THE UNITED REPUBLIC OF TANZANIA

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

TANZANIA RURAL AND URBAN ROADS AGENCY (TARURA)

TANZANIA CITIES TRANSFORMING INFRASTRUCTURE AND COMPETITIVENESS (TACTIC) - (P171189)

ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK (ESMF)

FINAL REPORT

MARCH, 2022

TABLE OF CONTENTS

TABLES

FIGURES

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
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
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
IP/SSAHUTLC	Indigenous People/Sub-Saharan African Historically Underserved Traditional Local Communities
LGAs	Local Government Authorities
LMP	Labour Management Procedures
NEMC	National Environment Management Council
OHS	Occupational Health and Safety
OSHA	Occupational Safety and Health Authority
PCN	Project Concept Note

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 Program
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
TA	Technical Assistance
TACTIC	Tanzania Cities Transforming Infrastructure and Competitiveness
TANESCO	Tanzania Electric Supply Company Ltd
TANROADS	Tanzania National Roads Agency
TARURA	Tanzania Rural and Urban Road Agency
TCP	Traffic Control Plan
TMP	Traffic Management Plan
ToR	Terms of Reference
TSCP	Tanzania Strategic Cities Project
ULGAs	Urban Local Government Authorities
ULGSP	Urban Local Government Support Program
VAT	Value Added Tax
WB	World Bank
WBCU	World Bank Coordination Unit
WCF	Workers Compensation Fund

EXECUTIVE SUMMARY

The Government of Tanzania (GoT), through President's Office - Regional Administration and Local Government (PO - RALG) and Tanzania Rural and Urban Roads Agency (TARURA) is preparing a proposed Tanzania Cities Transforming Infrastructure and Competitiveness (TACTIC) project as a successor to three projects namely Tanzania Strategic Cities Project (TSCP), Urban Local Government Support Program (ULGSP) and Dar es Salaam Metropolitan Development Project (DMDP). Implemented between 2011 and 2020, TSCP, ULGSP and DMDP collectively aimed at improving management, planning and service delivery in 29 Urban Local Government Authorities (ULGAs). TACTIC intends to consolidate TSCP and ULGSP into a single operation to better leverage synergies in activities aimed at strengthening urban management functions in 45 LGAs across the country. TACTIC Project Development Objective (PDO) is to "improve urban management, service delivery, and business and investment environment in participating urban councils." The PDO will be achieved via three broad project components namely Strengthening Urban Management (Technical Assistance and Performance Grants); Urban Infrastructure and Services; and Project Management. The GoT intends to request from the World Bank (WB) a credit amounting to US$ 300 million for implementation of the project in a period of six (6) years.

Potential environment and social impacts and risks for the TACTIC project are expected from component 1 [especially land use planning and design of subprojects / technical assistance (TA)] and component 2 (Urban Infrastructure and Services). The expected physical activities include construction of select roads, drainage, bus stands or terminals, markets, slaughterhouse, landfills, and industrial clusters in selected urban areas, similar to what was financed by TSCP and ULGSP. It is anticipated that these activities will be executed in populated areas, largely involving existing basic infrastructure. The likely implementation sites are in the vicinity of residential housing areas and commercial centers that are likely to be affected by project works. Therefore, the project activities and implementation sites, the nature and extent of the project's potential risks and impacts is anticipated to be substantial.

This ESMF has been 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 World Bank 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 ESS7 and ESS9 are irrelevant to the proposed TACTIC Project. In line with the requirements of these ESSs, this ESMF has been prepared alongside other framework documents for TACTIC Project namely Resettlement Policy Framework (RPF); Stakeholder Engagement Plan (SEP); Labor Management Procedures (LMP); and Environmental and Social Commitment Plan (ESCP).

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 that may result from implementation of the proposed TACTIC Project. It specifically establishes clear procedures and methodologies for screening subprojects, undertaking required level of environmental and social assessment; preparation of appropriate 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) 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/TARURA 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 TACTIC Project towards sustainable development.

1. INTRODUCTION

1.1. Project Background

Over the past ten years, PO-RALG has successfully implemented the Dar es Salaam Metropolitan Development Project (DMDP), the Tanzania Strategic Cities Project (TSCP), and Urban Local Government Support Program (ULGSP). Together, these projects aim to improve management, planning and service delivery in 29 Urban Local Government Authorities (ULGAs). Given that TSCP and ULGSP closed in 2020 while DMDP will close in 2022, technical discussions with PO-RALG started in early 2018 to shape the future urban program in Tanzania moving forward. For TSCP and ULGSP, it was proposed to consolidate these into a single operation to better leverage synergies in activities aimed at strengthening urban management functions. Implementation challenges were thoroughly reviewed during the project mid-term reviews for TSCP (May 2017) and ULGSP (May 2016) and the proposed Tanzania Cities Transforming Infrastructure and Competitiveness (TACTIC) project will introduce measures to address these challenges and build on the following lessons learned:

- Defining the right incentives is critical. Urban management functions will not be strengthened without the right incentives to improve performance.

- The selection of priority investments should be informed by urban plans and master plans. The proposed project will ensure consistency between economic plans, urban plans and sector plans, and also use additional selection criteria for priority investments. These will include: (i) population size and density; (ii) vulnerability to disasters; (iii) income levels; and (iv) lack of access to basic infrastructure and services.

