during different stages of subprojects implementation as described in the following subsections.

7.1.1. Implementing Agencies

The table below presents implementing agencies for each component.

Table 12: Project Components and Implementing Agencies

Project Components	Key Implementing Agencies
Component 1: Msimbazi Basin Development Infrastructure	
1.1 Flood control interventions	PO-RALG with LGAs
1.2 Resilient Transport Infrastructure	TANROADS
1.3 Msimbazi city park and redevelopment area	PO-RALG with LGAs
1.4 Watershed management	PO-RALG with LGAs
Component 2: Preventative resettlement of flood-prone communities	PO-RALG with LGAs
Component 3: Strengthening institutions for resilient urban development	PO-RALG
Component 4: Project Management	PO-RALG, TANROADS, LGAs
Component 5: Contingent Emergency Response	

The project will have three implementing agencies – PO-RALG (WBCU), LGAs and TANROADS. The overall project implementation agency and coordination function will be undertaken by World Bank Coordination Unit (WBCU) comprising staff from PO-RALG and TARURA. The same arrangements with the single Project Coordination Unit across all urban projects in the mainland – DMDP, TSCP, and ULGSP – will remain, with centralized responsibilities for safeguards oversight. Sub-projects will be implemented by LGAs and TANROADS. This project will include dedicated quality assurance and technical support consultants with WBCU (with international experience) for top-level support to ensure safeguards and works are carried out to high standards and on schedule. A Project Implementation Manual (PIM) will be prepared by WBCU to guide its implementation.

The LGAs and TANROADS will be responsible to implement the work, including sub-projects procurement, contract management, safeguards, resettlement, M&E, and project reporting to WBCU. Each LGA and TANROADS will establish a full time Project Implementation Unit (PIU) staffed with dedicated team of officers to carry out these responsibilities.

The E&S Unit at WBCU headquarters and PIU at participating LGAs and TANROADS will be responsible to:

- Ensure that the ESMF is implemented in compliance with National Legislations and the World Bank Group Environmental and Social Standards (ESSs) requirements;
- Determine the scope of environmental work i.e. identify the magnitude, sensitivity and risk category of the sub-projects;

- iii. Apply the Exclusion List to the potential sub-projects;
- iv. Hire consultants to develop ESIA, ESMPs and, where needed, site-specific ESMPs (SSESMP) based on subproject designs;
- v. Facilitate public consultations with Project Affected Persons (PAPs) and other project stakeholders in preparation of ESIA/ESMP and necessary specific plans such as Resettlement Action Plan/SSESMP and oversee functionality of the project Grievance Redress Mechanisms (GRMs);
- vi. Send ESIA and associated ESMPs and site-specific ESMPs to the National Environment Management Council (NEMC) for certification and to the World Bank for approval prior to commencement of any works on site;
- vii. Ensure that the necessary environmental authorizations and permits are obtained;
- viii. Ensure the relevant elements of the ESIA (including budget) are incorporated into final designs;
- ix. Include the requirements and mitigation measures from site-specific ESMPs in the bidding documents and contractors' contracts;
- x. Provide site-specific ESMPs to the design consultants to incorporate E&S measures identified;
- xi. Ensure that contractors have an Environmental, Health and Safety Officer (EHS), who are familiar with the compliance requirements, including WB EHS guidelines;
- xii. Ensure supervision of the civil works either by hiring a supervision consultant or through designated environmental supervisors in the team of the supervision engineer;
- xiii. Conduct inspection of the sites and review progress reports by the supervision engineer/consultant during civil works;
- xiv. In case of any major accident and incident, notify the Occupational Safety and Health Authority (OSHA) and the World Bank within 24 hours;
- xv. Send progress reports every 3 months to the World Bank; and
- xvi. Operation and maintenance of constructed subprojects.

7.1.2. NEMC

The NEMC is the national authority responsible for ensuring compliance with the national environmental law. The main evidence of compliance with the national environmental law is the Environmental Certification that is approved once the developers complete the environmental and social due diligence process.

NEMC is also responsible for carrying out monitoring of implementation of mitigation measures or other activities at project level for all development projects. Also may provide periodic oversight and technical assistance to ensure no adverse cumulative impacts from project activities.

Therefore, among other things, NEMC will perform four critically important roles as follows:

- i. Sub-project registration, approval of ToR for ESIA and ESMP preparations;
- ii. Review and approval of ESIA and ESMP reports;

- iii. Submission of recommendations to the Minister responsible for Environment to approve or disapprove the project.
- iv. Train district staff to carry out monitoring; and
- v. Environmental monitoring and compliance auditing.

7.1.3. ESIA Consultants

The Consultants (normally hired and working under Design Consultants) will be responsible to:

- i. Work with the PIU to understand the requirements of the E&S assessments;
- ii. Conduct initial site visits with the PIU to understand the sub-project setting and site-specific requirements;
- iii. Prepare the ESIA's and ESMPs based on the procedures described in the ESMF (Annex 6, -8) including carrying out an alignment walk, alternatives analysis and baselines studies, identifying the E&S risks and impacts, developing mitigation measures and monitoring plans incorporating EHS requirements;
- iv. Cost all the mitigation and management measures proposed in the ESMPs and SSMPS;
- v. Propose a capacity building plan for the implementation of the sub-projects for all actors involved with cost estimates and schedule;
- vi. Carry out public consultations;
- vii. Conduct trainings as needed; and
- viii. Assist the PIU in preparing documentation to obtain certification from NEMC for the ESIA's and ESMPs.

7.1.4. Design Consultants

Overall, Design Consultants will be responsible for the following:

- i. Understand the sub-project setting and site-specific requirements with discussions with the PIU;
- ii. Incorporate the issues identified in the ESIA's, ESMPS into the designs of the subprojects (including necessary budget) and ensure consistency with the design guidelines; and
- iii. Provide cost estimates for implementing the design requirements.

7.1.5. Supervision Engineer/Consultant

The WBCU and PIUs shall hire an independent firm which have a Supervision Engineer, Environmental Specialist, Social Specialist, Occupational Health and Safety Specialist to monitor and review on-site implementation of the E&S measures¹⁷. The duties of the officer responsible for E&S supervision shall include the following:

- i. Assist the PIU to ensure that the necessary environmental, health and safety authorizations and permits have been obtained;
- ii. Maintain open and direct lines of communication between the PIU and contractor(s) with regard to environmental and social matters;

¹⁷ For minor civil works, supervision can be carried out by the LGAs' safeguards officer responsible for day to day environmental and social safeguard activities.

- iii. Review and approve the contractor's site-specific construction ESMPs (CESMPs), Health and Safety Management Plan (HSMPs), Grievance Redress Mechanisms (GRMs), Labor Management Plans (LMPs), Traffic Management Plans (TMPs) and Resettlement Action Plans (RAPs) together with the PIU;
- iv. Review and approve the contractor's HIV/AIDS, STDs and other communicable diseases like COVID-19 and TB awareness and prevention program;
- v. Conduct regular site inspections of all work areas to ensure compliance with CESMPs and E&S specifications for contractors/Tanzania Environmental Code of Practices for Road Works (ECPRW);
- vi. Take appropriate action if the specifications are not followed;
- vii. Assist the contractor in finding environmentally and socially responsible solutions to problems;
- viii. Instruct the contractor(s) to take remedial actions within a specified timeframe, and carry out additional monitoring, if required, according to the contractual requirements and procedures in the event of non-compliances or complaints;
- ix. Instruct the contractor(s) to stop activities which generate adverse impacts, and/or when the contractor(s) fails to implement the ESMP requirements / remedial actions;
- x. Provide training to the contractor on the EHS requirements to be followed;
- xi. Monitor the contractor's environmental awareness training program for all personnel working onsite;
- xii. In case of any accidents or incidents, immediately notify the PIU and support the process of documenting, investigating, and reporting the case to OSHA and the WB;
- xiii. Prepare written reports for the PIU such as weekly report of non-compliance issues; summary monthly report covering key issues and findings from supervision activities; and consolidated summary report from contractor's monthly report.

In order to satisfactorily perform the above roles and responsibilities, the Supervision Engineer/Consultant shall retain at all times competent personnel with adequate knowledge, ability, training and experience on protection of environmental and social issues in construction projects and be able to supervise the Contractor's performance.

Table 13 below summarizes the required personnel qualifications, certifications and experience.

Table 13: Qualifications of ESHS Staff for Supervision Engineer/Consultant

	Position	Qualification	Total work experience (years)	Experience in similar works and position
1.	Environmental Expert	Degree in environmental science or equivalent and registered with NEMC	10	5
2.	Social Expert	Degree in social sciences or equivalent and registered with Tanzania Association of Social Workers (TASWO) and/or NEMC.	10	5

	Position	Qualification	Total work experience (years)	Experience in similar works and position
3.	Occupational Health and Safety Expert	Degree in environmental health sciences or health and safety engineering or related disciplines with internationally-recognized OHS certification.	10	5

The Supervision engineer/consultant will oversee the construction activities and ensure compliance with the C-ESMP and E&S specifications. Terms of Reference (ToR) for the supervision engineer/consultant is given in **Annex 9**. Where non-compliances are observed, the Supervision engineer/consultant and work with the contractor to rectify the problem in coordination with the WBCU. In case of significant non-compliance in particular where there is harm to individuals, communities and or the environment the work should be stopped and the information should be shared with the WBCU immediately. Chance Find Procedures included in the E&S specifications will be followed if tangible cultural heritage resource is encountered during civil works for specific subproject implementation.

7.1.6. The Contractor

The contractor and his employees shall avoid and minimize the impacts that may result from the civil works and implement the mitigation measures to prevent harm and nuisances on local communities, and to minimize the negative impacts to the environment. The duties of the contractor include:

- i. Compliance with relevant environmental, social, health and safety (ESHS) legislative requirements (project-specific, district- and national level), including allocating adequate budget for implementation of these requirements;
- ii. Work within the scope of contractual requirements and other tender conditions;
- iii. Prepare and implement CESMPs based on the ESMPs in the bidding documents and contracts. Guided by E&S specifications for the contractors in **Annex 8**, contractors shall prepare and implement C-ESMPs that shall be reviewed and approved by the Supervision Engineer/Consultant before the start of construction activities;
- iv. Prepare and implement HSMP, GMP, LMP, WMP and TMP (see guidelines in **Annex 10**);
- v. Prepare and implement HIV/AIDS, STDs and other communicable diseases like COVID-19 and TB awareness and prevention program through qualified service provider;
- vi. Recruit qualified E&S and OHS personnel and facilitate them adequately, including providing them with reliable transport.
- vii. Train workers about EHS (including relevant WBG EHS Guidelines) and the site-specific environmental and social measures to be followed;
- viii. The EHS officer of the contractor will participate in the joint site inspections with the PIU and Environmental Supervision Engineer/consultant;
- ix. Carry out any corrective actions instructed by the Supervision Engineer/consultant;
- x. Provide and update information to the Supervision Engineer/consultant regarding works activities including off-site activities/facilities such as borrow pits, quarries, disposal sites,

which may contribute, or be continuing to the generation of adverse environmental and social impacts;

- xi. In case of non-compliances/discrepancies, carry out investigation and submit proposals on mitigation measures, and implement remedial measures to reduce environmental and social impact;
- xii. Stop civil works which generate adverse impacts upon receiving instructions from the Supervision Engineer/consultant and/or PIU and other responsible authorities like NEMC and OSHA;
- xiii. Propose and carry out corrective actions in order to minimize the environmental and social impacts;
- xiv. Send immediate reports to the Client (PIU) in case of any accidents or incidents involving project site, project workers or otherwise occurring within the project area of influence and carry out incident investigation to determine root causes of any near misses, injuries, or fatalities;
- xv. Send weekly reports of non-compliance to the Supervision Engineer/consultant; and
- xvi. Send monthly progress reports to the Supervision Engineer/consultant;
- xvii. Ensure proper decommissioning or closure of camp sites, borrow pits, quarries, and waste disposal sites in line with local and national requirements.

In order to satisfactorily perform the above listed duties, the contractor shall appoint the staff described in **Table 14** below to oversee the ESHS compliance requirements.

Table 14: Qualifications of ESHS Staff for Contractor

	Position	Qualification	Total work experience (years)	Experience in similar works and position
1.	Environmental Manager	Degree in environmental science or equivalent and registered with NEMC	5	3
2.	Social Manger	Degree in social sciences or equivalent and registered with Tanzania Association of Social Workers (TASWO) and/or NEMC.	5	3
3.	Health and Safety Officer/Manager	Degree in environmental health sciences or health and safety engineering or related disciplines with internationally-recognized OHS certification.	5	3

7.1.7. The World Bank

The World Bank will:

- i. Review sub-project screening including risk level categorization;
- ii. Review the ESIAs, ESMPs, site-specific ESMPs; HSMPs, GRMs, LMPs, WMP and TMPs.
- iii. Review quarterly reports by the implementing agencies;

- iv. Monitor compliance with the ESMF; and
- v. Undertake implementation support missions.

7.2. Assessment of the Institutional Capacities

7.2.1. PO-RALG and TARURA (WBCU)

PO-RALG/TARURA has existing safeguards capacity in-terms of staffing. It has experience working with the Bank, specifically all urban projects in the mainland over the last ten years and has experience following the safeguards policies. PO-RALG has also recruited environment and social specialists and consultants under DMDP, TSCP, and ULGSP while TARURA (although a new institution) has 4 Environmental Specialists and 5 Social Specialists for the RISE Program financed by the Bank. The same specialists will continue to support the proposed MBDP.

7.2.2. Participating LGAs

The LGAs will be responsible to implement the work, including sub-projects safeguards and project reporting to WBCU. Each LGA will establish a full time PIU staffed with dedicated team of officers to carry out safeguards responsibilities.

The three LGAs of Ilala, Kionondoni and Ubungu have experience in working with Bank financed projects (DMDP 1) and their capacity is known to be sufficient; however, Kisarawe will require some additional implementation support from consultants and the WBCU.

7.2.3. TANROADS

TANROADS has vast experience in working with Bank financed projects. TANROADS has a fully dedicated safeguards unit that will be responsible for safeguard requirements for the proposed raising and widening of the Jangwani bridge.

7.2.4. Contractors and Supervision Engineers/Consultants

The contractors will, at their own costs, train all workers about environmental, social, health and safety and the site-specific environmental and social measures to be followed. All workers should be trained prior to starting work on site and trainings should be conducted periodically as needed. Details are provided in the E&S specifications for the contractors and TORs for supervision Engineers/Consultants in **Annex 8** and **Annex 9** respectively.

7.3. Requirements for Training and Capacity Building

Although WBCU has reasonable experience in working with WB financed projects, given the number of such projects, a training need and capacity building assessment may have to be undertaken as the existing E&S staff at both PO-RALG and TARURA (WBCU) might need capacity building and strengthening in project management and knowledge enhancement in handling of new World bank ESF/ESS requirements. WBCU will consider hiring E&S Consultants for capacity building as well as monitoring of implementation of safeguard tools.

Two types of capacity building of the LGAs (notably Kisarawe) are foreseen:

- i. WBCU will organize training program for capacity building of the new LGAs and enhancing that of the ones implementing DMDP in the following aspects:

- World Bank's ESF;
 - How to use MBDP's E&S instruments (ESMF, RPF, SEF and LMP);
 - Subproject and site screening;
 - Resettlement issues;
 - Stakeholder Engagement;
 - Grievance handling;
 - Occupational health and safety (OHS);
 - Labour issues;
 - Preparation and implementation of site specific ESMPs;
 - Environmental and social management of construction works;
 - Environmental and social supervision of construction works;
 - Reporting requirements; etc.
- ii. Study tours to well completed and managed subprojects under TSCP, ULGSP and DMDP.

8. CONSULTATION AND PUBLIC PARTICIPATION

8.1. Public Consultation during the ESMF Preparation

Stakeholder engagement is an inclusive process conducted throughout the project life cycle. Where properly designed and implemented, it supports the development of strong, constructive and responsive relationships that are important for successful management of a project's environmental and social risks and impacts.

Detailed stakeholders consultation and public participation is an integral part during preparation of this ESMF as presented in section 1.5.3. Key views and concerns of the consulted stakeholders are incorporated in this ESMF as summarized in the table below.