- Urban performance grants will incentivize the implementation of environmental and social safeguards instruments. Under DMDP, TSCP, and ULGSP the necessary safeguards instruments were developed. However, implementation of these instruments can be strengthened, including the timely payment of compensation to affected households and enhanced reporting measures on safety practices in construction sites.

The GoT intends to request a credit amounting to US$ 300 million for implementation of the project in the period of six (6) years.

1.2. Project Description

1.2.1. Project Development Objective

The proposed Project Development Objective (PDO) is to “To strengthen urban management performance and deliver improved basic infrastructure and services in participating urban local government authorities.” Key results include:

- Improved capacity in urban management (e.g. strengthening development controls, enforcement of urban plans, performance contracts with service providers, management of urban greening, etc.)
- Improved infrastructure and services; and
- Improved business and investment environment.

1.2.2. Project Components

In order to achieve the PDO above, the following project components are proposed:

Component 1: Strengthening Urban Management (Technical Assistance and Performance Grants)

This component provides technical assistance in each of the sub-component areas to prepare councils to achieve the performance grant targets. This component aims to support key urban management areas that should be strengthened to ensure the efficiency and sustainability of urban infrastructure and service delivery. Emphasis will be placed on implementation of General Planning Schemes and supporting planning instruments (Detailed Planning Schemes, Council Strategic Plans, Local Economic Development Plans, Drainage and Sanitation Development Plans, Solid Waste Management Plans, Own Source Revenue Collection Strategies), enforcement of development controls, and preparation of preventative and strategic resettlement planning.

Component 1a: ICT for Urban Management

This sub-component aims to strengthen data collection, sharing, and management for the implementation of general and detailed planning schemes, enforcement and development control, and support own source revenue collection.

Component 1b: PPPs for Urban Service Delivery

This sub-component aims to take an integrated and coordinated approach to the planning, implementation, operations and maintenance of completed infrastructure financed under TSCP and ULGSP, including abattoirs, bus stands/terminals, markets, open space, drainage, street lights, and solid waste management (e.g. collection, transport, disposal, centralized fee collection, landfill operations and management).

Component 1c: Mainstreaming Urban Resilience

This sub-component includes activities that have been piloted under the Tanzania Urban Resilience which will encompass: (a) risk identification; (b) risk reduction; and (c) disaster preparedness and emergency management.

Performance Grants

It was agreed that the performance grants will be disbursed once throughout the duration of the project. The performance assessment will be carried out on Year 3 to give councils enough time to implement technical assistance activities and civil works. The grant will be disbursed on Year 4 so that councils have three years to implement civil works (the project life cycle is proposed to be six years total). Only the top five (5) performers will be eligible for performance grants in order make this truly competitive. Performance grants will be available to use for infrastructure investments. The grants will measure performance in the following aspects:

- Implementation and enforcement of urban plans and by-laws;
- Operations and maintenance of infrastructure financed under TSCP and ULGSP;
- Management of performance-based contracts and PPPs for solid waste management, markets, bus stands, and abattoirs;

- Implementation of environmental and social safeguards (quality of completed ESIA, site specific ESMPs, RAPs, grievance redress mechanisms, occupational health and safety issues); and

- Own source revenue improvement (existence of revenue enhancement strategies and plans, use of LGRCIS and POS machines, etc.).

Component 2: Urban Infrastructure and Services

This component supports construction of strategic infrastructure investments identified under existing urban management plans. These investments intend to strengthen rural-urban connectivity through enhanced market linkages between villages and secondary cities. They prioritize areas of higher density and concentration of people. Investments will also link to existing urban plans and will focus on servicing existing economic activity clusters (e.g. markets, agro-processing centers, warehouses, etc.) and responding to urban adaptation and resilience needs (e.g. storm water drainage investments in flood prone areas, rehabilitation/retrofitting of critical infrastructure in seismically active areas, coastal protection investments in response to sea level rise for cities, river restoration, sediment management, erosion control, etc.).

Component 3: Project Management

This component supports project implementation at PO-RALG and participating LGAs in areas of project coordination, monitoring and evaluation, safeguards, financial management and procurement. The existing Project Coordination Unit at PO-RALG under TARURA will remain while implementation arrangements at LGAs level will be in collaboration with Tanzania Rural and Urban Road Agency (TARURA) Council Managers.

1.2.3. Project Geographical Location

The proposed TACTIC Project will be implemented in various parts of the country covering 45 ULGAs. It is agreed that the implementation will follow tiers approach as summarized in Table 1 below and marked in the Tanzania map in Figure 1 below.

Table 1: Participating ULGAs under TACTIC Project

Tier	Participating ULGAs	Number
Tier 1 (most of TSCP ULGAs)[1]	Arusha, Dodoma, Ilemela, Kigoma, Mbeya, Mwanza, Geita, Morogoro, Songea, Sumbawanga, Tabora and Kahama	12
Tier 2 (mostly under ULGSP)	Mtwara, Tanga, Babati, Bariadi, Bukoba, Iringa, Kibaha, Korogwe, Lindi, Moshi, Mpanda, Musoma, Njombe, Singida, and Shinyanga	15
Tier 3 (New ones)	Bagamoyo, Chato, Bunda, Handeni, Ifakara, Kasulu, Kondoa, Mafinga, Makambako, Masasi, Mbinga, Mbulu, Nanyamba, Newala, Nzega, Tarime, Tunduma, and Vvawa	18
Total		**45**

[1] A larger proportion of financing would be allocated as it include the largest secondary cities in Tanzania, with more than 250,000 people by 2022 (next census) and with a population growth rate of above 15%.

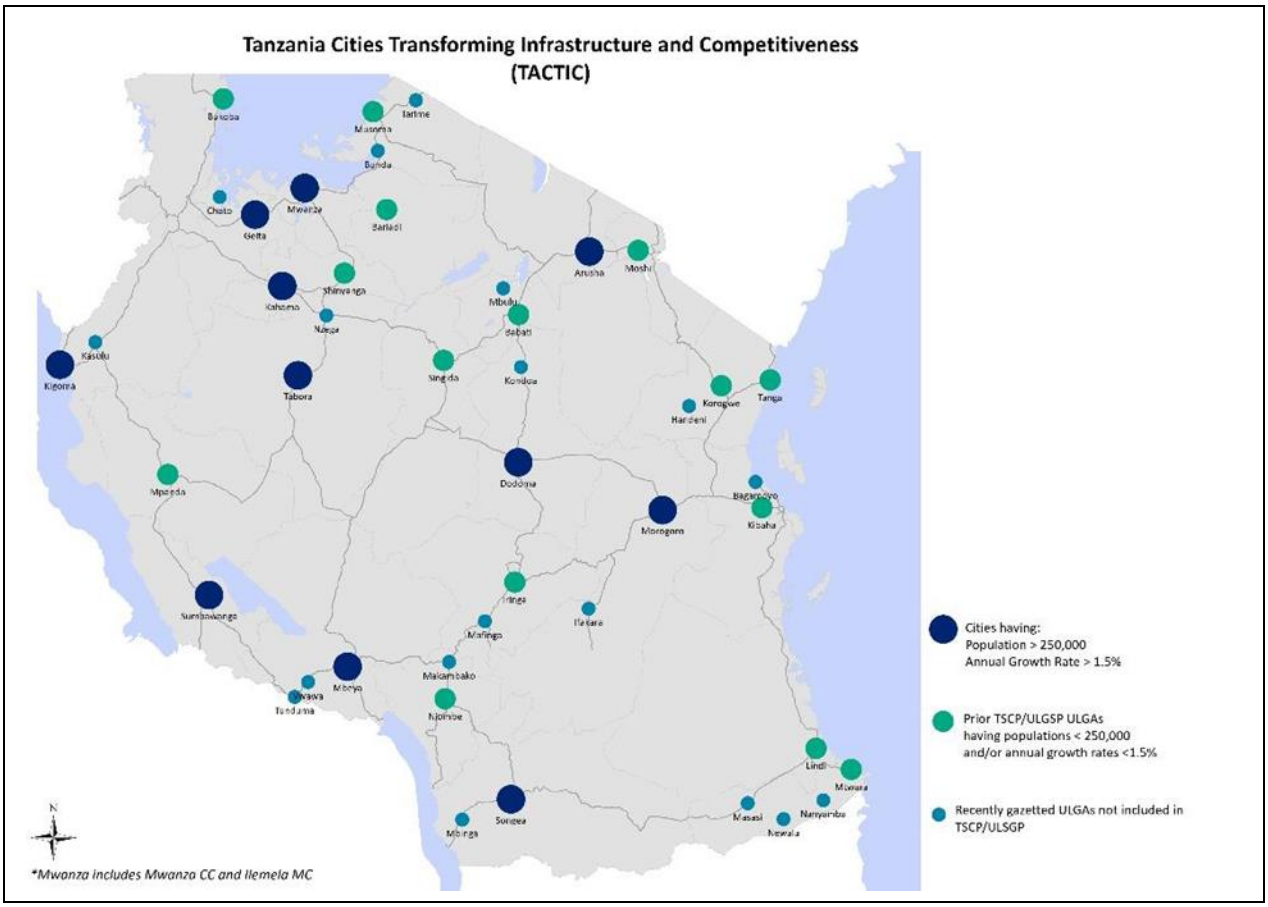

Figure 1: Map of Tanzania Showing Participating LGAs under TACTIC Project

1.2.4. Project Beneficiaries

The TACTIC Project is expected to be implemented in 45 LGAs; therefore, the main project beneficiaries are the urban and rural population who will benefit from improved infrastructures to be constructed by the project. The TACTIC Project implementation will benefit 45 LGAs.

The expected implementation of TACTIC Project that will involve a list of investments such as roads, markets, main bus terminals and mini bus stands, controlled dumpsites, slaughter houses, storm water drainages, lorry parking, footbridges and various economic clusters projects (**Annex 1**). Therefore, the general population of Tanzania will benefit from the improvement of various infrastructures to be constructed as well as other components of the project that include capacity building. Direct beneficiaries include those who will utilize fish markets- of which most are women, those using bus terminals, improvement of urban standard of living as a result construction of stand-alone drains, improved roads and other infrastructures.

The beneficiaries will include road users, rural households and the agriculture sector, fisheries sector stakeholders that will benefit from improved access to services, markets and opportunities, safer roads, improvement in transport services and reduction in travel costs and operation costs. Various road users (mainly pedestrians, bikers and those using motorized vehicles (mostly motorcycles and public transport), but also the minority users (trucks, Lorries and automobiles)

will benefit from improved, safer and resilient roads. Women will be among the most benefited from some of the proposed sub-projects, for example, the proposed Mkuyuni fish market in Mwanza City 80% of the users are women.