Table 15: Issues Raised from Stakeholder Engagement and Their Responses

	Category of Stakeholder	Issues Raised	Responses
1.	Project Affected People (PAPs)	Land and Compensation	Compensation will follow Tanzania legal requirements and those of the World Bank
		Construct good drainage for managing storm water	Noted
		Soil erosion management	Planting against erosion upstream to reduce rainwater runoff increase to be done
		Relocation: unsafe in the gazetted area, people willing to move if they receive money for their damages	
		Resettlement/compensate those who are vulnerable to flooding	
		Stakeholders engagement	Stakeholders engagement will be an ongoing activity
2.	Mtaa and Ward Leaders	Compensation to all communities by potentially moving into new buildings (high rises) in the area and land acquisition	Compensation and land take will follow Tanzania legal requirements and those of the World Bank
		Project should have a waste management program for improving solid waste management within the settlements include advocating for each Municipality to have its dumping and each ward should have its own truck for solid waste	The project will have a waste management program that will involve local communities, street leaders and municipal authorities implementing the project by providing education and capacity building to the community; Inco parting by-laws and reinforcement to the defaulters, and initiating recycling and composting programs
		Sand mining adjacent/along the river corridor	The Ruvu basin water body and implementing government authorities will set and enforce by-laws to ensure sand mining activities is not conducted within/adjacent to the river corridor, and mining by licensed companies who pay a use fee and employ people from the communities will be allowed,
		Erosion Control	Erosion control will be done by trapping sand from the upper basin, sand trapping and commercial sand mining (at the sand trap and specific areas), Reducing the riverbank erosion and Selander bridge opening (relief culverts) and dredging the lower part of the basin

	Category of Stakeholder	Issues Raised	Responses
		Provide awareness program for waste management	Awareness program on waste management will be provided during engagement meeting, and media
		The project will control/manage floods	This will be done via cleaning and aligning, securing the border of the flood plain: agreeing and demarcating the flood line, Riverbank improvement and protection and Deepening the river channel
		Msimbazi Bondeni should become a green environment	Noted
		Reforested slopes of new edges at Sunna, Idrissi and Dossi areas/streets	Noted
		Stop further individual developments in the valley (land reclamation; buildings)	Noted
		Waste water management within the settlement	The project will advocate the need of expanding the waste water utility to more new areas, consider innovative sanitation solutions such as the DEWAT in areas where the utility's sewerage services are unavailable. Other activities on waste water include the provision of community sensitisation and waste water re-use.
		Drainage from neighbourhoods to the river should be improved	Noted
		Public Engagement and Communications	Public engagement and communications will be an ongoing activity
3.	Local Government Authorities implementing the Project- Kinondoni, Dar es Salaam City Council, Ubungo and Kisarawe	Issues associated with compensation-who is to pay affected PAPs	
		Issues associated with ownership of the Gazetted land of the Msimbazi	
		Biodiversity and ecosystem	The biodiversity and ecosystem (e.g. mangroves) of the proposed project will be maintained/managed
		The project should have environmental conservation component (mainly for mangroves)	Mangrove replant scheme along the Selander bridge will be initiated
		Issues associated with Project implementation-who forms and manages the PIU	
		Sources of recreations	Public space uses for playgrounds, sports, gatherings (City Park), biotourism, botanical gardens, etc.
		Promotion of urban agriculture through irrigation	
		Waste management	All types of the produced wastes (solid and liquid) will be managed by control position of waste (community & industrial), Increasing capacity of waste collection, Increasing waste collection, Make collection points, Provision of collection point facilities (and accessibility for

	Category of Stakeholder	Issues Raised	Responses
			collection), awareness programme, Clean the river, community empowerment (how to manage waste), Integrated solid waste management programme, enforcement, penalties and Enforce law of waste
		Project to come up with different interventions that will ensure safer, cleaner and more useable living environment	Noted
		Sediment control	Sand mining activities will be controlled by a Ruvu River Basin Authority who will determine where one can mine, how much one can mine and where to store the mined material and only mining licenced company will be allowed to mine.
		Erosion control	The project will: Build bridges instead of culverts (Raise road levels and widen drainage structures across the valleys, Management of flood plain area containing: Resettlement within the flood plain; Sensitization and awareness of the community (Empowerment) via awareness raising and education about erosion risks
		Issues of time frame-when is the project anticipated to take-off	
4.	Government Agencies, Ministries and Institutions (<i>Ministry of Lands Housing and Settlements, Ministry of works, Ministry of Water and Irrigation, Wami Ruvu Water Basin Authority Prime Minister Office – Disaster Management Department, TANROADs, NEMC, DART, DAWASA, DAWASCO Tanzania Meteorological Agency, Ardhi University, and Vice President Office</i>)	- Governance of the Basin - Sustainability of the constructed infrastructure - Environmental protection that includes the mangrove and - Environmental degradation upstream	All these will be considered as part of the implementation of the project
		- Stakeholders engagement especially during the design - Need to ensure proper handling of utilities to be relocated	Noted
		Infrastructure connections	Noted
		The Waste Water Treatment Plant cannot be imagined by many at the projected location but has to comply with very strict guidelines to fit in the city park environment and rules and regulations on mainly safety are key.	Noted
		Human settlement (if not exposed to flood & pollution)	The project will manage flood by clean lower basin for retention, improve gradient from river to the sea, construct dikes to redirect water back to the river, construct embankments at the lower basin, and stop discharge at flood zone areas
		Continue with stakeholder engagement	Noted

	Category of Stakeholder	Issues Raised	Responses
		• Reforestation program	Planting against erosion upstream to reduce rainwater runoff increase, forestation upstream and along the riverbanks, Pugu hills reserve replant, plant trees along the river and protect the river to be implemented
		• Project should have long term measures to reduce flooding.	The 'Flood reduction interventions' and 'Mangrove, forest and wetlands' in which a whole series of measures will be done at the entire river catchment area.
		• Improvement of mobility	The bridge will improve mobility since city centre it currently only has few access point
		The mangroves in front of Selander Bridge are clutched with sediments and solid. On the one hand this hinders the water outflow into the sea, causing flooding upstream which blocks the salt water intrusion from the ocean, for which the mangrove forest is slowly declining.	Open up the river channel to be done by professional mangrove management cleaning and removing some of the mangroves, furthermore, the sediments along the river channel will be cleared to allow river water to flow towards the sea outlet and allow more sea water to flow through the valley during high tide to boost more mangrove growth in the valley.
		Water quality management	• Community awareness on solid waste management and wastewater management will be provided • a WWTP e.g. bioreactors and incineration and DEWATS to be constructed • Law enforcement by the municipality, NEMC WRBWO and community police and ward environmental committee • Sewerage drainage systems to be rehabilitated. • Urban agriculture along the basin using extension officers to be controlled
		Sensitizing communities on solid waste management	Communities through their local government authorities will be sensitized on the waste management
5.	NGOs, CBOs including Borda, CDR International 9to mention a few)	Alternative land for those affected by the project	The project will have special consideration of Vulnerable communities as part of project implementation
		Handling of vulnerable community members that include women	
		Capacity building as part of livelihood restoration	The project will engage NGOs/CBOs
		Environmental conservation for mangroves	Mangrove replant scheme along Selander bridge will be initiated
		Sanitation and Waste water Management: The project should come up on how produced waste water from the surrounding communities will not be discharged into the proposed project environment	Noted, and the project will come up with comprehensive measures to manage waste water by ensuring waste water treatment close to the community is available, decentralized waste water systems, Reinforce law, connecting sewerage (DAWASA)/ connecting with Public sewers, etc.
		Compensation for house owners/landlords	Compensation for house owners/landlords aligned to be done in accordance to the

	Category of Stakeholder	Issues Raised	Responses
			Tanzania legal requirements and those of the World Bank
		Develop & improve solid waste management system items of collection, transportation and disposal.	All types of the produced liquid wastes will be managed by control position of waste (community & industrial), Increasing capacity of waste collection, make collection points, Provision of collection point facilities (and accessibility for collection), awareness programme, clean the river, community empowerment (how to manage waste), Integrated solid waste management programme, enforcement, penalties, Enforce law of waste, and collaborating with CBOs, NGOs, and the Media to establish sustainable community awareness campaign supported by the respective LGA on the site.
		Flood reduction/Control	Deepening the river channel, cleaning lower basin for retention and Improving gradient from the river to sea

8.2. Public Consultation during Project Implementation

A Stakeholder Engagement Plan (SEP) has been prepared as a guiding document for LGAs under MBDP to prepare their own Stakeholder Engagement Plans (SEPs) and how best to implement them. To ensure that the stakeholder engagement is well coordinated; the SEP recommends that the LGAs to follow 6-step process (**Figure 7 below**) for each phase of the MBDP sub-project for stakeholder engagement.

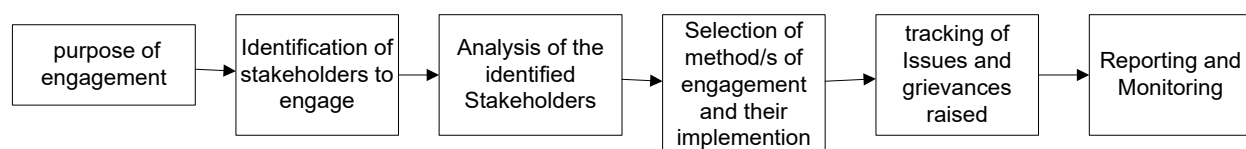


Figure 6: Stakeholders Engagement Process under MBDP

The SEP includes guidance on the following pertinent issues:

- i. Engagement of vulnerable groups and individuals as stakeholders; and
- ii. Stakeholder engagement in pandemic situations such as COVID-19.

8.3. Project Information Disclosure to the Public

In compliance with ESS 10 (and other relevant ESSs) and the EIA and Audit Regulations, 2005; disclosure of relevant safeguard documents helps affected communities and other interested parties to understand the scope and associated risks, impacts and opportunities. The implementing agencies will continue providing the respective communities and other stakeholders with access to the required relevant information. During consultative meetings and discussions, the following details were further clarified: purpose, nature, and scale of the project; duration of proposed project activities; potential opportunities, etc.

The ESSs requires that before a sub-project is approved, the applicable documents (ESMF, RPF, ESIA and RAPs) must be disclosed and made available to the public/communities for review at

strategically accessible places (e.g. World Bank website, websites and offices of PO-RALG, TARURA, TANROADS, and participating LGAs offices as well as to the most preferable newspapers.) in a form, manner and understandable language preferable Kiswahili language. This allows the public and other stakeholders to comment on the possible environmental and social impacts and risks of the roads sub-projects. It also helps the appraisal team to strengthen the frameworks as necessary, particularly measures and plans to prevent or mitigate any adverse environmental and social impacts.

9. GRIEVANCE REDRESS MECHANISM

Grievance redress mechanism (GRM) involves a formal process for receiving, evaluating and redressing program-related grievances from affected communities and the public. The MBDP recognizes vulnerability of the different project's participants to be involved or affected by the project (such as vendors within operating markets and fish markets, road users, community members, workers and other beneficiaries).

9.1. Procedures for Grievance Management

Grievances related to land take will be handled following the GRM detailed in the RPF for MBDP while all other types of grievances will be handled as per the details in the SEP and LMP for MBDP. Accordingly, each sub-project will establish a formalized procedure or process for dealing with both workers' and communities' grievances. Each should include as a minimum:

1. Assigning a responsible person, team or function to organize the resolution of grievances;
2. Defined timeframes for acknowledgement of the receipt of complaints and subsequent resolution;
3. Practical arrangements for maintaining confidentiality, reviewing and resolving grievances, including resources and organizational arrangements information on the grievance; and
4. A provision for an appeal mechanisms including provisions for arbitration in the courts.

9.2. Records Keeping

A simple database is often useful to manage and monitor grievances. Good practice is to log all grievances, even recurrent ones or grievances that will eventually be dismissed as unreasonable. Regardless of the actual establishment of such a database, typically documentation on grievances keeps track of the following:

- Complaint/Issue Log;
- The Complaint/Issue Log records will include the following information;
- Name of person with a complaint;
- How the complaint was received;
- Date the complaint was received and recorded;
- Location/village/clan;
- Contact information;
- Description of the complaint;
- Follow-up corrective action steps;
- Corrective action taken by whom and date; and
- Response and means of response (written or verbal).

9.3. Responsibility for Implementing Grievance Management Procedures

The SEP for MBDP has a dedicated section on grievance handling mechanism and establishes a guidance for the development of a stakeholder's grievance management process and responsibility for implementing a complaints management procedure. There will be a general Grievance Redress Committee (GRC) at the LGA level as well as a GRC for each subproject. The LGAs in collaboration with the respective Regional Offices will ensure GRM Committees at various levels (Mtaa, Ward, Sub-project areas etc.) are established and adequately capacitated. The GRM will also be extended to the WBCU and TANROADS level and be expanded to handle all types of grievances arising from implementation of all sub-projects under the MBDP. LGAs and TANROADS should ensure effectiveness and efficiency of the GRM by putting in place simple procedures and administered mechanism.

For workers hired by contractors, the contractors will be required to produce their GRM procedure as a prerequisite for tender which at a minimum conform to these requirements. The GRM procedures have to be transparent. After they are engaged, contractor will be required to prove that each employee has been inducted and signed that they have been inducted on the procedure. The details of the workers' GRM is presented in the LMP under the MBDP.

9.4. Consolidated Grievance Handling Mechanism

In order to ensure efficiency and consistency in handling grievances associated with the project the following consolidated approach is recommended

- TANROADs PIU to have a Grievance desk for the Project
- All LGAs that are implementing the Msimbazi Project to have a Grievance desk for the project
- A special grievance desk to handle grievance associated with resettlement of the Msimbazi Flood prone community
- All Contractors implementing the project should have a special grievance desk for workers and for other grievances
- The LGAs will handle those within their capacity and later consolidate the Grievance and send a report to the PIU at the Dar Es Salaam City Council
- The PCU unit at the PORALG specifically the Environmental and Social Unit will receive consolidated Grievance from TANROADs and those from the PIU at DCC for further action
- A report will be submitted to the WB by the PO-RALG WBCU.

It should be noted that the proposed mechanisms for handling grievances under the RPF, SEP and LMP for the Msimbazi project should be complied.

General grievance handling mechanism for the msimbazi basin development project is presented in the figure below.

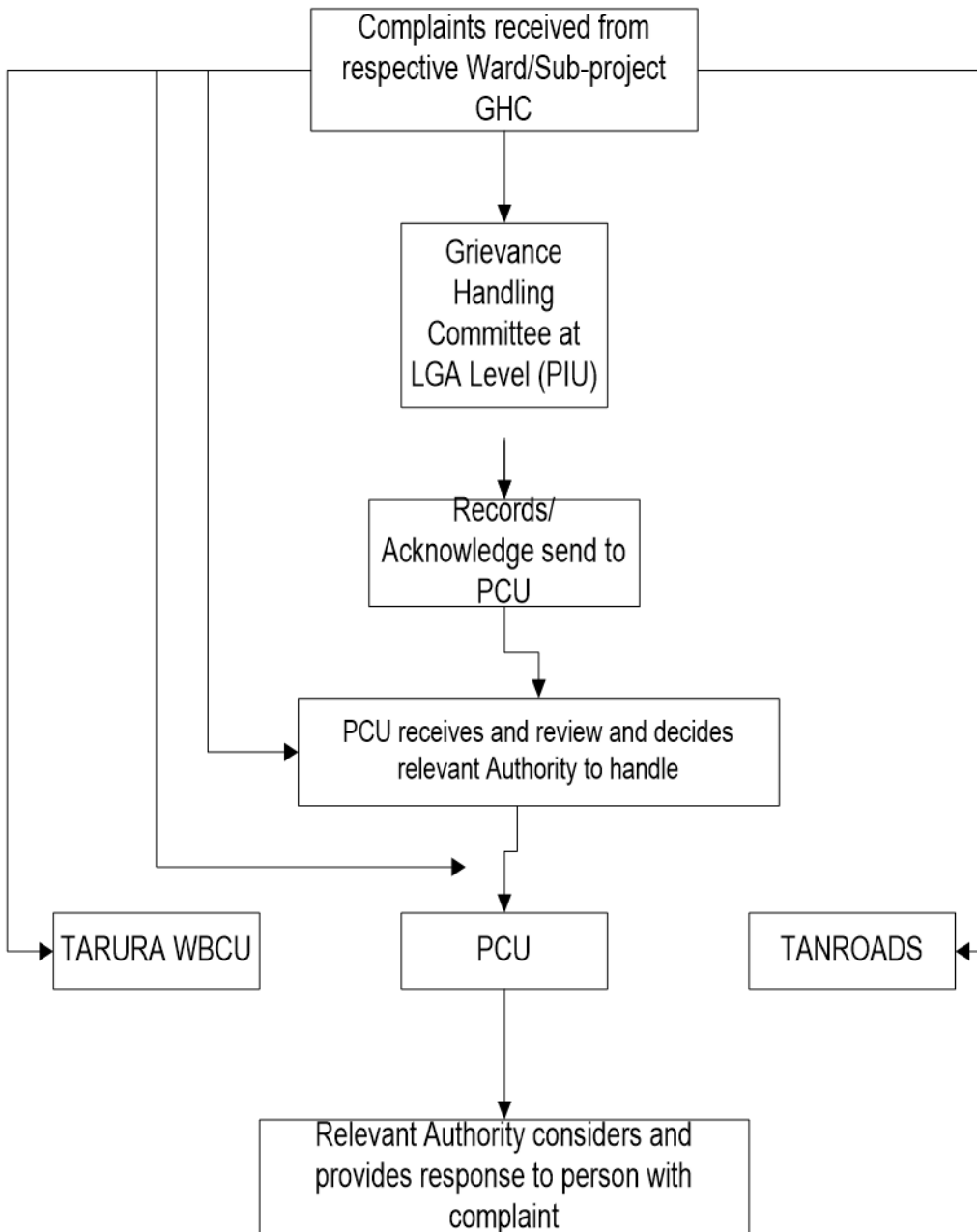


Figure 7: General Grievance Handling Mechanism for the Msimbazi Basin Development Project

10. BUDGET ESTIMATES

Table 17 below presents a summary of cost estimates for the implementation of the ESMF. The cost for implementation of other safeguard documents (RPF, SEP, LMP and GRM) are presented separately in each of them. Budget for implementation of ESIA's and ESMPs will be determined during their preparations and will be included in the overall costs (BOQs) of respective subprojects.