1.2.5. Project Implementation Schedule

For the project to meet IDA 19 financing cycle, the proposed TACTIC Project documents must be ready and discussed by the World Bank Board Date, currently scheduled for March 2022. It is therefore expected that preparation of safeguard framework documents, selection of Consultants for detailed engineering designs and safeguards documents and preparation of detailed designs and safeguard documents for at least 30% of investments will be ready by Project Appraisal. However, the safeguards framework documents are expected to be finalized before consultancies for feasibility studies, detailed engineering designs, environmental and social due diligence, and bidding documents mobilize in order to take a consistent approach for the priority investments in Annex 1 and, later, for investments selected by Tier 2 and Tier 3 LGAs.

1.2.6. Environmental and Social Management Framework

This ESMF has been prepared in line with the new World Bank's Environmental and Social Policy of 2018 whose details are given in section 2.1 of this ESMF. This ESMF has been prepared alongside other framework documents for TACTIC Project as listed below:

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

Since Tier 1 LGAs have already proposed priority subprojects (**Annex 1**) whose exact nature of the works (location and designs) are currently known These subprojects will not be covered by ESMF because their ESIAs or ESMPs will be ready prior to appraisal.; and Tier 2 and 3 LGAs have are yet to identify/prioritize their subprojects – though most of them will be similar to ones in Tier 1; comprehensive identification and evaluation of the nature, magnitude and extent of environmental and social impacts cannot be made at this preparatory stage of TACTIC Project. However, these sub-projects are likely to have adverse environmental and social impacts which must be identified and necessary measures to address them taken as part of the TACTIC Project approval process and implementation. Therefore, this ESMF has been prepared as an appropriate instrument that establishes an environmental and social management process, and defines roles and responsibilities for addressing environmental and social issues for projects and sub-projects from preparation, through review and approval, to implementation consistent with National and World Bank's Environmental and Social requirements relevant to the TACTIC Project.

This ESMF provides guidance to the TACTIC Project implementers to identify and mitigate potential risks and negative environmental and social impacts during all stages of project implementation, i.e. planning, designing, implementation, operation as well decommissioning stages of the sub-projects.

1.2.7. Project Budget

The proposed amount for the credit is US$ 300 million; as summarized in Table 2 below is Project budget by components.

Table 2: Proposed TACTIC Project Budget

S/N	Project Component	Amount (US$ million)
1.	Component 1: Strengthening Urban Management	35
2.	Performance Grants	50
3.	Component 2: Urban Infrastructure and Services	200
4.	Component 3: Project Management	15
	Total	**300**

PO-RALG/TARURA have proposed fund allocation among the participating LGAs considering significant support given to TSCP and ULGSP cities earlier, inexperience and inadequate capacity of newly joined LGAs in implementation of IDA financed projects.

1.3. Objectives of the ESMF

This ESMF establishes a process of environmental and social screening which will permit the institutions in charge of the implementation of the sub-projects to identify, assess and mitigate the environmental and social impacts of sub-project investments. The ESMF also determines the institutional measures to be taken during the program implementation, including those relating to capacity building. It also describes the process to screen potential sub-projects for environmental and social issues and how to manage the adverse environmental and social impacts that may result from implementation of subprojects under *Component 2: Urban Infrastructure and Services*.

The ESMF is designed to help LGAs manage the risks and impacts of a project, and improve their environmental and social performance, through a risk and outcomes based approach consistent with the World Bank's Environmental and Social Standards (ESSs) described in section 2.2.
The ESMF should also inform the designs of the subprojects, and be used to identify mitigation measures and actions to improve decision making and manage environmental and social risks and impacts of the subprojects throughout the subproject life cycle in a systematic manner, proportionate to the nature and scale of the subprojects and their respective potential risks and impacts in line with relevant National and World Bank Environmental and Social requirements.

Specific ESMF objectives are:

i. To establish clear procedures and methodologies for screening subprojects, undertaking required level of environmental and social assessment;

ii. To guide on the preparation of appropriate safeguard instruments {namely Environmental and Social Impact Assessments (ESIA), Environmental and Social Management Plans (ESMPs), Health and Safety Management Plan (HSMP), Traffic Management Plans (TMPs), etc.} review, approval and monitoring implementation of subprojects to be financed under the Project;

iii. Describe the process for preparation of various relevant environmental and social safeguard documents;

iv. Provide procedures for filing grievances and resolving disputes associated with various project activities/phases;

v. To specify appropriate roles and responsibilities, and outline the necessary reporting procedures, for managing and monitoring environmental and social concerns related to subprojects;

vi. To determine the training, capacity building and technical assistance needed to successfully implement the provisions of the ESMF; and

vii. To establish the budget required to implement the ESMF requirements/safeguards instruments.

1.4. ESMF Preparation Methodology

1.4.1. Desk Reviews

Review of relevant literature was undertaken during initial preparations and continued throughout the preparation of this ESMF. Information sources include documents from PO-RALG, TARURA, participating LGAs and other information centers/sources including:

- TACTIC Project preparation documents: Project Brief; Project Concept Note (PCN); and Environmental and Social Review Summary (ESRS);
- Background literature of the environmental and social conditions of all 45 participating LGAs;
- ESMF for RISE Program for TARURA and ESMF for TSCP AFII; and
- Tanzania legislations and the World Bank Environmental and Social Framework (ESF).

Documents reviewed are listed under the Reference section.

1.4.2. Fieldwork and Stakeholder Consultations

Fieldworks involving stakeholders' consultations and site visits were conducted to 15 out 45 participating LGAs from 28th June to 6th July 2020. Selection of 15 sampled LGAs, as summarized in Table 3 below, was based on representation of LGAs category representation, tier representation and environmental and social sensitivity of the subprojects like fish markets. The rest of the LGAs were consulted via emails and phone calls especially in gathering of baseline environmental and social conditions. These consultations and site visits were conducted in line with national government laws, protocols and policies, as well as World Health Organization Guidelines and World Bank guidance[2] in relation to the COVID-19 situation.

[2] See World Bank Technical Note: Public Consultations and Stakeholder Engagement in WB-supported operations

Table 3: Sampled LGAs for Fieldwork and Stakeholder Consultations

		Number of ULGAs Sample by Tier		
	ULGA Type	**Tier 1**	**Tier 2**	**Tier 3**
1.	Cities	4	1	0
2.	Municipalities	6	9	2
3.	Towns	2	5	16
	Total	**12**	**15**	**18**
	Sampled	5	5	5
		Dodoma, Kigoma, Mwanza, Sumbawanga and Kahama	Tanga, Bukoba, Musoma, Singida and Lindi	Kasulu, Kondoa, Tarime, Tunduma and Chato

Three groups consisting of the Consultant and E&S specialists from PO-RALG and TARURA conducted the site visits and stakeholder consultations as summarized in Table 4 below. A total of 1,870 stakeholders (1,116 males and 754 females) were consulted. Categories of stakeholders invited to stakeholder consultative meetings included the following:

i. TARURA Regional Office;
ii. TARURA Council Manager;
iii. Regional Administrative Secretary (RAS);
iv. District Executive Director (DED)/ City Executive Director (CED) Office;
v. Land Transport Regulatory Authority (LATRA);
vi. Tanzania National Roads Agency (TANROADS);
vii. Environmental NGOs AND CBOs;
viii. NGOs and CBOs on gender and special groups;
ix. NGOs/CBOs on land issues;
x. Local leaders from project area -Ward Executive Officers (WEO), Village Executive Officers (VEO), Mtaa Executive Officers (MEO), etc.;

xi. Representatives from proposed subprojects beneficiary/interested/affected groups e.g. Association of Bus Operators; Association of Fishermen; youth, women and special-needs association groups (e.g. people with disabilities, the elderly, etc.); and development partners working in the LGA;

xii. Water supply authorities;
xiii. Basin Water Offices;
xiv. Tanzania Electric Supply Company Limited (TANESCO); and
xv. Tanzania Telecommunications Corporation (TTCL).

Signed consultation forms are included in Annex 1 in stand-alone Annexes for Framework Documents (ESMF, RPF, SEP and LMP) for TACTIC Project. Stakeholders' major views and concerns are incorporated into this ESMF and other framework documents while a consolidated summary of the same is included in **Annex 2** of this ESMF.

when there are constraints on conducting public meetings, March 20, 2020.

Table 4: Summary of Stakeholder Consultative Meetings in Sample ULGAs

				Number of Participants		
S/N	**Meeting**	**Venue**	**Date**	**Male**	**Female**	**Total**
1.	Mwanza CC	Mwanza City Council Hall	29/06/2020	49	18	67
		Mkuyuni Fish Market (Mswahili Shore)		75	129	204
		Lake Victoria Water Basin Office		1	0	1
2.	Tunduma TC	Tunduma TC Conference Hall	29/07/2020	27	35	62
3.	Kasulu TC	Kasulu Conference Hall	01/07/2020	45	11	56
4.	Kigoma-Ujiji MC	Kigoma Ujiji MC Conference Hall	01/07/2020	59	15	74
		Luiche River		19	14	33
5.	Sumbawanga MC	Municipal Conference Hall	01/07/2020	30	25	55
6.	Chato TC	Chato Council Hall	01/07/2020	40	7	47
		Kasenda Fish Market		28	4	32
7.	Kondoa TC	Kondoa TC Conference Hall	02/07/2020	20	21	41
8.	Tarime TC	Tarime Town Council Hall	02/07/2020	17	1	18
9.	Musoma MC	Musoma Council Hall	02/07/2020	34	19	53
		Mwalo Makoko Fish Market		16	95	111
10.	Dodoma CC	Dodoma CC Conference Hall	03/07/2020	25	30	55
11.	Bukoba MC	Kaitaba Football Ground	03/07/2020	39	16	55
		Kashai Market		22	54	76
12.	Singida MC	Singida Municipal Hall	03/07/2020	42	13	55
		International Onion Market		68	15	83
13.	Kahama TC	Kahama Town Council Hall	30/06/2020	53	19	72
		Sangu Market		78	23	101
		Zongomela Bus Stand		83	34	117
		Kahama TC Bus Stand		137	43	180
14.	Tanga CC	Tanga TC Conference Room	06/07/2020	30	25	55
15.	Lindi MC	Lindi Municipal Council Hall	06/07/2020	42	26	68
		Mangrove fish market		37	62	99
	Total			**1,116**	**754**	**1,870**