Table 16: Budget for ESMF Implementation by WBCU

S/N	Activity	Cost per MBDP Year (USD)					Total (USD)
		1	2	3	4	5	
1.	Implementation of ESMF	100,000	100,000	100,000	100,000	100,000	500,000
2.	ESIA's and ESMP preparations	500,000					500,000
3.	Training Needs Assessment	40,000					40,000
4.	Technical Training to WBCU	50,000					50,000
5.	Technical training to ULGAs	50,000					50,000
6.	Refresher workshops to WBCU and ULGAs			30,000			30,000
7.	Workshops to Design Consultants	10,000					10,000
8.	Workshops to Contractors and Supervision Consultants	10,000		10,000		10,000	30,000
9.	Community leaders awareness raising and sensitization	20,000	20,000	20,000	20,000	20,000	100,000
10.	Contingent training of LGAs staff	10,000	10,000	10,000	10,000	10,000	50,000
	TOTAL	790,000	130,000	170,000	130,000	140,000	1,360,000

REFERENCES

1. Project Appraisal Document (PAD) for Dar es Salaam Metropolitan Development Project- Msimbazi Basin Development, December 2021
2. Final ESMF for Tanzania Cities Transforming Infrastructure and Competitiveness (TACTIC) - (P171189) - Project, June 2020.
3. Draft Resettlement Policy Framework (RPF) for MBDP, November 2021
4. Draft Stakeholders Engagement Plan (SEP) for MBDP, December 2021
5. Draft Labour Management Procedures (LMP) for MBDP, December 2021
6. Environmental and Social Management Framework (ESMF) for Roads to Inclusion and Socio-Economic Opportunities (RISE) Program (P164920), TARURA and TANROADS, 2020
7. [2016. "World Bank Environmental and Social Framework." World Bank, Washington, DC.]
8. United Republic of Tanzania (URT), Ministry of Infrastructure Development (2009), Environmental Code of Practice for Road Works (February, 2009).
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12. URT. 2005. Environmental Impact Assessment and Audit Regulations. Dar es Salaam.
13. URT. 2018. Environmental Management (EIA and Audit Regulations) (Amendment). Dar es Salaam.
14. URT.2015. The Occupational Safety and Health (General Administrative) Rules, 2015.
15. URT.2015. The Occupational Health and Safety (Building and Construction Industry) Rules, 2015.
16. URT.2015. The Occupational Safety and Health (Lifting Appliances and Gears) Rules, 2015.
17. URT.2015. The Occupational Safety and Health (First Aid and Welfare Facilities) Rules, 2015.

ANNEXES

Annex 1: Tentative List of Stakeholders for National Workshop

S/No	Stakeholder	Contact Address
1.	President's Office, Regional Administration and Local Government (PO-RALG)	Permanent Secretary, President's Office, Regional Administration and Local Government (PO-RALG), Attn.: Department of Infrastructure Development (DID), P.O. Box 1923, DODOMA.
2.	Tanzania Rural and Urban Roads Agency (TARURA) Headquarters	Chief Executive, TARURA Headquarters, P.O. Box 11042, TARURA HOUSE - Government City, DODOMA.
3.	Ministry of Finance and Planning	Permanent Secretary, Ministry of Finance and Planning, Treasury Square Building, 18 Jakaya Kikwete Road P.O. Box 2802, 40468 DODOMA
4.	Ministry of Works, Transport and Communication (Works Section)	Permanent Secretary, Ministry of Works, Transport and Communication (Works Section), Wizara Building, Moshi Street, P.O. Box 2880, 40470 DODOMA.
5.	Ministry of Lands and Human Settlements	Permanent Secretary, Ministry of Lands and Human Settlements, P. O. Box 2908, DODOMA
6.	Ministry of Water	Permanent Secretary, Ministry of Water, Government City, Maji Street, P.O. Box 456 DODOMA
7.	Ministry of Health, Community Development, Gender, Elderly and Children	Permanent Secretary, Ministry of Health, Community Development, Gender, Elderly and Children, Attn.: Community Development Department, University of Dodoma, College of Social Science and Humanity, Block 11, P.O. Box 573, 40478 DODOMA.
8.	Labour, Youth, Employment and Persons with Disability	Permanent Secretary, Prime Minister's Office, Labour, Youth, Employment and Persons with Disability, P.O. Box 2890, DODOMA.

S/No	Stakeholder	Contact Address
9.	Ministry of Natural Resources and Tourism	Permanent Secretary, Ministry of Natural Resources and Tourism, Government City, Maliasili Street, 40472, DODOMA.
10.	Ministry of Agriculture	Permanent Secretary, Ministry of Agriculture, P.O. Box 2182, 40487 DODOMA
11.	Ministry of Livestock and Fisheries	Permanent Secretary - Livestock Sector Dodoma University, Block 9, P.O.BOX 2870, 40487- DODOMA,
12.	The Office Of Vice President – Division Of Environment	Permanent Secretary, The Office Of Vice President – Division Of Environment Government City P. O. Box 2502, DODOMA.
13.	DART	Chief Executive, P. O. Box 724, Dar es Salaam, Tanzania Phone: +255 22-2700486/280 Email: info@dart.go.tz Ahmed O. Wamala Edwin Hema Nason Bwatota
14.	PCCB	Director General, Prevention and Combating of Corruption Bureau- (PCCB), P. O. Box, 4856, Dar es Salaam, Tanzania, Telephone: +225222150043/46, Email: dgeneral@pccb.go.tz
15.	Dar es Salaam Regional Commissioner's Office	Regional Commissioner, P. O. Box 5429, Dar es Salaam, Tanzania, Telephone: +255222203158, Mobile: +255222203156, Email: ras@dsm.go.tz
16.	Kinondoni Municipal Council	Municipal Director, P. O. Box, 31902, 2 Morogoro Road, 14883 Dar es Salaam, Tanzania, Telephone: 2170173, Cartherine Sembua Dr. Henjeweje Patricia
17.	Kigamboni Municipal Council	Municipal Director, P. O. Box, 36009, Kigamboni, Dar es Salaam, Tanzania,

S/No	Stakeholder	Contact Address
		Telephone: +225222928468, Mobile: +225222928468, Email: info@kigambonimc.go.tz Maabad S. Hoja
18.	Ubungu Municipal Council	Municipal Director, P. O. Box, 55068, Kibamba, Dar es Salaam, Tanzania, Eng. Ramadhani Mabula
19.	Temeke Municipal Council	Municipal Director, P. O. Box, 46343, Dar es Salaam, Tanzania, Telephone: +225222928132, Email: temeke@temekemc.go.tz
20.	Kisarawe District Council	District Executive Director, P. O. Box, 28001, Bomani Road, Kisarawe, Pwani, Tanzania, Telephone: 0232401045, Mobile: 0784930892, Email: ded@kisarawedc.go.tz Filemon Mwakiwone Mussa L. Gama Patrick Alute Selemani Jaffo (MP)
21.	Roads Fund Board	Manager, Roads Fund Board, Njedengwa Investment Area, Block D, Plot No. 3, P.O.Box 993, DODOMA.
22.	World Bank – Country Representative	World Bank – Country Representative, 50 Mirambo Street, P. O. Box 2054, DAR ES SALAAM
23.	The National Environment Management Council	Director General, The National Environment Management Council, Regent Estate Plot No. 29/30, P.O. Box 63154, DAR ES SALAAM.
24.	Tanzania Occupational Safety and Health Authority	Cheif Executive Officer, Occupational Safety and Health Authority, Plot No. MNY/KMB/565, Mahakama Road – Kinondoni P.O. BOX 519, Dar es Salaam
25.	TANROADS Headquarters	Chief Executive Officer, TARURA Headquarters P.O. Box 11364, 1st - 3rd Floor,

S/No	Stakeholder	Contact Address
		Building adjacent to Julius Nyerere International Convention Centre, 10 Shaaban Robert Road/Garden Avenue, DAR ES SALAAM.
26.	Tanzania Forest Services (TFS) Agency	Chief Executive, Tanzania Forest Services (TFS) Agency P.O. Box 40832, Nyerere Road, MPINGO HOUSE, DAR ES SALAAM
27.	Land Transport Regulatory Authority (LATRA)	Director General, Land Transport Regulatory Authority (LATRA) Mawasiliano House, Ali Hassan Mwinyi Road/Nkomo Street, P.O. Box 3093, DAR ES SALAAM
28.	Tanzania Private Sector Foundation (TPSF)	Executive Secretary, Tanzania Private Sector Foundation, Plot No. 1288 Mwaya Road, Msasani Peninsula, P.O. Box 11313, DAR ES SALAAM.
29.	Tanzania Investment Centre (TIC)	Executive Director, Tanzania Investment Centre, P.O. Box 938, Shaaban Robert Street, DAR ES SALAAM
30.	TANESCO Head Office	Managing Director, TANESCO Head Office, Plot No. 114, Block G, Dar es Salaam Road, P.O.Box 453, DODOMA.
31.	International Labour Organization (ILO)	International Labour Organization (ILO) Attn.: Employment Intensive Investment Project National Coordinator, Kazi House, Maktaba Street, P.O. Box 9212, DAR ES SALAAM.
32.	Tanzania Gender Network Programme (TGNP)	Executive Director, Tanzania Gender Network Programme (TGNP), P.O. Box 8912, DAR ES SALAAM
33.	Tanzania Telecommunications Corporation.	Director General Tanzania Telecommunications Corporation. Extelcoms House - Samora Avenue P. O. Box 9070, DAR ES SALAAM
34.	Various NGOs and CBOs	Relevant on Gender, Environment, Labour, Child Protection etc

Annex 2: Screening Form for Potential Environmental and Social Issues

This form is to be used by the executing agency and/or the Project Implementation Unit (PIU) and relevant local institutions to screen potential environmental and social risk levels of a proposed subproject under the Project. The screening will determine the relevance of Bank environmental and social standards (ESS), propose its environment and social risk levels, and the instrument to be prepared for the sub project.

Subproject Name	
Subproject Location	
Subproject Proponent	
Estimated Investment	
Start/Completion Date	

Questions	Answer			ESS relevance	Due diligence / Actions if “yes”
	Not Applicable	yes	no		
1. Does the subproject involve civil works that include new/upgrading or rehabilitation of infrastructure				ESS 1: Assessment of Management of risks and impacts	ESIA or ESMP
2. Is there sound regulatory framework, institutional capacity in place the sub-project?				ESS 1	ESMP, SEP ¹⁸
3. Was the sub project analyzed in terms of impacts and risks and using the mitigation hierarchy				ESS1	ESMP
4. Does the subproject area present considerable Gender-Based Violence (GBV), Sexual Exploitation and Abuse (SEA), and Sexual Harassment (SH) risks?				ESS 2 Labor and working conditions	Assessment of SEA/SH, SEP, ESMP
5. Does the subproject involve recruitment of workforce including direct, contracted, primary supply, and/or community workers?				ESS 2 Labor and working conditions	ESMP and , SEP
6. Does the subproject include an independent unit/or group for accountability and grievance and conflict resolution?				ESS 2	ESMP, SEP, GRM ¹⁹ procedures
7. Is the subproject associated with any external waste management facilities such as a sanitary landfill, incinerator, or wastewater treatment plant?				ESS3 Resources Efficiency and Pollution Prevention	ESMP, WMP ²⁰ , SEP
8. Does the subproject release airborne and/or water borne pollutants with concentration above the WHO / World Bank guidelines or National Guidelines				ESS3	ESMP,, SEP
9. Does the subproject result in GHG emissions or black carbons				ESS3	ESMP, SEP

¹⁸ SEP : Stakeholder Engagement Plan

¹⁹ GRM: Grievance and redress Mechanism

²⁰ WMP: Waste management

Questions	Answer			ESS relevance	Due diligence / Actions if “yes”
	Not Applicable	yes	no		
10. Does the subproject involve transboundary transportation of specimen, samples, infectious and hazardous materials?				ESS3	WMP, SEP
11.Does the subproject use pesticides, and herbicides				ESS3	IPMP ²¹ , ESMP
12.Does the subproject has at least the necessary procedures for health and safety of its workers and its project affected people				ESS4 Community health and Security	ESMP, OSHMP ²² , SEP
13.Is the sub-project likely to apply the WHO code of Sexual abuse and exploitation regarding Gender-Based Violence (GBV), Sexual Exploitation and Abuse (SEA), and Sexual Harassment (SH) risks				ESS 4	SEA/SH MGT plan,
14.Does the subproject require acquisition of land or result in physical or economical displacement of (a) less than 200 people; (b) more than 200 people				ESS 5 Land acquisition and resettlement	RAP ²³
15.Was a social assessment conducted or will be conducted to identify and address the potential economic and social impacts of the subproject cause by involuntary land acquisition or resettlement				ESS 5	Social Assessment, RAP
16.Does the subproject have a mitigation hierarchy for minimizing, mitigating and managing the adverse impacts and risks related to the potential threats to biodiversity				ESS 6 Living and natural resources	Ecosystem Management Plan
17. Is the subproject located within or in the vicinity of any ecologically sensitive areas?				ESS 6	Ecosystem Management Plan, ESMP,
18.Will a river or stream ecology be adversely affected due to the installation of structures such as bridges, fixed barriers, and by-passes. Attention should be paid to water quality and quantity; the nature, productivity and use of aquatic habitats, and variations of these over time				ESS 6	Ecosystem management Plan , ESMP
19. Are there any indigenous people, Sub-Saharan African Historically Underserved Traditional Local Communities and vulnerable groups present in the subproject area and are likely to be affected by the proposed subproject negatively or positively?				ESS 7 Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	IPDP ²⁴ SEP
20.Does (or will) the subproject undertake free, prior, and informed consultations with affected Indigenous Peoples/and Sub Saharan African historically underserved communities				ESS 7	IPDP, SEP

²¹ IPMP: Integrated Pest Management Plan

²² OSHMP: Occupation Safety and Health management Plan

²³ RAP: Resettlement Action Plan (abbreviated for less than 200 people), Full for more than 200 people Plan

²⁴ IPDP: Indigenous Peoples Development Plan

Questions	Answer			ESS relevance	Due diligence / Actions if “yes”
	Not Applicable	yes	no		
21. Is the subproject located within or in the vicinity of any known cultural heritage sites?				ESS8 Cultural Heritage	ESIA/ESMP, SEP
22. Will the subproject ensure that the physical cultural resources (PCR) are appropriately preserved and their destruction or damage is appropriately avoided				ESS 8	ESIA/ESMP, SEP
23. Did the proponent of the subproject carry out regular consultation with a wide range of project stakeholders,				ESS 10 Stakeholder Engagement and Information	ESMP, SEP
24. Can the stakeholders play a significant role in shaping or affecting the subproject, either positively or negatively				ESS 10	SEP
25. Is there any territorial dispute between two or more countries in the subproject and its ancillary aspects and related activities?				<i>OP7.60 Projects in Disputed Areas</i>	Governments concerned agree
26. Will the sub project and its ancillary aspects and related activities involve the use or potential pollution of, or be located in international waterways ²⁵ ?				<i>OP7.50 Projects on International Waterways</i>	Notification (or exceptions)

A1. All answers to the checklist questions are “No”. There is no need for further action.