Figure 2: Consultative Meeting in Kigoma

Figure 3:Consultative Meeting in Tunduma

Figure 4: Public Meeting at Mkuyuni Fish Market Site

Figure 5: Public Meeting at Kahama Bus Stand

2. LEGAL AND INSTITUTIONAL FRAMEWORK

2.1. World Bank Environmental and Social Framework

2.1.1. Objective of the Environmental and Social Framework

The World Bank Environmental and Social Framework (ESF) sets out the World Bank's commitment to sustainable development. The ESF protects people and the environment from potential adverse impacts that could arise from Bank-financed projects and promotes sustainable development. Launched on October 1, 2018 and effectively replacing the Bank's Safeguards Policies; the ESF enables the World Bank and Borrowers to better manage environmental and social risks of projects and to improve development outcomes. The ESF also places more emphasis on building Borrower governments' own capacity to deal with environmental and social issues.

The Framework comprises of

- The World Bank Vision for Sustainable Development, which sets out the Bank's aspirations regarding environmental and social sustainability;
- The World Bank Environmental and Social Policy for Investment Project Financing, which sets out the mandatory requirements that apply to the Bank;
- The 10 Environmental and Social Standards (ESSs), together with their Annexes, which set out the mandatory requirements that apply to the Borrower and projects;
- Bank Directive: Environmental and Social Directive for Investment Project Financing;
- Bank Directive on Addressing Risks and Impacts on Disadvantaged or Vulnerable Individuals or Groups; and
- The World Bank Group Environmental, Health and Safety Guidelines (EHSGs). These are technical reference documents, with general and industry specific examples of Good International Industry Practice (GIIP).

The ESF offers broad and systematic coverage of environmental and social risks. It makes important advances in areas such as climate change; labor standards; transparency; non-discrimination; social inclusion; public participation; and accountability—including expanded roles for grievance mechanisms. The ESF codifies best practice in development policies. It brings the World Bank's environmental and social protections into closer harmony with those of other development institutions; and encourages Client countries to use, and improve, their own national environment and social policies, when these policies are materially consistent with the ESF and supported by adequate implementation capacity. The ESF provides an incentive for countries to develop and build their own environmental and social policies and capacity.

2.1.2. Environmental and Social Standards

The 10 Environmental and Social Standards (ESSs) 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.

The TACTIC Project will apply the ESF and Table 5 below describes the application of the ESSs to the Project.

Table 5: Application of World Bank's ESSs to the TACTIC Project

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 ESIAs 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[3] 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 ESIAs, ESMPs and WMP. 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, ESS4 and other provisions of the ESF. The project workforce could facilitate an increase in the transmission of HIV and other communicable diseases to members of the local/host communities during implementation of the sub-projects. Specific measures to address GBV risks are presented in section 3.11 and the Project GRM in section 4 will be implemented. 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 guidance[4] regarding the COVID-19 situation in relation to stakeholder consultations, project worksites, communities 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 try to minimize land acquisition and any associated physical or economic resettlement wherever possible

[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.

[4] 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
		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	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. In case the project will purchase natural resources commodities such as timber, it will be important to establish the source area and to have a mechanism in place to ensure that the Primary Suppliers are not significantly impacting sensitive ecosystem or degrading natural habitats.
ESS 7: Indigenous People/Sub-Saharan African Historically Underserved Traditional Local Communities (IP/SSAHUTLC)	No	The project will mainly be implemented in urban areas where communities that meet the requirements of ESS7 are generally not located in Tanzania. As such, this standard is not considered relevant. However, screening will be undertaken for all sub-projects as part of ESIA preparation to confirm the absence of such communities. If IP/SSAHUTLC are found, the project would seek agreement from the Bank for the subproject to go ahead and the required instruments.
ESS 8: Cultural Heritage	Yes	The Project will be implemented in 45 LGAs, all with different cultural backgrounds. Elements of cultural heritage are found in some of the ULGAs such that there potential for cultural heritage resources to be found unexpectedly (chance finds) and screening of subproject sites to avoid impacts on cultural heritage during construction. Chance finds procedures will be included in the Specifications for the contracts.
ESS 9: Financial Intermediaries	No	This ESS is not relevant to the Project.
ESS 10: Stakeholder Engagement and Information Disclosure	Yes	A Stakeholder 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 as well as establishment / strengthening as relevant of a GRM for all stakeholders.

2.2. National Policy, Legal and Institutional Framework

Tanzania has a number of policies and laws 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 subprojects under the TACTIC project. Tanzania is also a signatory to and has ratified various international conventions on environmental and social sustainability. Some of the policies, laws, regulations and guidelines that are relevant to the environmental and social management of the proposed TACTIC project are briefly described in the succeeding subsections.

2.2.1. Policy Framework

Several national policies and strategies are applicable to the proposed TACTIC project.