Conclusions:

- 1. Proposed Environmental and Social Risk Ratings (High,/Substantial, Moderate or Low).**
- 2. Proposed environment and social Instruments.**

²⁵ International waterways include any river, canal, lake or similar body of water that forms a boundary between, or any river or surface water that flows through two or more states.

Annex 3: World Bank ESF Risk Categories

High Risk

A Project is classified as High Risk after considering, in an integrated manner, the risks and impacts of the Project, taking into account the following, as applicable.

a. The Project is likely to generate a wide range of significant adverse risks and impacts on human populations or the environment. This could be because of the complex nature of the Project, the scale (large to very large) or the sensitivity of the location(s) of the Project. This would take into account whether the potential risks and impacts associated with the Project have the majority or all of the following characteristics:

- i) long term, permanent and/or irreversible (e.g., loss of major natural habitat or conversion of wetland), and impossible to avoid entirely due to the nature of the Project;
- ii) high in magnitude and/or in spatial extent (the geographical area or size of the population likely to be affected is large to very large);
- iii) significant adverse cumulative impacts;
- iv) significant adverse trans boundary impacts; and
- v) A high probability of serious adverse effects to human health and/or the environment (e.g., due to accidents, toxic waste disposal, etc.);

b. The area likely to be affected is of high value and sensitivity, for example sensitive and valuable ecosystems and habitats (legally protected and internationally recognized areas of high biodiversity value), lands or rights of Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities and other vulnerable minorities, intensive or complex involuntary resettlement or land acquisition, impacts on cultural heritage or densely populated urban areas.

c. Some of the significant adverse E&S risk and impacts of the Project cannot be mitigated or specific mitigation measures require complex and/or unproven mitigation, compensatory measures or technology, or sophisticated social analysis and implementation.

d. There are significant concerns that the adverse social impacts of the Project, and the associated mitigation measures, may give rise to significant social conflict or harm or significant risks to human security.

e. There is a history of unrest in the area of the Project or the sector, and there may be significant concerns regarding the activities of security forces.

f. The Project is being developed in a legal or regulatory environment where there is significant uncertainty or conflict as to jurisdiction of competing agencies, or where the legislation or regulations do not adequately address the risks and impacts of complex Projects, or changes to applicable legislation are being made, or enforcement is weak.

g. The past experience of the Borrower and the implementing agencies in developing complex Projects is limited; their track record regarding ES issues would present significant challenges or concerns given the nature of the Project's potential risks and impacts.

h. There are significant concerns related to the capacity and commitment for, and track record of relevant Project parties, in relation to stakeholder engagement.

I. There are a number of factors outside the control of the Project that could have a significant impact on the ES performance and outcomes of the Project.

Substantial Risk

A Project is classified as Substantial Risk after considering, in an integrated manner, the risks and impacts of the Project, taking into account the following, as applicable.

a. the Project may not be as complex as *High Risk* Projects, its E&S scale and impact may be smaller (large to medium) and the location may not be in such a highly sensitive area, and some risks and impacts may be significant. This would take into account whether the potential risks and impacts have the majority or all of the following characteristics:

- i) they are mostly temporary, predictable and/or reversible, and the nature of the Project does not preclude the possibility of avoiding or reversing them (although substantial investment and time may be required);
- ii) there are concerns that the adverse social impacts of the Project, and the associated mitigation measures, may give rise to a limited degree of social conflict, harm or risks to human security;
- iii) they are medium in magnitude and/or in spatial extent (the geographical area and size of the population likely to be affected are medium to large);
- iv) the potential for cumulative and/or trans-boundary impacts may exist, but they are less severe and more readily avoided or mitigated than for *High Risk* Projects; and
- v) there is medium to low probability of serious adverse effects to human health and/or the environment (e.g., due to accidents, toxic waste disposal, etc.), and there are known and reliable mechanisms available to prevent or minimize such incidents;

b. The effects of the Project on areas of high value or sensitivity are expected to be lower than *High Risk* Projects.

c. Mitigatory and/or compensatory measures may be designed more readily and be more reliable than those of *High Risk* Projects.

d. The Project is being developed in a legal or regulatory environment where there is uncertainty or conflict as to jurisdiction of competing agencies, or where the legislation or regulations do not adequately address the risks and impacts of complex Projects, or changes to applicable legislation are being made, or enforcement is weak.

e. The past experience of the Borrower and the implementing agencies in developing complex Projects is limited in some respects, and their track record regarding E&S issues suggests some concerns which can be readily addressed through implementation support.

f. There are some concerns over capacity and experience in managing stakeholder engagement but these could be readily addressed through implementation support.

Moderate Risk

A Project is classified *as* Moderate Risk after considering, in an integrated manner, the risks and impacts of the Project, taking into account the following, as applicable:

a. the potential adverse risks and impacts on human populations and/or the environment are not likely to be significant. This is because the Project is not complex and/or large, does not involve activities that have a high potential for harming people or the environment, and is located away from environmentally or socially sensitive areas. As such, the potential risks and impacts and issues are likely to have the following characteristics:

- i) predictable and expected to be temporary and/or reversible;
- ii) low in magnitude;
- iii) site-specific, without likelihood of impacts beyond the actual footprint of the Project; and
- iv) low probability of serious adverse effects to human health and/or the environment (e.g., do not involve use or disposal of toxic materials, routine safety precautions are expected to be sufficient to prevent accidents, etc.).

b. The Project's risks and impacts can be easily mitigated in a predictable manner.

Low Risk

A project is classified as Low Risk if its potential adverse risks to and impacts on human populations and/or the environment are likely to be minimal or negligible. These Projects, with few or no adverse risks and impacts and issues, do not require further E&S assessment following the initial screening.

Annex 4: NEMC's Procedures for Carrying out EIA and Environmental Audit



NATIONAL ENVIRONMENT MANAGEMENT COUNCIL (NEMC)
BARAZA LA TAIFA LA HIFADHI NA USIMAMIZI WA MAZINGIRA

PROCEDURES FOR CARRYING OUT ENVIRONMENTAL IMPACT ASSESSMENT AND ENVIRONMENTAL AUDIT

1. Environmental Impact Assessment (EIA)

Section 81 of the Environmental Management Act Cap 191 requires all Developers of projects identified in the 3rd Schedule of the Act and detailed in the 1st Schedule of the EIA and Audit Regulations of 2005, to undertake Environmental Impact Assessment (EIA).

Section 82 of EMA Cap 181 requires that the EIA be carried out prior to the commencement or financing of the project.

Procedures for carrying out the EIA, identified under the EIA and Audit Regulations of 2005 identify nine key steps to be followed in the EIA process in Tanzania. These are:

Step 1: REGISTRATION

Register the proposed project with NEMC, by submitting an application for the EIA certificate, where you will be required to fill in a 'Preliminary Environmental Assessment Registration Form' for your project. The application fee is TZs 70,000/=.

Please use Environmental Experts when filling in registration form and during preparation of the project as required by Regulation 6(3).

Step 2: SCREENING

Return to NEMC three copies of a duly filled Application Form attached with 10 copies of the Project Brief for screening by NEMC. The contents of the Project Brief must comply with the EIA and Audit Regulations of 2005.

Screening report is approved by the Council within **45** days from the date of submission of the brief as per Regulation 10(1).

Step 3: SCOPING

Contract an Environmental Expert/EIA Consultant to prepare a Scoping Report and Terms of Reference (TORs) for conducting the Environmental Impact Assessment (EIA) and submit them to NEMC for review and approval before the commencement of the EIA study. NEMC will provide you with a list of Registered Experts whom you can negotiate with;

TORs are approved by the Council within **14** days as per Regulation 13(2).

Step 4: ENVIRONMENTAL ASSESSMENT

Conduct EIA study (by the Consultant) according to the approved TOR and adhere to the Environmental Management Act Cap. 191 and The Environmental Impact Assessment and Audit Regulations of 2005.

Time taken to carry out EIS depends on the type and complexity of the individual project.

Step 5: REVIEW

Submit an Environmental Impact Statement (EIS) also called Environmental Impact Assessment (EIA) Report to NEMC for **review** by a Cross-sectoral Technical Advisory Committee (TAC); the EIS shall be submitted along with duly filled EIS submission form i.e. form no. 2,

Prior to the review by TAC, NEMC and key stakeholders from other sectors (depending on the type of project) may visit the proposed site for verification of issues that have been raised on the EIS and confirmation of stakeholder consultation at the proponent's costs (transport arrangements to be done by the Developer).

The Council shall, within **60** days following submission of EIS carry out its review as per Section 87(1) of EMA Cap. 191.

Step 6: RECOMMENDATIONS OF THE TECHNICAL ADVISORY COMMITTEE (TAC)

The Consultant will **make** improvements of the EIS by incorporating all comments and recommendations raised by the TAC.

Step 7: SUBMISSION TO THE MINISTER FOR ENVIRONMENT

The Consultant will **submit** the improved (final) version of the EIS to NEMC for final scrutiny. NEMC will forward recommendations to the Minister for Environment for final approval.

Step 8: APPROVAL OF THE EIS

Upon signing of the Certificate by the Minister, it will be brought back to NEMC for collection by the Developer.

The Minister may approve or disapprove the EIS within 30 days as per Section 92(1) of EMA Cap. 191.

Step 9: ISSUANCE OF CERTIFICATE

The signed EIS Certificate will be **attached** with the General and Specific conditions that must be adhered to by the Developer.

Regular monitoring will be carried out to ensure that the specified conditions are followed.

2. Environmental Audit

Section 44 (2a) of the EIA and Audit Regulations of 2005 requires all ongoing projects identified in the 1st Schedule of the Regulations, that have commenced prior to the EMA Cap 191 coming into force, to carry out Environmental Audit (EA).

Initial Environmental Audit will help the Developer to set baseline information on the key environmental issues surrounding his project.

There are eight key steps to be followed when carrying out Environmental Audit. These are:

- Step 1: REGISTRATION**
 Register the proposed project with NEMC, by submitting an application for the Environmental Audit (EA) certificate, where you will be required to fill in a 'Preliminary Environmental Assessment Registration Form' for your project. The application fee is TZs 70,000/=
- Please use Environmental Experts when filling in registration form and during preparation of the project brief.
- Step 2: APPROVAL OF TERMS OF REFERENCE**
 Return to NEMC three copies of a duly filled EA Application Form attached with 10 copies of the Project Brief and Terms of Reference for review by NEMC. The contents of the Project Brief must comply with the EIA and Audit Regulations of 2005.
- Terms of Reference are approved by the Council within **14** days from the date of submission of the brief and ToR.
- Step 3: ENVIRONMENTAL ASSESSMENT**
 Conduct EA study (by the Consultant) according to the approved TOR and adhere to the Environmental Management Act Cap. 191 and The Environmental Impact Assessment and Audit Regulations of 2005.
- Time taken to carry out EA depends on the type and complexity of the individual project.
- Step 4: REVIEW**
 Submit an Environmental Audit report to NEMC for review by a Cross-sectoral Technical Advisory Committee (TAC);
- Prior to the review by TAC, NEMC and key stakeholders from other sectors (depending on the type of project) will visit the location of the ongoing project for verification of issues that have been raised on the EA, and confirmation of stakeholder consultation (transport arrangements to be done by the Developer).
- The Council shall, within **60** days following submission of EA report carry out its review.
- Step 5: RECOMMENDATIONS OF THE TECHNICAL ADVISORY COMMITTEE (TAC)**
 The Consultant will make improvements of the EA report by incorporating all comments and recommendations raised by the TAC.
- The Developer will improve the situation on the ground following recommendations by the TAC.
- Step 6: SUBMISSION TO THE MINISTER FOR ENVIRONMENT**
 The Consultant will submit the improved (final) version of the EA to NEMC for final scrutiny. NEMC will forward recommendations to the Minister for Environment for final approval.
- Step 7: APPROVAL OF THE EA REPORT**
 Upon signing of the Certificate by the Minister, it will be brought back to NEMC for collection by the Developer.

The Minister may approve or disapprove the EIS within 30 days as per Section 92(1) of EMA Cap. 191.

Step 8: ISSUANCE OF CERTIFICATE

The signed EIS Certificate will be attached with the General and Specific conditions that must be adhered to by the Developer.

Regular monitoring will be carried out to ensure that the specified conditions are followed.

Annex 5: Indicative Outlines of ESIA Report and ESMP

A. Indicative Outline of ESIA Report

Where an environmental and social impact assessment is prepared as part of the environmental and social assessment, it will include the following:

(a) Executive Summary

- Concisely discusses significant findings and recommended actions.

(b) Legal and Institutional Framework

- Analyzes the legal and institutional framework for the project, within which the environmental and social assessment is carried out, including the issues set out in ESS1, paragraph 26 of the ESF.
- Compares the Borrower's existing environmental and social framework and the ESSs and identifies the gaps between them.
- Identifies and assesses the environmental and social requirements of any co-financiers.

(c) Project Description

- Concisely describes the proposed project and its geographic, environmental, social, and temporal context, including any offsite investments that may be required (e.g., dedicated pipelines, access roads, power supply, water supply, housing, and raw material and product storage facilities), as well as the project's primary suppliers.
- Through consideration of the details of the project, indicates the need for any plan to meet the requirements of ESS1 through 10.
- Includes a map of sufficient detail, showing the project site and the area that may be affected by the project's direct, indirect, and cumulative impacts.

(d) Baseline Data

- Sets out in detail the baseline data that is relevant to decisions about project location, design, operation, or mitigation measures. This should include a discussion of the accuracy, reliability, and sources of the data as well as information about dates surrounding project identification, planning and implementation.
- Identifies and estimates the extent and quality of available data, key data gaps, and uncertainties associated with predictions.
- Based on current information, assesses the scope of the area to be studied and describes relevant physical, biological, and socioeconomic conditions, including any changes anticipated before the project commences.
- Takes into account current and proposed development activities within the project area but not directly connected to the project.

(e) Environmental and Social Risks and Impacts

- Takes into account all relevant environmental and social risks and impacts of the project. This will include the environmental and social risks and impacts specifically identified in ESS2–8, and any other environmental and social risks and impacts arising as a consequence of the specific nature and context of the project, including the risks and impacts identified in ESS1, paragraph 28.

(f) Mitigation Measures

- Identifies mitigation measures and significant residual negative impacts that cannot be mitigated and, to the extent possible, assesses the acceptability of those residual negative impacts.
- Identifies differentiated measures so that adverse impacts do not fall disproportionately on the disadvantaged or vulnerable.

- Assesses the feasibility of mitigating the environmental and social impacts; the capital and recurrent costs of proposed mitigation measures, and their suitability under local conditions; and the institutional, training, and monitoring requirements for the proposed mitigation measures.
- Specifies issues that do not require further attention, providing the basis for this determination.

(g) Analysis of Alternatives

- Systematically compares feasible alternatives to the proposed project site, technology, design, and operation—including the “without project” situation—in terms of their potential environmental and social impacts.
- Assesses the alternatives’ feasibility of mitigating the environmental and social impacts; the capital and recurrent costs of alternative mitigation measures, and their suitability under local conditions; and the institutional, training, and monitoring requirements for the alternative mitigation measures.
- For each of the alternatives, quantifies the environmental and social impacts to the extent possible, and attaches economic values where feasible.

(h) Design Measures

- Sets out the basis for selecting the particular project design proposed and specifies the applicable ESHGs or if the ESHGs are determined to be inapplicable, justifies recommended emission levels and approaches to pollution prevention and abatement that are consistent with GIIP.

(i) Key Measures and Actions for the Environmental and Social Commitment Plan (ESCP)

- Summarizes key measures and actions and the timeframe required for the project to meet the requirements of the ESSs. This will be used in developing the Environmental and Social Commitment Plan (ESCP).

(j) Appendices

- List of the individuals or organizations that prepared or contributed to the environmental and social assessment.
- References—setting out the written materials both published and unpublished, that have been used.
- Record of meetings, consultations and surveys with stakeholders, including those with affected people and other interested parties. The record specifies the means of such stakeholder engagement that were used to obtain the views of affected people and other interested parties.
- Tables presenting the relevant data referred to or summarized in the main text.
- List of associated reports or plans.

B. Indicative Outline of ESMP

An ESMP consists of the set of mitigation, monitoring, and institutional measures to be taken during implementation and operation of a project to eliminate adverse environmental and social risks and impacts, offset them, or reduce them to acceptable levels. The ESMP also includes the measures and actions needed to implement these measures. The Borrower will

- (a) identify the set of responses to potentially adverse impacts;
- (b) determine requirements for ensuring that those responses are made effectively and in a timely manner; and
- (c) describe the means for meeting those requirements.