Table 6: 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.	Agriculture and Livestock Policy, 1997	The proposed TACTIC project will serve to improve the economic potential of agriculture for the communities providing access to better markets of the agricultural produce, livestock and livestock products by providing reliable and cost-effective means of transport.
3.	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. The overall aim of the National Land Policy among other things is to promote and ensure a secure land tenure system in Tanzania that protects the rights in land for all its citizens. The policy provides that a dual system of tenure, which recognizes both customary and statutory rights of occupancy as being equal in law be established. The Land Policy directs that land be graded as a Constitutional category and that the following basic land policy tenants be entrenched in the Constitution to ensure continuity: (i) All land in Tanzania is public land vested in the President as trustee on behalf of all citizen; (ii) Land has value; (iii) The rights and interest of citizens in land shall not be taken without due process of law; and (iv) Full, fair and prompt compensation shall be paid when land is acquired. The compensation should be paid to any person whose right of occupancy or recognized long standing occupation or customary use of land is revoked or otherwise interfered with to their detriment by the state and the Acts or is acquired under the Land Acquisition Act Cap 118. In principle the Minister responsible for land matters is the sole authority in land issues. According to the policy, land in towns is governed by the City, Municipal or Town Councils. Some of proposed subprojects will involve land acquisition and therefore the compensation shall be effected prior to the project implementation.
4.	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.
5.	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.

	Policy	Relevant sections
6.	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 developers to offer medical and preventive health services to their employees according to guidelines given by the respective Ministry.
7.	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.
8.	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.
9.	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.
10.	Cultural Property Policy of 1997	This policy covers a wide range of topics relating to both living cultural heritage and historical and archaeological remains ("cultural property"). The policy requires that "all land development shall be preceded by Cultural Resource Impact Studies". During the execution of the proposed project the contractor shall observe the archaeological remains ("cultural property") and report immediately any if found to the relevant authority and shall be required to sensitize his workmen on the matter particularly those involved in the road construction.
11.	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.

2.2.2. Legal Framework

The TACTIC project is set within the context of a range of local and national environmental and social management legislations as summarized in Table 7 below.

Table 7: Pertinent Legislations for TACTIC Project

	Legislations	Summary of the most relevant requirements
1.	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 EIA by the project Proponent at his/her own cost prior to commencement or financing of a project or undertaking. The Act prohibits any development to be initiated without an EIA Certificate. This is ESMF establishes the process for complying with this requirement.
2.	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 TACTIC Project implementation.
3.	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.
4.	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.
5.	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 TACTIC Project. 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 TACTIC Project 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.
6.	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.
7.	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.

	Legislations	Summary of the most relevant requirements
		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.
8.	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 settlement of disputes. A LMP has been prepared to guide labour issues under TACTIC Project.
9.	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.
10.	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.
11.	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 TACTIC Project 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.

2.2.3. Relevant Regulations and Guidelines

Table 8 below summarizes applicable regulations and guidelines for the TACTIC project.

Table 8: Relevant Regulations and Guidelines for TACTIC Project

	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 ESlA 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 ESlA; 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,

	Key Regulations	Summary of the most relevant requirements
		Type B1 and B2 based on the risky levels. Most of the TACTIC 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 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. TACTIC contractors 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 TACTIC'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

	Key Regulations	Summary of the most relevant requirements
		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 EIA requirement in the country. Being in the road construction, and due to the fact that TARURA is a new 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 TACTIC Project.
9.	The Occupational Safety and Health (General Administrative) Rules, 2015.	Relevant to TACTIC Project, 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 TACTIC'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 TACTIC'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 TACTIC'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 TACTIC's investment sub-projects shall be required to comply with these rules.

2.3. Institutional Framework for Environmental and Social Management

2.3.1. Environmental and Social Management Authorities

The administrative and institutional arrangements for environmental management in Tanzania that are relevant to various projects including the TACTIC project 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

Advice the Minister Responsible for Environment.

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

i. ***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 EIA, Initial and Control Environmental Audit Environmental Inspection, EIA training and other technical support.

ii. 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.

iii. ***NEMC Zonal Offices***

Headed by Environmental Management Coordinators replicate all functions and departments of NEMC including overseeing Compliance and Enforcement; EIA; Research and Planning etc. NEMC target 7 such offices namely: Lake Zone (Mwanza (center), Geita, Kagera, Mara and Shinyanga); North Zone (Arusha (center), Tanga, Kilimanjaro, Manyara); Southern Zone (Mbeya (center), Iringa, Rukwa, Nkasi, Ruvuma); South-Coast Zone (Mtwara, Lindi); Central Zone (Tabora, Dodoma, Singida); and Coast Zone (Dar es Salaam, Pwani, Morogoro).

v. Sector Ministries

Responsible for all sector–specific environmental matters within the Ministry including participation in Cross-Sectorial Advisory Committee for review of EIA 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.

iv. ***LGA Environment Management Officer (designated / appointed)***

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

v. ***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.

vi. ***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

vii. *Investor/ Developer / Project Proponent*

Oversee and meet costs of Environmental assessment and implementation of ESMP/EMP; 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.

viii. *General Public*

Empowered by EMA and EIA Regulations to participate in all environmental management matters concerning them and at all stages of the EIA 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 ULGAs will required to deal with management of TACTIC'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 TACTIC project.

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. World Bank Coordination Unit (WBCU) comprising staff from PO-RALG and TARURA (including environmental and social staff as well as expert consultants) 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 45 participating LGAs.

The WBCU will have management oversight and reporting responsibilities for all components of the Project. PGC 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.

2.3.2. 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.

2.3.3. 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 dependents 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.

2.4. Comparison of Tanzania Legal Framework and WB ESSs

Based on the comparison presented in Table 9 below, it is evident that the legislation in Tanzania provides sufficient basis for ESIAs and ESMPs to be completed for proposed activities under the proposed TACTIC Project. It is also apparent that the relevant institutions are in place to ensure effective implementation and monitoring of the required environmental measures, in compliance with national law and World Bank safeguard requirements.