Depending on the project, an ESMP may be prepared as a stand-alone document or the content may be incorporated directly into the ESCP. The content of the ESMP will include the following:

(a) Mitigation

- The ESMP identifies measures and actions in accordance with the mitigation hierarchy that reduce potentially adverse environmental and social impacts to acceptable levels. The plan will include compensatory measures, if applicable. Specifically, the ESMP:
 - (a) identifies and summarizes all anticipated adverse environmental and social impacts (including those involving indigenous people or involuntary resettlement);
 - (b) describes—with technical details—each mitigation measure, including the type of impact to which it relates and the conditions under which it is required (e.g., continuously or in the event of contingencies), together with designs, equipment descriptions, and operating procedures, as appropriate;
 - (c) estimates any potential environmental and social impacts of these measures; and
 - (d) takes into account, and is consistent with, other mitigation plans required for the project (e.g., for involuntary resettlement, indigenous peoples, or cultural heritage).

(b) Monitoring

- The ESMP identifies monitoring objectives and specifies the type of monitoring, with linkages to the impacts assessed in the environmental and social assessment and the mitigation measures described in the ESMP. Specifically, the monitoring section of the ESMP provides
 - (a) a specific description, and technical details, of monitoring measures, including the parameters to be measured, methods to be used, sampling locations, frequency of measurements, detection limits (where appropriate), and definition of thresholds that will signal the need for corrective actions; and
 - (b) monitoring and reporting procedures to
 - i. ensure early detection of conditions that necessitate particular mitigation measures, and
 - ii. furnish information on the progress and results of mitigation.

(c) Capacity Development and Training

- To support timely and effective implementation of environmental and social Project components and mitigation measures, the ESMP draws on the environmental and social assessment of the existence, role, and capability of responsible parties on site or at the agency and ministry level.
- Specifically, the ESMP provides a specific description of institutional arrangements, identifying which party is responsible for carrying out the mitigation and monitoring measures (e.g., for operation, supervision, enforcement, monitoring of implementation, remedial action, financing, reporting, and staff training).
- To strengthen environmental and social management capability in the agencies responsible for implementation, the ESMP recommends the establishment or expansion of the parties responsible, the training of staff and any additional measures that may be necessary to support implementation of mitigation measures and any other recommendations of the environmental and social assessment.

(d) Implementation Schedule and Cost Estimates

- For all three aspects (mitigation, monitoring, and capacity development), the ESMP provides (a) an implementation schedule for measures that must be carried out as part of the project, showing phasing and coordination with overall project implementation plans; and (b) the capital and recurrent cost estimates and sources of funds for implementing the ESMP. These figures are also integrated into the total project cost tables.

(e) Integration of ESMP with Project

- The Borrower's decision to proceed with a project, and the Bank's decision to support it, are predicated in part on the expectation that the ESMP (either stand alone or as incorporated into the ESCP) will be executed effectively. Consequently, each of the measures and actions to be implemented will be clearly specified, including the individual mitigation and monitoring measures and actions and the institutional responsibilities relating to each, and the costs of so doing will be integrated into the project's overall planning, design, budget, and implementation.

Annex 6: Indicative Outline of NEMC Scoping Report

Application Reference No.....

THE ENVIRONMENTAL MANAGEMENT ACT, CAP.191

SUBMISSION OF PROJECT BRIEF

PART A

DETAILS OF PROPONENT/DEVELOPER

Name (Person or Firm).....

TIN

Physical

Address.....

Name of contact person.....

Telephone No. Fax No.

E-mail address

PART B

DETAILS OF THE PROJECT

1. PROPOSED UNDERTAKING/DEVELOPMENT

- (a) Title of Proposal (general classification of undertaking);
- (b) description of Proposal (nature of undertaking, unit processes [flow diagram], raw materials, list of chemicals; {source, types and quantities}, storage facilities, wastes/by-products {solid, liquid and gaseous) and their management;
- (c) scope of Proposed Project (size of labor force and working hours, equipment and machinery, installed/production capacity, product type, area covered facility/proposal, market);
- (d) project cost; and
- (e) technology to be used.

2. PROPOSED SITE DESCRIPTION

- (a) proof of land ownership;
- (b) location : Administrative Location and Latitude and Longitude;
- (c) attach a site layout plan and location maps;
- (d) current zoning;
- (e) distance to nearest residential and/or other facilities;
- (f) adjacent land uses (existing & proposed);
- (g) a declaration that the project site is not within or near the sensitive ecosystem/areas (e.g. water bodies, protected areas, schools, public utilities and defense strategic areas); and
- (h) land Acquisition Process (Relocation or Compensation) attach Resettlement Action Plan.

3. INFRASTRUCTURE AND UTILITIES

- (a) Structures (buildings and other facilities);

- (b) Land required;
- (c) Water (source, quantity);
- (d) Power (type, source & quantity);
- (e) Road;
- (f) Other major utilities (e.g. sewerage, etc.).

4. ENVIRONMENTAL IMPACTS

- (a) potential environmental effects of proposed undertaking (both construction, operation and decommission phases);
- (b) project alternatives (site, design and/or technology).

5. OTHER ENVIRONMENTAL ISSUES

- (a) potential significant risks and hazards associated with the proposed project (including occupational health and safety) and its Emergence Preparedness and Response Plan; and
- (b) state briefly relevant environmental studies already done and attach copies as appropriate.

6. METHODOLOGIES OF CONDUCTING THE SCOPING EXERCISE

7. SYNTHESIS OF THE RESULTS OF THE SCOPING

8. STAKEHOLDERS INVOLVEMENT

9. PROJECT ALTERNATIVES

10. ENVIRONMENTAL MANAGEMENT PLAN

11. MONITORING PLAN

12. DECOMMISSIONING PLAN

PART C

DECLARATION BY THE PROPONENT

I hereby certify that the particulars given above are correct and true to the best of my knowledge.

Name.....

Position.....

Signature.....

On behalf of.....

Date.....

(Firm name and Seal)

PART D

DETAILS OF ENVIRONMENTAL IMPACT ASSESSMENT EXPERT

Name (individual/firm).....

Certificate of registration No.....
Address.....
Tel.....Fax.....e-mail.....

PART D

DETAILS OF ENVIRONMENTAL IMPACT ASSESSMENT EXPERT

Name (individual/firm).....
Certificate of registration No.....
Address.....
Tel.....Fax.....e-mail.....

PART E

FOR OFFICIAL USE

Decision of the Council.....
Comments
.....
.....
.....
Officer.....Sign.....Date.....

NB:

1. If the Project Brief does not contain sufficient information required under the Environmental Impact Assessment and Audit Regulations the applicant may be required to conduct an environmental impact assessment study.
2. Any person who fraudulently makes a false statement in a project report or alters the project report commits an offence.

Important notices: Please submit the following:

- (a) three copies of the project brief;
- (b) the prescribed fee to the Director General, of the National Environment Management Council, Plot No.28, 29 & 30 Regent Street,
P.O. Box,
11404 Dar es Salaam.
Tel Fax.....
e-mail

Form No. 5

Serial No.....

Annex 7: Indicative Outline of ESA Report

The aim of the audit is to identify significant environmental and social issues in the existing project or activities, and assess their current status, specifically in terms of meeting the requirements of the ESSs and Tanzania's EIA and Audit Regulations of 2005 and Amendments of 2018.

a. Executive Summary

- Concisely discusses significant findings and sets out recommended measures and actions and timeframes.

b. Legal and Institutional Framework

- Analyzes the legal and institutional framework for the existing project or activities, including the issues set out in ESS1, paragraph 26, and (where relevant) any applicable environmental and social requirements of existing financiers.

c. Project Description

- Concisely describes the existing project or activities, and the geographic, environmental, social, and temporal context and any Associated Facilities.
- Identifies the existence of any plans already developed to address specific environmental and social risks and impacts (e.g., land acquisition or resettlement plan, cultural heritage plan, biodiversity plan).
- Includes a map of sufficient detail, showing the site of the existing project or activities and the proposed site for the proposed project.

d. Environmental and Social Issues Associated with the Existing Project or Activities

- The review will consider the key risks and impacts relating to the existing project or activities. This will cover the risks and impacts identified in ESSs1–10, as relevant to the existing project or activities. The audit will also review issues not covered by the ESSs, to the extent that they represent key risks and impacts in the circumstances of the project.

e. Environmental and Social Analysis

- The audit will also assess (i) the potential impacts of the proposed project (taking into account the findings of the audit with regard to the existing project or activities); and (ii) the ability of the proposed project to meet the requirements of the ESSs.

f. Proposed Environmental and Social Measures

- Based on the findings of the audit, this section will set out the suggested measures to address such findings. These measures will be included in the Environmental and Social Commitment Plan (ESCP) for the proposed Project. Measures typically covered under this section include the following:
 - specific actions required to meet the requirements of the ESSs
 - corrective measures and actions to mitigate potentially significant environmental and/or social risks and impacts associated with the existing project or activities
 - measures to avoid or mitigate any potential adverse environmental and social risks or impacts associated with the proposed project.

Annex 8: E&S Specifications for Contractors²⁶

AIM OF THIS DOCUMENT

The purpose of this document is to present a comprehensive set of specifications to be followed by Contractors in the implementation of subprojects under MBDP.

GENERAL

In order to prevent harm and nuisances on local communities, and to minimize the impacts on the environment during construction of investment sub-projects under the MBDP, the Contractor and his employees shall adhere to the mitigation measures set down in:

- ESIA
- Site Specific ESMP
- The specifications, procedures, and best practices included in this Annex. These specifications complement any technical specifications included in the work quantities and the requirements of Tanzanian regulations
- **Contractor's ESMP:** The Contractor is required to submit a construction ESMP (CESMP)) as part of his proposed Construction Method Statements prepared as part of his Bid document and/or during construction phase. The Contractor's CESMP shall provide details such as Contractor's commitment to environmental protection; methodology of implementing the project ESMP; environmental mitigation measures and monitoring program during different stage of the construction period, and the contractor's proposed resources for the implementation of the ESMP.

The Contractor and his employees shall adhere to the mitigation measures set down in these specifications to prevent harm and nuisances on local communities, and to minimize the impacts in construction and operation on the environment.

SUBPROJECTS CONSTRUCTION ACTIVITIES

The following information is intended solely as broad guidance to be used in conjunction with local and national regulations and complemented by the Site Specific Environmental and Social Management Plans prepared for the project. Before initiation of rehabilitation activities, the Contractor shall present the PIU and Supervision Engineer/Consultant a Plan which explicitly states how he plans to abide by these specifications. After approval of such Plan by the PIU construction activities can proceed.

Workforce and Site Installation Management Plan

Workforce

There is the potential that local labor from the streets/villages around subproject area could participate in the project implementation activities. Priority shall be set by the Contactor(s) and sub-Contractor(s) to hire the local labor for the works. The contractor will not engage in child labor or forced labor. Based on the Labor Management Procedures (LMP) of the MBDP the Contractor should prepare a Labor Management Plan (LMP) for his workers. The Contractor shall take the following steps to maximize to use of the local labor:

- Announcement for the position that local labor could participate in the works to every street/villages around the subproject area;
- Provide equal employment opportunities for both youth, women, men and disabled;
- Provide work safety/environmental awareness training to those local labors upon their hiring.

²⁶ The Contractor will have to follow the World Bank Group Environmental, Health and Safety Guidelines as well as applicable laws of Tanzania. List of OHS legislation can be taken from <https://www.osha.go.tz/page/laws-and-regulations>

Code of Conduct

A Code of Conduct shall be established to outline the importance of appropriate behavior, drug and alcohol abuse, and compliance with relevant laws and regulations. Each employee shall be informed of the Code of Conduct and bound by it while in the employment of the Contractors. The Code of Conduct shall be available to local communities at the project information centers or other place easily accessible to the communities.

The Code of Conduct shall address the following measures (but not limited to them):

- All of the workforce shall abide by the laws and regulations of Tanzania;
- Reporting of work situations that are believed not to be safe or healthy;
- Treating other people with respect, and not discriminating against specific groups such as women, people with disabilities, migrant workers or children;
- Illegal substances, weapons and firearms shall be prohibited;
- Pornographic material and gambling shall be prohibited;
- Fighting (physical or verbal) shall be prohibited;
- Creating nuisances and disturbances in or near communities shall be prohibited;
- Disrespecting local customs and traditions shall be prohibited;
- Smoking shall only be allowed in designated areas;
- Maintenance of appropriate standards of dress and personal hygiene;
- Requirement of completion of relevant training courses that will be provided related to the environmental and social aspects of the Contract, including on health and safety matters, and Sexual Exploitation, and Sexual Abuse (SEA)
- Failure to comply with the Code of Conduct, or the rules, regulations, and procedures implemented at the construction camp will result in disciplinary actions.

Prohibitions

The following activities shall be prohibited on or near the project site.

- Cutting of trees for any reason outside the approved project area;
- Hunting, fishing, wildlife capture, or plant collection;
- Buying of wild animals for food;
- Feeding of wild animals;
- Use of unapproved toxic materials, including lead-based paints, asbestos, etc.;
- Disturbance to anything with architectural or historical value;
- Building of fires;
- Use of firearms;
- Use of alcohol by workers in office hours;
- Washing cars or machinery in streams or creeks;
- Doing maintenance (change of oils and filters) of cars and equipment outside authorized areas;
- Disposing trash in unauthorized places;
- Driving in an unsafe manner in local roads;
- Having caged wild animals (especially birds) in camps;
- Working without safety equipment (including boots and helmets);
- Creating nuisances and disturbances in or near communities;
- The use of rivers and streams for washing clothes;
- Indiscriminate disposal of rubbish or rehabilitation wastes or rubble;
- Littering the site;
- Spillage of potential pollutants, such as petroleum products;
- Collection of firewood;
- Poaching of any description;
- Explosive and chemical fishing;
- Latrine outside the designated facilities;
- Burning of wastes and/or cleared vegetation;

- Engaging in any form of sexual harassment including unwelcome sexual advances, requests for sexual favours, and other unwanted verbal or physical conduct of a sexual nature with other Contractor's or Employer's Personnel;
- Engaging in sexual exploitation, rape or sexual abuse;
- Engaging in any form of sexual activity with individuals under the age of 18, except in case of pre-existing marriage.

Any rehabilitation workers, office staff, Contractor's employees, the implementing agencies employees or any other person related to the project found violating these prohibitions will be subjected to disciplinary actions that can range from a simple reprimand to termination of his/her employment depending on the seriousness of the violation.

Camp and Site Facilities

If applicable, the following general measures shall be considered for camp and site facilities:

- The construction, layout and extent of the construction site and its components, i.e. all offices, accommodation facilities, testing facilities / laboratories, batching areas, storage & stockpiling areas, workshops, vehicle washing areas and all other areas/facilities required for completion of the project shall be planned, designed and managed in such a manner that environmental and social impacts are minimized;
- The Contractor shall establish worker's camps, offices, workshops, testing facilities, stockpiling areas, staff accommodation etc. in a manner that does not adversely affect the environment.
- Observe applicable national (if any) and international standards²⁷ on how many workers are allowed in one room, what minimum space required per person, type of beds, cooking arrangements etc.
- Site offices, camps, depots, asphalt plants, mixing stations, and workshops shall be located in appropriate areas as agreed by local village and approved by the Supervision engineer/Consultant and not within 500 meters of existing residential settlements and not within 1,000 meters for asphalt plants;
- Site offices, camps, depots and particularly storage areas for fuel, lubricants, bitumen and asphalt plants shall not be located within 500 meters of watercourses, and be operated so that no pollutants enter watercourses, either overland or through groundwater seepage, especially during periods of rain. This will require lubricants to be recycled and a ditch to be constructed around the area with an approved settling pond/oil trap at the outlet;
- Areas for the storage of fuel or lubricants and for a maintenance workshop shall be fenced and have a compacted/impervious floor to prevent the escape of accidental spillage of fuel and or lubricants from the site. Surface water drainage from fenced areas shall be discharged through purpose designed and constructed oil traps. Empty fuel or oil drums may not be stored on site.
- Fuel wood shall not be used as a means of heating during the processing or preparation of any materials forming part of the Works;
- The Contractor shall restrict all his activities, materials, equipment and personnel to the area specified. Entry into restricted areas by any person, vehicle or equipment without the Supervision Engineer's/Consultant's permission can result in penalties;
- Potable water safe for human consumption shall be provided for at camps, site offices, and other working areas;
- Camp areas shall be located to allow effective natural drainage;
- A method shall be established for storing and disposing of all solid wastes generated by the labor camp. If applicable, kitchen wastes shall be disposed into soak pits;
- Solid wastes generated in the labor site shall be reused if recyclable or disposed of in land fill sites;
- If water is stored on site, drinking water and multi-purposed water storage facilities shall be clearly distinguished and demarcated.
- Sanitary arrangements, latrines and urinals shall be provided in every camp sites/work fronts.

²⁷ Like Workers' accommodation: processes and standards A guidance note by IFC and the EBRD and https://www.ebrd.com/downloads/about/sustainability/Workers_accomodation.pdf

First Aid Facilities

- Medical and first aid facilities shall be provided at each camp area. In line with Occupational Health and Safety (First aid And Welfare Facilities) Rules, 2015, First aid box shall be provided at the construction campsite and under the charge of a responsible person who shall always be readily available 24 hours. He/she shall be adequately trained in administering first aid-treatment. Formal arrangement shall be prescribed to make motor transport available to carry injured person or person suddenly taken ill to the nearest hospital.

Sanitary Facilities

- In every camp site separate and adequate lavatory facilities (toilets and washing areas) shall be provided for the use of male and female workers. Toilet facilities should also be provided with adequate supplies running water, soap, and toilet paper. Such facilities shall be conveniently accessible and shall be kept in clean and hygienic conditions:
 - Where female workers are employed, there shall be at least one latrine for every 25 females or part thereof.
 - Where males are employed, there shall be at least one latrine for every 25 males or part thereof.
 - Every latrine shall be under cover and so partitioned off as to secure privacy, and shall have a proper door and fastenings.
 - Where workers of both sexes are employed, each latrine or urinal must be lockable from inside, and outside of each block there must be a notice in the language understood by the majority of the workers “For Men” or “For Women” as the case may be.
 - The latrines and urinals shall be adequately lighted and shall be maintained in a clean sanitary condition at all times and
 - Water shall be provided in or near the latrines and urinals by storage in drums
- Chemical toilets, etc. must be provided at all construction camp areas where there will be a concentration of labor. Toilet paper must be provided;
- A temporary septic tank system shall be installed for the disposal of domestic wastes and excreta without causing pollution of nearby watercourses. Wastewater should not be disposed into water bodies without treatment.

Eating areas

- If none is available, the Contractor shall provide adequate temporary shade within the rehabilitation areas to ensure that site personnel do not move off site to eat;
- The Contractor shall provide adequate refuse bins at all eating areas to the satisfaction of the Supervision engineer/Consultant;
- If deemed necessary by the Supervision engineer/Consultant, the Contractor shall demarcate designated eating areas.

Security

Some security measures shall be put into place to ensure the safe and secure running of the site facilities and its residents. Some of these security measures include:

- Adequate, day-time night-time lighting shall be provided;
- A perimeter security fence at least 2m in height constructed from appropriate materials;
- Provision and installation in all buildings of firefighting equipment and portable fires extinguishers.

Impact Management Plan

Erosion and Sedimentation

In order to minimize negative impacts in the project area, the following activities shall be carried out by the Contractor:

- The Contractor shall implement erosion and sedimentation control measures to the satisfaction of the PIU and Supervision engineer/Consultant;
- The Contractor shall protect all areas susceptible to erosion by installing necessary temporary and permanent drainage works as soon as possible and by taking any other measures necessary to prevent storm water from concentrating in streams and scouring slopes, banks, etc.
- Areas of the site not disturbed by rehabilitation activities shall be maintained in their existing conditions;
- Conserve topsoil with its leaf litter and organic matter, and reapply this material to local disturbed areas to promote the growth of local native vegetation;
- Apply local, native grass seed and mulch to barren erosive soil areas or closed construction surfaces;
- Apply erosion control measures before the rainy season begins preferably immediately following rehabilitation;
- Install sediment control structures where needed to slow or redirect runoff and trap sediment until vegetation is established. Sediment control structures include windrows of logging slash, rock berms, sediment catchment basins, straw bales, brush fences, and silt;
- In areas where rehabilitation activities have been completed and where no further disturbance would take place, re-vegetation should commence as soon as possible;
- Spray water as needed on dirt roads, cuts, fill material and stockpiled soil to reduce wind-induced erosion;
- Traffic and movement over stabilized areas shall be restricted and controlled, and damage to stabilized areas shall be repaired and maintained to the satisfaction of the Supervision engineer/Consultant.

Earthworks, Cut and Fill Slopes

All earthworks shall be properly controlled, especially during the rainy season;

- The Contractor shall maintain stable cut and fill slopes at all times and cause the least possible disturbance to areas outside the prescribed limits of the works;
- In order to protect any cut or fill slopes from erosion, in accordance with the drawings, cut off drains and toe-drains shall be provided at the top and bottom of slopes and be planted with grass or other plant cover. Cut off drains should be provided above high cuts to minimize water runoff and slope erosion;
- Any excavated cut or unsuitable material shall be disposed of in designated disposal areas as agreed to by the Supervision engineer/Consultant;
- Disposal sites should not be located where they can cause future slides, interfere with agricultural land or any other properties, or cause soil from the dump to be washed into any watercourse. Drains may need to be dug within and around the tips, as directed by the Engineer

Stockpiles and Borrow Pits

In general terms, the Contractor shall:

- Identify and demarcate locations for stockpiles and borrow pits, ensuring that they are 15 meters away from critical areas such as steep slopes, erosion-prone soils, and areas that drain directly into sensitive water bodies. Location of borrow pits shall be approved by the Supervision engineer/Consultant.
- Limit extraction of material to approved and demarcated borrow pits.
- Stockpile topsoil when first opening the borrow pit. After all usable borrow has been removed, the previously stockpiled topsoil should be spread back over the borrow area and graded to a smooth, uniform surface, sloped to drain. On steep slopes, benches or terraces may have to be specified to help control erosion.
- Excess overburden should be stabilized and re-vegetated. Where appropriate, organic debris and overburden should be spread over the disturbed site to promote re-vegetation. Natural re-vegetation is preferred to the extent practicable.
- Existing drainage channels in areas affected by the operation should be kept free of overburden.
- The Contractor shall ensure that all borrow pits used are left in a trim and tidy condition with stable side slopes, re-establishment of vegetation, restoration of natural water courses, avoidance of flooding of the excavated areas wherever possible so no stagnant water bodies are created which could breed mosquitoes.
- When the borrow pits cannot be refilled or reasonably drained, the Contractor shall consult with the local community to determine their preference for reuse such as fish farming or other community purposes;
- No foreign material generated/ deposited during construction shall remain on site. Areas affected by stockpiling shall be reinstated to the satisfaction of the Supervision Engineer/Consultant.

Disposal of Debris

The Contractor shall carry out the following activities:

- Establish and enforce daily site clean-up procedures, including maintenance of adequate disposal facilities for debris;
- Debris generated due to the dismantling of existing structures shall be suitably reused, to the extent feasible, in the proposed rehabilitation program (e.g. as fill materials for embankments). The disposal of remaining debris shall be carried out only at sites identified and approved by the Supervision Engineer/Consultant. The contractor should ensure that these sites (a) are not located within designated forest areas; (b) do not impact natural drainage courses; and (c) do not impact endangered/rare flora. Under no circumstances shall the contractor dispose of any material in environmentally sensitive areas.
- In the event any debris or silt from the sites is deposited on adjacent land, the Contractor shall immediately remove such, debris or silt and restore the affected area to its original state to the satisfaction of the Supervision Engineer/Consultant.
- Water courses shall be cleared of debris and drains and culverts checked for clear flow paths;
- Include provisions for incorporating the most appropriate stabilization techniques for each disposal site and determine that the selected spoil disposal sites do not cause unwanted surface drainage;
- Assess risk of any potential impact regarding leaching of spoil material on surface water;
- Once the job is completed, all rehabilitation -generated debris should be removed from the site.

Demolition of Existing Infrastructures

The following measures shall be implemented in order to protect workers and the public from falling debris and flying objects:

- Set aside a designated and restricted waste drop or discharge zones, and/or a chute for safe movement of wastes from upper to lower levels;
- Conduct sawing, cutting, grinding, sanding, chipping or chiselling with proper guards and anchoring as applicable;
- Maintain clear traffic ways to avoid driving of heavy equipment over loose scrap;
- Provide all workers with safety glasses with side shields, face shields, hard hats, and safety shoes.

Dust Control

- The Contractor shall ensure that the generation of dust is minimized and shall implement a dust control program to maintain a safe working environment, minimize nuisance for surrounding residential areas/dwellings and protect damage to natural vegetation, crops, etc.;
- Construction vehicles shall comply with speed limits and haul distances shall be minimized;
- Material loads shall be suitably covered and secured during transportation;
- Exposed soil and material stockpiles shall be protected against wind erosion and the location of stockpiles shall take into consideration the prevailing wind directions and locations of sensitive receptors;
- The Contractor shall implement dust suppression measures (e.g. water spray vehicles, covering of material stockpiles, etc.) if and when required.

Noise Control

- The Contractor shall be responsible for compliance with the relevant legislation with respect to noise;
- The Contractor shall try to keep noise generating activities to a minimum;
- The Contractor shall restrict all operations that result in undue noise disturbance to local communities and/or dwellings (e.g. blasting, crushing, etc.) to daylight hours on weekdays or as agreed with the Supervision Engineer/Consultant;
- The Contractor shall warn any local communities and/or residents that could be disturbed by noise generating activities such as blasting well in advance and shall keep such activities to a minimum;
- In sensitive areas (including residential neighbourhoods, hospitals, rest homes, schools, etc.) more strict measures may need to be implemented to prevent undesirable noise levels;
- To the extent possible, night time operations shall be kept to a minimum and banned near sensitive receptors;

- No blasting shall be allowed during night time unless prior approval is obtained from the government authority and the Supervision Engineer/Consultant;
- The Contractor shall maintain the construction equipment in its best operating conditions and lowest noise levels possible.

Re-Vegetation and site restoration

- Re-vegetation shall start at the earliest opportunity. Appropriate local native species of vegetation shall be selected for the compensatory planting and restoration of the natural landforms;
- Restoration of cleared areas such as borrow pits no longer in use, disposal areas, site facilities, stockpiles areas, working platforms and any areas temporarily occupied during construction of the project works shall be accomplished using landscaping adequate drainage and re-vegetation;
- Spoil heaps and excavated slopes shall be re-profiled to stable batters, and grassed to prevent erosion;
- Restoration and re-vegetation shall be carried out timely for the exposed slopes/soils and finished areas shall be reinstated in order to achieve the stability of slopes and maintain soil integrity;
- All affected areas shall be landscaped and any necessary remedial works shall be undertaken without delay, including grassing and reforestation;
- Soil contaminated with chemicals or hazardous substances shall be removed and transported and buried in waste disposal areas.

Waste Management Plan

Waste management on site shall be strictly controlled and monitored. Only approved waste disposal methods shall be allowed. The Contractor shall ensure that all site personnel are instructed in the proper disposal of all waste.

Solid waste

- The Contractor shall submit a method statement detailing a solid waste control system (storage, provision of bins, site clean-up schedule, bin clean-out schedule, etc.) to the Supervision Engineer/Consultant for approval.
- The Contractor shall ensure that all facilities are maintained in a neat and tidy condition and the site shall be kept free of litter;
- Measures shall be taken to reduce the potential for litter and negligent behaviour with regard to the disposal of all refuse. At all places of work, the Contractor shall provide litter bins, containers and refuse collection facilities for later disposal;
- Solid waste may be temporarily stored on site in a designated area approved by the Supervision Engineer/Consultant prior to collection and disposal through a licensed waste collector;
- Waste storage containers shall be covered, tip-proof, weatherproof and scavenger proof. The waste storage area shall be fenced off to prevent wind-blown litter;
- No burning, on-site burying or dumping of waste shall occur;
- All solid waste shall be disposed of offsite at an approved landfill site. The Contractor shall supply the Supervision Engineer/Consultant with certificates of disposal;
- Random disposal of solid waste in scenery areas shall be strictly prohibited;
- During rehabilitation, inert construction materials / excavated soil shall be reused on site as much as possible and minimize the volume requiring disposal;
- The Contractor shall identify and demarcate disposal areas clearly indicating the specific materials that can be deposited in each;
- Recyclable materials such as wooden plates for trench works, steel, scaffolding material, site holding, packaging material, etc. shall be collected and separated on-site from other waste sources. Collected recyclable material shall be re-used for other projects or sold to waste collector for recycling.

Domestic waste

- The Contractor shall provide refuse bins, all with lids, for all buildings. Refuse shall be collected and removed from all facilities at least twice per week. Domestic waste shall be transported to the approved refuse disposal site in covered containers or trucks.

Wastewater

- The Contractor shall submit a method statement to the Supervision Engineer/Consultant detailing how wastewater would be collected from all wastewater generating areas, as well as storage and disposal methods. If the Contractor intends to carry out any on-site wastewater treatment, this should also be included;
- Water from kitchens, showers, laboratories, sinks etc. shall be discharged into a conservancy tank for removal from the site;
- Runoff from fuel depots / workshops / machinery washing areas and concrete batching areas shall be collected into a conservancy tank and disposed off at a site approved by the Supervision Engineer/Consultant;
- Domestic sewage from site office and toilets shall either be collected by a licensed waste collector or treated by on-site treatment facilities. Discharge of treated wastewater must comply with the discharge limit according to the legislation;
- Chemical toilets can be provided on site for construction workers. Domestic sewage collected from the site office and chemical toilets shall be cleaned up on regular basis. Only licensed waste collectors shall be employed for this disposal;
- At completion of rehabilitation works, soak pits and septic tanks shall be covered and effectively sealed off.

Hazardous and Chemical waste

- All hazardous and chemical waste (including bitumen, etc.) shall be disposed of at an approved hazardous landfill site and in accordance with local legislative requirements. The Contractor shall provide disposal certificates to the Supervision Engineer/Consultant;
- The removal of asbestos-containing materials or other toxic substances shall be performed and disposed of by specially trained workers;
- Used oil and grease shall be removed from site and sold to an approved used oil recycling company;
- Under no circumstances shall the spoiling of tar or bituminous products be allowed on the site, over embankments, in borrow pits or any burying;
- Unused or rejected tar or bituminous products shall be returned to the supplier's production plant;
- Used oil, lubricants, cleaning materials, etc. from the maintenance of vehicles and machinery shall be collected in holding tanks and sent back to the supplier or removed from site by a specialist oil recycling company for disposal at an approved hazardous waste site.
- Inform the Supervision Engineer/Consultant of any accidental spill or incident;
- Initiate a remedial action following any spill or incident;
- Provide a report explaining the reasons for the spill or incident, remedial action taken, consequences/damage from the spill, and proposed corrective actions.

Materials Handling, Use and Storage Management Plan

General

The Contractor shall submit a method statement detailing cement storage, concrete batching areas and methods, method of transport of cement and concrete, storage and disposal of used cement bags, etc. for each concrete batching operation. Environmental considerations shall be taken into account in the location of any material storage areas.

Transportation

- The Contractor shall ensure that all suppliers and their delivery drivers are aware of procedures and restrictions (e.g. restricted areas);
- Material shall be appropriately secured to ensure safe passage between destinations during transportation;
- Loads shall have appropriate cover to prevent them spilling from the vehicle during transit;
- The Contractor shall be responsible for any clean-up resulting from the failure by his employees or suppliers to properly secure transported materials.
- Transport vehicle e.g. dumper, truck and any equipment as may be required for offloading heavy objects should have safety equipment like cones, first aid kit, fire extinguisher, etc. as per

the requirements of part 8 of *The Occupational Safety and Health (Building and Construction Industry) Rules, 2015*²⁸.

Hazardous and Chemical Substances

The Contractor shall provide a method statement detailing the hazardous substances/material that are to be used during construction, as well as the storage, handling, and disposal procedures for each substance / material and emergency procedures in the event of misuse or spillage that might negatively affect the environment.

In general terms, the following activities shall be carried out:

- All hazardous material/substances (e.g. petrochemicals, oils, etc.) shall be stored on site only under controlled conditions;
- All hazardous material/substances shall be stored in a secured, appointed area that is fenced and has restricted entry. All storage shall take place using suitable containers to the approval of the Supervision Engineer/Consultant;
- Hazard signs indicating the nature of the stored materials shall be displayed on the storage facility or containment structure;
- Fuel shall be stored in a steel tank supplied and maintained by the fuel suppliers. The tank shall be located in a secure, demarcated area and should be contained by dykes than can hold 100% of the volume of the fuel stored.

Surfacing Materials

- Over spray of bitumen products outside of the road surface and onto roadside vegetation shall be prevented using a method approved by the Supervision Engineer/Consultant;
- When heating of bitumen products, the Contractor shall take appropriate fire control measures; Stone chip / gravel excess shall not be left on road / paved area verges. This shall be swept /raked into piles and removed to an area approved by the Supervision Engineer/Consultant;
- Water quality from runoff from any fresh bitumen surfaces shall be monitored by the Supervision Engineer/Consultant and remedial actions taken where necessary.

Cement and Concrete Batching

- Concrete mixing directly on the ground shall not be allowed and shall take place on impermeable surfaces to the satisfaction of the Supervision Engineer/Consultant;
- All runoff from batching areas shall be strictly controlled, and cement-contaminated water shall be collected, stored and disposed of at a site approved by the Supervision Engineer/Consultant;
- Unused cement bags shall be stored out of the rain where runoff won't affect it;
- Used (empty) cement bags shall be collected and stored in weatherproof containers to prevent windblown cement dust and water contamination. Used cement bags shall not be used for any other purpose and shall be disposed of on a regular basis via the solid waste management system (see Waste Management Plan);
- All excess concrete shall be removed from site on completion of concrete works and disposed of. Washing of the excess into the ground is not allowed. All excess aggregate shall also be removed.

Loading/Unloading Activities

The project will use large RCC pipes for drainage projects. This is a very risky activity and needs specifications for crane operation (e.g. licensed operator), lifting gear (e.g. use of two belts, not a single belt), flagmen, etc. The Contractor will be required to describe in their HSMP how both mechanical and manual handling will be done.

Ecological Considerations

²⁸ <https://www.osha.go.tz/storage/publications/LawsRegulations/sw1496149205-BUILDING%20AND%20CONSTRUCTION%20RULES,%202015.pdf>

Protection of Natural Vegetation

- The Contractor shall be responsible for informing all employees about the need to prevent any harmful effects on natural vegetation on or around the rehabilitation site as a result of their activities;
- Clearing of natural vegetation shall be kept to a minimum;
- The removal, damage and disturbance of natural vegetation without the written approval of the Supervision Engineer/Consultant are prohibited;
- The use of herbicides shall be approved by the Supervision Engineer/Consultant;
- Regularly check the work site boundaries to ensure that they are not exceeded and that no damage occurs to surrounding areas;
- Prohibit and prevent open fires during rehabilitation and provide temporary firefighting equipment in the work areas, particularly close to forest areas;
- Some trees might be of value for the communities and may not be cut, disturbed, damaged, destroyed and their products may not be possessed, collected, removed, transported, exported, donated, purchased or sold except under license granted a delegated authority.

Protection of Fauna

- The Contractor shall ensure that no hunting, trapping, shooting, poisoning or otherwise disturbance of any fauna takes place;
- The feeding of any wild animals shall be prohibited;
- The use of pesticides shall be approved by the Supervision Engineer/Consultant;
- No domestic pets or livestock shall be permitted on site.

Safety during Construction

Construction Site Safety

The Contractor's responsibilities include the protection of every person and nearby property from construction accidents. The Contractor shall be responsible for complying with all national and local safety requirements and any other measures necessary to avoid accidents, including the following:

- Provide personal protective equipment and clothing (goggles, gloves, respirators, dust masks, hard hats, steel-toed boots, etc.) for construction workers and enforce their use;
- During heavy rains or emergencies of any kind, suspend all work;
- Brace electrical and mechanical equipment to withstand seismic events during the construction;
- Present details regarding maximum permissible vehicular speed on each section of road;
- Establish safe sight distance in both construction areas and construction camp sites;
- Place signs around the rehabilitation areas to facilitate traffic movement, provide directions to various components of the works, and provide safety advice and warning. All signs shall be in English and Swahili language and be constructed according to Tanzanian specifications.

Measures on blasting (if applicable)

- The Contractor shall take necessary precautions to prevent damage to special features and the general environment;
- Environmental damage caused by blasting/drilling shall be repaired at the Contractor's expense to the satisfaction of the Supervision Engineer/Consultant;
- The Contractor shall notify any occupants / owners of surrounding land at least one week prior to blasting and shall address any concerns that they may have to the satisfaction of the Supervision Engineer/Consultant;
- For the transportation, storage, process, package on site, connect, blasting and the disposal of the blasting, the procedure shall be in accordance with the relevant Tanzania Regulations.

Fire Control

- The Contractor shall submit a fire control and fire emergency method statement to the Supervision Engineer/Consultant for approval. The method statement shall detail the procedures to be followed in the event of fire;
- The contractor shall take all reasonable steps to avoid increasing the risk of fire through activities on site;
- The contractor shall ensure that basic fire-fighting equipment is available at all camp areas and facilities;

- The contractor shall appoint a fire officer who shall be responsible for ensuring immediate and appropriate action in the event of a fire;
- The contractor shall ensure that all site personnel are aware of the procedure to be followed in the event of a fire;
- Any work that requires the use of fire may only take place at a designated area approved by the Supervision Engineer/Consultant and must be supervised at all times. Fire-fighting equipment shall be available.

Traffic Management

- Estimate maximum concentration of traffic (number of vehicles/hour);
- Use selected routes to the project site, as agreed with the Supervision Engineer/Consultant, and appropriately sized vehicles suitable to the class of roads in the area, and restrict loads to prevent damage to local roads and bridges used for transportation purposes;
- Maintain adequate traffic control measures throughout the duration of the Contract and such measures shall be subject to prior approval of the Supervision Engineer/Consultant;
- Carefully and clearly mark pedestrian-safe access routes;
- If school children are in the vicinity, include traffic safety personnel to direct traffic during school hours;
- Maintain a supply for traffic signs (including paint, easel, sign material, etc.), road marking, and guard rails to maintain pedestrian safety during construction.

Other Requirements

As indicated in section 4.9 of the ESMF, Contractors will be required to include in their HSMPs safety measures in different activities including the following:

- Excavations
- Working from height
- Working in confined spaces
- Housekeeping
- Other general work (hot work, power tool safety, electrical work, tagging system, etc.)
- Permit-to-work system

Protection of Heritage and Cultural Property

- If any archaeological or paleontological artefact or remains are uncovered during rehabilitation activities, work in the vicinity of the find shall cease immediately. The Contractor shall immediately notify the Supervision Engineer/Consultant who shall contact the Provincial Culture Department;
- The Contractor will be required to abide by the specifications as set out by the heritage specialist appointed to investigate the find;
- The Contractor may not, without a permit issued by the relevant heritage resources authority, destroy, damage, excavate, alter, deface or otherwise disturb archaeological material.

Grievance Redress Mechanism (GRM)

The contractor shall develop a GRM for workers and community members to express concerns about the civil works. The GRM system should be easily accessible. For GBV cases, the GRM shall be designed in a way to keep strict confidentiality. All workers shall be trained about the GRM process and the contractor shall prove that each employee has been inducted with signatures to show that they have been inducted on the procedure. If the dispute is not resolved at the workplace, other resolutions mechanisms provided for in the labor legislations can be utilized.

All complaints received shall be recorded. The supervision engineer/consultant and PIU should be informed about the complaints when they are received. A mechanism shall be put in place to resolve the complaint swiftly. For complaints by community members if a resolution is not possible, the complaint shall be dealt with through the TACTIC Project GRM system.

Community Relations

To enhance community relations the Contractor shall:

- Inform the local communities about construction and work schedules, blasting schedules, interruption of services, traffic detour routes and provisional bus routes, and demolition, as appropriate.
- Limit construction activities at night. When necessary ensure that night work is carefully scheduled and the community is properly informed so they can take necessary measures.
- Inform local community as early as possible and repeat at least one day in advance of any service interruption (including water, electricity, telephone, and bus routes) the community must be advised through postings at the project site, at bus stops, and in affected homes/businesses.
- All community infrastructures such as roads, bridges, water supply systems, micro-power generators, boat landings, irrigation systems, etc. affected during construction must be restored to the satisfaction of the communities and approved by the Supervision Engineer.
- All local roads used or by-passed by the Contractor will need to be rehabilitated to their original conditions.
- Establish and maintain a unit to receive, process and reach resolution on community complaints arising from construction activities (Grievance Redress Mechanism). Records of such complaints and their resolution must be kept and be available for review by the Supervision Engineer/Consultant and PIU.

Health Services, HIV/AIDS and COVID-19 Education

The Contractor shall provide basic first aid services to the workers as well as emergency facilities for work related accidents including medical equipment suitable for treatment likely to be required prior to transportation to hospital.

The Contractor shall be responsible for implementing a program for the detection screening of sexually transmitted diseases, especially with regard to HIV/AIDS, amongst laborers.

The Contractor shall appoint an accident prevention officer at the Site, responsible for maintaining safety and protection against accidents. This person shall be qualified for this responsibility and shall have the authority to issue instructions and take protective measures to prevent accidents. Throughout the execution of the Works, the Contractor shall provide whatever is required by this person to exercise this responsibility and authority.

The Contractor shall send, to the Supervision Engineer/Consultant details of any accident as soon as practicable after its occurrence. The Contractor shall maintain records and make reports concerning health, safety and welfare of persons, and damage to property, as the Engineer may reasonably require.

The Contractor shall conduct an HIV-AIDS awareness program via an approved service provider, and shall undertake such other measures as are specified in this Contract to reduce the risk of the transfer of the HIV virus between and among the Contractor's Personnel and the local community, to promote early diagnosis and to assist affected individuals.

The Contractor shall conduct information and education campaigns addressed to all the site staff and labor (including all the Contractor's employees, all Sub-Contractors and Consultants' employees, and all truck drivers and crew making deliveries to site for construction activities) and to the immediate local communities, concerning the risks, dangers and impact, and appropriate avoidance behaviour with respect to Sexually Transmitted Diseases (STD)-or Sexually Transmitted Infections.

The Contractor shall also provide awareness on COVID-19 as well as putting in place necessary precautionary and emergency facilities for COVID-19 as per the national guidelines.

Environmental Emergency Procedures

The possibility exists for environmental emergencies of an unforeseen nature to occur during the course of the construction and operational phases of the project;

- By definition, the nature of such emergencies cannot be known. Therefore, the Contractor shall respond on a case-by-case basis to such emergencies and shall initiate event-specific measures in terms of notifications and reactions;

- The Contractor shall prepare a report on the incident detailing the accident, clean-up actions taken, any pollution problems and suggested measures to prevent similar accidents from happening again in future. The incident report shall then be submitted to the Supervision Engineer/Consultant and PIU for review and records.

Environmental Training and Awareness

The Contractor should ensure that all concerned staff are aware of the relevant environmental requirements as stipulated in local environmental legislation and the Contract specifications. The Contractor is responsible for providing appropriate training to all staff. This should be tailored to suit their level of responsibility for environmental matters. The Contractor should also ensure that all site staff members are aware of the emergency response procedures. All staff should receive environmental induction training and managerial staff should receive additional training. The training materials should be reviewed by the Supervision Engineer/Consultant. Additional refresher training may be provided and this should be scheduled following periodic internal review of requirements for the Project activity. Records should be maintained for staff environmental training. Records should be kept on site where possible for each project activity for easy access during site audits or enquiries. Environmental training records (e.g. attendance records for environmental awareness training, topics covered) should be kept.

Remedial Actions

Remedial actions which cannot be effectively carried out during construction should be carried out on completion of the works (and before issuance of the acceptance of completion of works):

- All affected areas should be landscaped and any necessary remedial works should be undertaken without delay, including grassing and reforestation;
- Water courses should be cleared of debris and drains and culverts checked for clear flow paths; and
- All sites should be cleaned of debris and all excess materials properly disposed;
- Borrow pits should be restored prior to formal contract closure.

Annex 9: TOR for E&S Supervision Engineer/Consultant

These terms of reference are for the Supervision Engineer/Consultant as part of the construction of any subproject under the TACTIC Project. Environmental and Social Supervision should be a continuous process during the construction of the Project.

The Contractor has the responsibility to comply with the Environmental and Social Management Plan (ESMP) of the Project and contractual requirements while undertaking the works. This is overseen by the Supervision Engineer/Consultant.

In order to achieve the goal of minimizing the negative environmental and social impacts of the project, the ESMP has to be integrated in the design of the Project, and in the technical specifications and contract documents. It will need to be closely followed and supervised by the Supervision Engineer/Consultant.

1. Objective of the Assignment

The general services to be provided by the Supervision Engineer/Consultant are:

- Inspect, monitor and audit construction activities²⁹ to ensure that Environmental and Social Specifications established in the Site Specific Environmental and Social Management Plan (SSESMP) of the Project and E&S Specifications for contractors are implemented effectively;
- Ensure that Contractors comply with the laws and regulations of a country and the contractual requirements;
- Ensure that the negative impacts are minimized;
- Provide environmental training to all actors involved in the construction activities.

2. Scope of Services

The Supervision Engineer/Consultant is expected to perform the following duties:

Initiation of the Supervision Works and Review of Project Documents

The Supervision Engineer/Consultant shall initiate the supervision works at least in advance before the start of the construction activities.

The Supervision Engineer/Consultant should use this time to become familiar with the Project designs, the technical specifications, contract documents, the plans to carry out the construction works, the ESMP, the SSESMPs, the Laws and Regulations of the country and any other document that is relevant to the Project.

In general, the objectives of this phase are: (I) review the ESIA, ESMP, project designs and technical specifications and confirm that there have been no major omissions of mitigation measures; (ii) prepare guidelines for Contractors on implementing the ESMP; and, (iii) develop and execute training programs for all involved in construction activities. The main tasks in this phase are:

Review of Project Documents: The Supervision Engineer/Consultant shall review the ESIA, ESMP, project designs, technical specifications and contractual requirements to determine that there have been no major omissions of mitigation measures. Following the review, the Supervision Engineer/Consultant shall prepare a brief report on the potential issues and challenges arising from the implementation of the ESIA/ESMP, condition of contracts and make recommendations to the PIU about how best to improve the

²⁹The term 'construction activities' in this TOR pertains to all aspects related to the construction phase of the Project, including but not limited to, all construction sites, permanent and temporary camps, off-site activities (disposal sites, borrow pits), all associated facilities (crushing plants, asphalt plants, maintenance yards), access roads, traffic and disturbances (dust, noise) in local roads, and areas of impact away from the project site.

implementation of the ESIA/ESMP. Once the changes are approved by the PIU the Supervision Engineer/Consultant shall update the ESMP.

Environmental Supervision Checklist: The Supervision Engineer/Consultant shall establish checklists which will be used during the construction of the project to monitor the Contractor's performance. This shall cover major aspects of the project, required mitigation/control measures and their implementation schedule.

Log-Book: The Supervision Engineer/Consultant shall keep a log-book of each and every circumstance or change of circumstances which may affect the E&S management and non-compliance with the recommendations made by the Supervision Engineer/Consultant to remediate the non-compliance. The log-book shall be kept readily available for inspection by all persons assisting in the supervision of the implementation of the recommendations made in the ESIA and ESMP.

Site Inspections: The Supervision Engineer/Consultant shall carry out visits of site prior to commencement of construction activities and give its no objection. These sites shall include among others, quarries, stockpiles, borrow pits, disposal sites, location of workers' camps, access roads, storage of explosives, hazardous materials, fuels, maintenance areas, etc. The Supervision Engineer/Consultant should take advantage of these visits to take pictures of the places visited.

Blasting (If applicable)

The Supervision Engineer/Consultant will approve the blasting sites and blasting schedule of the contractor. Supervision Engineer/Consultant will ensure the contractor takes all necessary precautions to prevent damage to special features and the general environment and that he notifies any occupants / owners of surrounding land and adequately addresses any concerns that they may have.

Environmental and Social Training: The Supervision Engineer/Consultant shall design and execute a training program for all the Contractor's workers, PIU, and all staff involved on the environmental and Social requirements of the Project, and how they will be supervised, monitored and audited, giving particular attention to:

- ESMP: The requirements of the ESMP and E&S specifications. Particular attention will be paid to the specific provisions in each contract's technical specifications indicating how the ESMP is to be complied with.
- Health and Safety: The health and safety requirements of the project shall be clearly identified and communicated (included in environmental specifications for contractors).
- Laws and regulations: explanation of the relevant environmental requirements as stipulated in the environmental legislation, standards and regulations of Tanzania and the contract specifications.
- Code of Conduct: All construction workers (permanent or temporary) will have to sign and should be educated on the following issues but not limited to them: firearm possession, traffic regulations, illegal logging and collection of non-timber forestry products, non-disturbance of communities, hunting and fishing restrictions, waste management, protection of surface water, erosion control, all prohibited activities, the Code of Conduct requirements and disciplinary procedures, general information on the environment in which they will be working and living; and establishment of penalties for those who violate the rules.

The training programs shall be carried out before the start of the construction activities and every time new workers or Contractors are hired to inform them of the problems identified and to indicate how to improve environmental and social performance and compliance.

At the conclusion of the training, all attendees shall sign a statement acknowledging their understanding of the environmental regulations, the ESMP, the health and safety obligations and the Code of Conduct. The

Supervision Engineer/Consultant shall sign a similar statement confirming their understanding of the supervision responsibilities.

Supervision of Construction Activities

The Supervision Engineer/Consultant shall:

- Review, and inspect in an independent, objective and professional manner in all aspects of the implementation of the ESIA, ESMP and contractor management plans;
- Carry out random monitoring checks, and review records prepared by Contractors;
- Conduct regular site inspections;
- Review the status of implementation of environmental and social protection measures against the ESMP, and contract documents;
- Review the effectiveness of environmental and social mitigation measures and project environmental and social performance;
- As needed, review the environmental acceptability of the construction methodology (both temporary and permanent works), relevant design plans and submissions. Where necessary, the Supervision Engineer/Consultant shall seek and recommend the least environmental and social impact alternative in consultation with the designer, the Contractor(s), and the PIU;
- Verify the investigation results of any non-compliance of the environmental and social quality performance and the effectiveness of corrective measures;
- Provide regular feedback audit results to the PIU according to the procedures of non-compliance in the ESMP;
- Instruct the Contractor(s) to take remedial actions within a specified timeframe, and carry out additional monitoring, if required, according to the contractual requirements and procedures in the event of non-compliances or complaints;
- Instruct the Contractor(s) to take actions to reduce impacts and follow the required ESMP procedures in case of non-compliance / discrepancies identified;
- Instruct the Contractor(s) to stop activities which generate adverse impacts, and/or when the Contractor(s) fails to implement the ESMP requirements / remedial actions instructed by the Supervision Engineer/Consultant;
- The Supervision Engineer/Consultant shall also regularly review the contractor's records to ensure that they are up to date, factual and meet the ESMP reporting requirements (e.g. environmental and social complaint monitoring records).

Review of Site Plans: The Supervision Engineer/Consultant shall review and finally clear all site plans which may affect the environment. The Supervision Engineer/Consultant shall review and approve the Contractor's E&S management plans. Where these plans are found not to comply with the ESMP, the Supervision Engineer/Consultant shall work with the PIU and Contractors to find a solution.

Health and Safety: The Supervision Engineer/Consultant shall review and clear Contractors' Health and Safety Plans. These Plans shall include procedures such as management of explosions, safety during construction, the prevention of soil erosion during the rainfall season, etc. These plans shall be updated upon change in legislation, change in scope of work, change in management system structure, change after audit findings and at least once a year.

The Supervision Engineer/Consultant shall ensure compliance with requirements of the health and safety clauses in the contract documents and involve Health and Safety Manager/Supervisor in supervising OHS compliance by contractor during construction. This shall include, but not be limited to: (i) construction activities; (ii) HIV/AIDS and COVID-19; (iii) compliance with National Labor Laws; and (iv) road traffic safety.

In case of any incidents or accidents, the Supervision Engineer/Consultant should immediately notify the PIU, which is required to notify the World Bank of the occurrence of the incident within 24 hours.

Site Inspections: The Supervision Engineer/Consultant shall closely monitor the construction activities through regular site inspections accomplished through daily site visits, walks and visual inspections to identify areas of potential environmental and social problems and concerns. As noted in footnote 1 of this ToR, the area of inspection should cover both the construction areas and the environment outside the site area that could be affected, directly or indirectly, by the contractor's activities.

Inspections should be done independently from the Contractor's staff. Where definitive monitoring is necessary to resolve contentious issues or to impose penalties, the Supervision Engineer/Consultant may contract third parties to carry out specific monitoring at the locations under review.

Where there is infringement of technical specifications, or condition of contracts, or non-compliance with the ESMP, the Supervision Engineer/Consultant shall immediately inform the Contractor. The Supervision Engineer/Consultant shall also report all infringements to the PIU as part of the monthly reporting.

Regular joint environmental and social site inspections (e.g. weekly) should be organized by the Supervision Engineer/Consultant with the Contractor's staff. These should be used as an opportunity for the Supervision Engineer/Consultant to further train the Contractor's staff.

Complaints: Complaints could be received by the Contractor's Site Office from local residents with regard to environmental infractions such as noise, dust, traffic safety, etc. The Contractor's Environmental Officer shall be responsible for processing, addressing or reaching solutions for complaints brought to them. The Supervision Engineer/Consultant shall be provided with a copy of these complaints and shall confirm that they are properly addressed by the Contractor in the same manner as incidents identified during site inspections.

Unforeseen Impacts: In the event that an incident arises which was not foreseen in the ESMP, the Supervision Engineer/Consultant shall work closely with Contractors and the PIU to reach a satisfactory resolution to the incident. The Supervision Engineer/Consultant shall then update the ESMP, the implementation guidelines and train the Contractors' staff accordingly.

Site restoration and Landscaping

Before completion of construction activities, the Contractor shall submit to the Supervision Engineer/Consultant, for its approval, a Site Decommissioning and Restoration Plan including cleaning, landscaping and re-vegetation of areas affected by the Project. The Supervision Engineer/Consultant shall closely monitor all activities related to the restoration, re-vegetation and landscaping of places such as borrow pits, quarries, disposal sites, worker's camps, storage and maintenance areas, river banks, slopes, erosion-prone areas, etc., to ensure compliance with the ESMP and that the activities are performed according to appropriate and acceptable standards.

Staffing

The Supervision Engineer/Consultant shall retain at all times trained personnel with adequate knowledge on protection of environmental and social issues in construction projects and be able to supervise the Contractor's performance. One staff member should have specific qualifications and be designated as Health and Safety Supervisor. The personnel should have the qualifications indicated below.

	Position	Qualification	Total work experience (years)	Experience in similar works and position
1.	Environmental Expert	Degree in environmental science or equivalent and registered with NEMC	10	5
2.	Social Expert	Degree in social sciences or equivalent and registered with Tanzania Association of Social Workers (TASWO) and/or NEMC.	10	5
3.	Occupational Health and Safety Expert	Degree in environmental health sciences or health and safety engineering or related disciplines with internationally-recognized OHS certification.	10	5

Equipment

The Supervision Engineer/Consultant will have their own monitoring equipment such as hand held and portable monitoring equipment, cameras, gas detection equipment, motor vehicles and all resources necessary to carry out supervision of the Project. The Supervision Engineer/Consultant shall also have office equipment such as computers, fax, scanners, etc.

Reporting

As a minimum the Supervision Engineer/Consultant shall prepare the following written reports:

- Weekly report of non-compliance issues;
- Summary monthly report covering key issues and findings from reviewing and supervision activities;
- Consolidated summary report from contractor's monthly report; and
- Collect and report on data as requested by the PIU.

At the end of the project the Supervision Engineer/Consultant shall prepare a final report summarizing the key findings from their work, the number of infringements, resolutions, *etc.* as well as advice and guidance for how such assignments should be conducted in the future.

1. GENERAL INFORMATION

A Traffic Management Plan (TMP) must be developed and submitted in advance of construction work. In general, a TMP is required for all projects that could have an impact on:

- **MOBILITY** - including interruptions to pedestrians, cyclists and vehicular traffic; and
- the **COMMUNITY** - including interruptions to surrounding businesses and residents from construction activity and worker parking needs.

The objective of a TMP is to provide safe passage for pedestrians, cyclists and vehicular traffic around a construction site with as little inconvenience and delay as possible and with minimal on street parking removal.

2. COMPONENTS OF A TMP

2.1 Project Details and Schedule

The purpose of this section is to describe the project from mobilization to completion or demobilization.

- Describe the work to be performed (in case of multiple phases, describe each phase).
- Define scope of area that will be affected by construction activities.
- Describe the location and length of the proposed on-street building zone.
- Provide sequence of construction operations.
- Describe when each phase will commence and finish.
- Provide duration of work.
- Note proposed hours of work activity on the site.
- Provide primary contractor's name, address, phone number as well as the 24-hour contact for the contact person representing the applicant.

2.2 Mobility Impact

The purpose of this section is to describe how the project will impact road users, and what measures should be provided to mitigate these impacts.

- Describe the impact of construction activities on pedestrians, disabled persons, cyclists, transit service, emergency vehicles, trucks and general purpose traffic.
- For each impact identified above, describe the mitigation measure(s) that are proposed to minimize inconvenience and delay.
- Include any necessary plans to demonstrate how safety concerns for cyclist and pedestrians will be mitigated with any proposed pedestrian/cycling facilities closure. The North Vancouver Bicycle Plan includes a network of dedicated bicycle routes to encourage cycling. These routes are very important for cyclists and every effort should be made to allow safe passage through construction zones.
- For construction activities that require a road closure and require that transit service and/or emergency vehicle service be rerouted, the applicant must provide written approval from the appropriate agencies on the proposed plan and mitigation measures.
- Describe the number of truck trips that the site will generate on an hourly and daily basis, for each phase of construction.

- Describe the truck route(s) that are proposed to be used to and from the site - designated truck route map can be drawn and annexed.

2.3 Community Impact (Parking)

The purpose of this section is to describe how construction activities will impact parking (loss and/or increased need). The use of on-street parking to accommodate construction site needs is not appropriate, given the associated impact on residents and businesses.

- For each phase of construction, provide an estimate of how many construction worker vehicles (personal vehicles) will be generated by site activity.
- For each phase of construction, describe how the parking demand will be met.
- If parking for construction workers cannot be provided on the project site, alternate strategies must be described in the TMP. Applicant should undertake a review of nearby public parkades and parking lots, private parking lots that may be leased, provision of a vanpool/carpool program for construction workers, shuttle van to off-site parking, etc. TMP must include how the applicant will ensure that construction workers will not impact public street parking. Note that any expense resulting from the parking arrangements will be borne by the applicant.

2.4 Work Zone Traffic Control Devices

- Contractors must prepare a Traffic Control Plan (TCP) drawing by providing a detail map/drawing showing all signage and spacing. The TCP must show applicable pavement markings, vertical signs, delineation devices, channelization devices and traffic control persons. The building zones, site access and wheel wash location should also be shown.
- For projects with multiple phases, separate TCPs must be submitted for each distinct phase and it has to include all types of anticipated street closures.
- The Traffic Control Plan must be in accordance with *A Guide to Traffic Signing (URT, 2009)*.

2.5 Communication Plan

The purpose of this section is to illustrate how the applicant will inform stakeholders of anticipated project impacts. A detailed Communication Plan should include the following elements:

- A list or map describing affected agencies, businesses, residents and property owners that will be contacted and informed about the project.
- A sample letter/notice that will be distributed to stakeholders prior to commencement of construction (a sample letter is given below).

SAMPLE NOTICE TO RESIDENTS AND BUSINESS OPERATORS

Temporary Street Closure/Building Zone

Location

Time and Dates

Date

Dear Residents and Business Operators:

We regret that we must close <> Street between <> & <>.

The closure is necessary to install/repair the <underground utilities, road, sidewalk, landscaping, lighting etc.> adjacent to the <Address>.

The closure will be required during week day business hours from <> to <>.

During construction there will be traffic diversions, parking restrictions and road closures. The actual work site will be kept as compact and tidy as reasonably possible. The workers will cooperate with the businesses to try and minimize the impact the work will have on day-to-day business operations.

We apologize for any inconvenience the work may cause and thank you for your understanding and cooperation. Please contact the undersigned at <> or by e-mail at <> if you would like to discuss this matter in further detail.

Please also refer to PO-RALG or TARURA or TANROADS offices for construction updates.

Yours truly,

<Contractor>

cc:

Supervision Consultant

PO-RALG or TARURA or TANROADS

Annex 11: Chance Finds Procedures

1. *Applicability of the Chance Finds Procedure*

The following procedure shall apply to all project activities that may involve physical works that have the potential to uncover or otherwise disturb tangible cultural heritage.

Under project implementation arrangements, the contractor will be put in place with an ‘on-call’ archaeological monitor who will advise on chance finds and any other cultural heritage issues arising from the implementation of project activities.

2. *Purpose of the Procedure*

The objective of this Chance Finds Procedure is to identify and protect previously unrecorded archaeological sites, artefacts or features from the potential impacts of DTP subproject-related activities. The Procedure applies to potential cultural heritage objects, features or sites identified as a result of any and all ground disturbing activities associated with construction. As a key part of the Chance Finds Procedure, an archaeologist(s) with relevant field experience should be identified who can assist with dealing with the authorities in Tanzania designated with responsibility for cultural heritage.

3. *Legal Requirements*

Two principal pieces of Tanzanian national legislation pertain to chance finds:

- The Antiquities Act, 1964; and
- The Antiquities (Amendment) Act, 1979.

The Antiquities (Amendment) Act, 1979 states that it should be read as one with the 1964 Act. The Antiquities Act, 1964 defines monuments and other protected objects, and it also sets out that in the case of a discovery (i.e. a chance find):

“...the occupier of any land, who knows of any such discovery on or under such land, shall forthwith report the same to an administrative officer, the Commissioner [of National Culture], the Conservator [of Antiquities] or the Curator of the Museum. The discoverer of such a relic, monument, object or site shall take such steps as may be reasonable for the protection thereof and shall, where he makes a report concerning a portable relic or object, if so required (and on payment of the cost of delivery if any) deliver such antiquity or object to an administrative officer, the Commissioner, the Conservator or the Curator of the Museum, as the case may be.”

The Antiquities (Amendment) Act, 1979 sets out *inter alia* the Minister’s powers:

“...to declare any place or structure of historical interest to be a monument for the purposes of this Act”

And it further sets out that:

“The Minister, after consulting the Minister for the time being responsible for lands may, by notice in the Government *Gazette*, declare to be a conservation area any area or site which: (a) in his opinion is a valuable national heritage for its aesthetic value; or (b) contains a homogeneous group of monuments; or

(c) contains buildings, structures or other forms of human settlement which in his opinion are a valuable national heritage for their historical, architectural, social or cultural value”

and:

“...no person except the Director or a person acting on his behalf, shall whether on his own land or elsewhere, (a) excavate, dig or probe for monuments or relics; or (b) remove or collect any relic or any object he supposes to be a relic from the site of its discovery, except for the purposes of protecting it and reporting the discovery under the provisions of section 10 or for the purposes of delivering it to the authorities if required to do so under that section; or (c) search for or collect any ethnographical object, except under and in accordance with an excavation licence or in the case of an ethnographical object, a collectors licence issued by the Director [of Antiquities].”

It also states that:

“No person shall sell or exchange any relic discovered in sales Tanganyika, or any protected object, except under and in accordance with a licence issued by the Commissioner.”

4. Chance Find Procedure

4.1 Scope

The scope and requirements of the Chance Finds Procedure can be divided into two phases: the planning and preparatory phase, and the implementation phase. Prior to initiating ground-disturbing works associated with any project activity, the contractor responsible for the works will receive a detailed briefing on the requirements of the protocol from project staff.

The key objective of the briefing prior to onsite and other project activities will be to familiarise the contractor with the process of using an off-site, ‘on-call’ archaeological monitor³⁰ and the circumstances under which the monitor will need to be called to the site/work area. The familiarisation process will also include training in the identification/recognition of objects/items of potential interest.

In areas such as those identified where previous survey work has indicated that the sites are of low or moderate potential for containing cultural heritage sites in terms of structures/buildings, the permanent presence of an archaeological monitor **will not be required**. The Project archaeologist will, however, need to be available to respond to any chance finds identified by project personnel or contractors during ground works.

4.2 Process for Managing Chance Finds During Implementation

In the event that the construction team encounters any chance finds during excavation or construction works the following procedures shall apply.

1. All construction activities in the vicinity of the find/feature/site will cease and project management personnel, the project archaeologist and the authorities will be informed.
2. The site will be marked, and active work at the site shall cease until an appropriate course of action has been determined.
3. The detailed find location will be recorded.
4. The area will be secured to prevent any damage or loss of removable objects (pottery, artefacts, jewellery, coins, etc.).

³⁰ The Project archaeologist should be a person who meets the requirements for granting of a license as defined in Section 12 of the Antiquities (Amendment) Act, 1979, i.e. an expert who “has had sufficient scientific training or experience to carry out the proposed excavation, search or collection satisfactorily”.

5. The project archaeologist will assess, record, and photograph the find/feature/site.
6. The archaeologist will undertake the inspection process in accordance with all relevant health and safety protocols established as part of project implementation arrangements.
7. The archaeologist will determine the appropriate course of action to take and will discuss and agree on this with the authorities.
8. All finds which have cultural heritage value as determined by the project archaeologist will be delivered to the relevant authorities, as defined under the Antiquities Acts defined above, and other relevant legislation as may come into force at a future date.
Once the necessary documentation and (if appropriate) recovery and removal of materials with a cultural heritage value has been completed and authorization has been given by the responsible statutory authorities, the contractor may resume work at the site.