The World Bank requires that all projects comply with national law, but where there is conflict and gaps exist, World Bank policies take precedence, except in cases where national standards are more stringent (e.g. air emissions or effluents).

Table 9: Gap Assessment and Comparison of WB and Tanzania Requirements

Issue	Tanzanian requirements	WB safeguard requirements	Gaps and their remedy
An ESIA is required for proposed infrastructure activities	The Environmental Management Act, 2004 and the EIA and Audit Regulations of 2005 and Amendments of 2018 provide the overarching framework for the requirement of impact assessments	Under the ESS1, High Risk Sub-Projects are rejected. Substantial Risk Sub-projects should undertake an ESIA (with elements of other instruments included as appropriate) to inform the project design including assessment of direct, indirect and induced impacts. For Moderate risk Sub-projects: Site-specific ESMPs (or ESIAs) should be developed. For Low risk Sub-projects, the impacts can be managed through the E&S specifications for contractors with oversight by the Supervision engineer/consultant.	The framework in Tanzania is relatively consistent with ESS1. Therefore, the ESIAs to be prepared refer to TACTIC subprojects that are determined to warrant such instruments based on national and World Bank requirements.
Environmental authority must provide an environmental permit for projects prior to appraisal	All projects with environmental implications are required to obtain approval from the Minister of Environment. NEMC is responsible for reviewing projects, assessing whether an EIA is needed and then reviewing the EIAs prepared by the project. NEMC then advises the Minister who makes the final decision The final decision must include an explanation and must be made available to the general public.	ESS1 requires the approval and disclosure of EIAs by the relevant government authority	The law requires approval of EIAs by the Minister while public consultation is included throughout the process. The final decision and explanation is published by the Minister. The EIA report shall be given to key stakeholders including local authorities in the affected communities as per national requirements and disclosed as per World Bank requirements.
Environmental and Social Management Plan (ESMP) and Environmental Monitoring Plan (EMP)	ESMP and EMP are separate chapters (see EIA contents and structure of an EIA report)	ESMP and EMP are combined under ESS1	Contents will be harmonized and aligned prior to submission of the EIA for NEMC's review and approval.

3. BASELINE ENVIRONMENTAL AND SOCIAL CONDITIONS

This chapter describes the overall baseline conditions of Tanzania (section 3.1 and 3.2) as well as participating ULGAs (Annex 13) in terms of biophysical environment and socioeconomic context. Existing environmental and socio-economic conditions will, in many cases, provide a basis for predicting potential impacts of the TACTIC subprojects.

3.1. Baseline Environmental Conditions of Tanzania

3.1.1. Geographical Location

Tanzania lies between 29°30'E and 40°30'E, and 1°00'S and 11°48'S. It is a land of contrasts, being the home of Africa's highest mountain (Kilimanjaro, at 5,895 meters [m]amsl) and its lowest point (the floor of Lake Tanganyika, which is 1,470 m deep). Located on the east coast of Africa, it covers an area of approximately 945,000 square kilometers (km^2), of which the Zanzibar Islands cover 2,400 km^2. The islands of Mafia, Pemba, and Zanzibar are included in this area. Of this area, 61,495 km^2 are covered by the inland waters of the Great Lakes (Victoria, Nyasa, and Tanganyika). The country is bordered by Uganda to the north for 396 km; Rwanda and Burundi to the northwest for 217 km and 451 km, respectively; the Democratic Republic of Congo to the west for 459 km (a water border on Lake Tanganyika); Zambia and Malawi to the southwest for about 338 km and 475km, respectively; Mozambique to the south for 756 km; and Kenya to the northeast for 769 km. The Indian Ocean, with shores characterized by coral reefs and small islands, lies to the east. The continental shelf within the 200 m depth contour varies from 4–60 km from the shore.

3.1.2. Climatic Conditions

Tanzania experiences a variety of climatic conditions, ranging from the alpine deserts on the top slopes of Mount Kilimanjaro that are permanently covered by snow, to the tropical coastal areas that are under the influence of two monsoon winds. The northeast monsoon wind, which blows southwards from December to March, brings the hottest weather, while the southeast monsoon winds that blow northwards from March to September bring intermittent rains. The main rainy season on the coast is from March to May (the long rains) with a second season between October and December (the short rains). Mean annual rainfall varies from 400 mm in the central regions to over 2,500 mm in the highlands and the western side of Lake Victoria. Mean annual temperatures are influenced by altitude, ranging from 21°C in high mountain areas to 29°C at sea level.

Except for the coastal belt and islands, most of the country is part of the Central African Plateau (1,000–1,500 m above sea level) and characterized by gently sloping plains and plateaus, broken by scattered hills and low-lying wetlands. The Central African Plateau is deeply incised by two arms of the Rift Valley: the eastern arm, which includes lakes Natron and Manyara, and the deeper western arm, which contains Lake Tanganyika. Both arms of the rift converge in the south of the country near the northern end of Lake Nyasa/Malawi.

There are seven agro-ecological zones in Tanzania based on climate, physical geography, soils, vegetation, land use and tsetse fly occurrence, which are the main physical factors that influence opportunities and constraints for crop and livestock production.

3.1.3. Water Bodies

Apart from the Indian Ocean, the largest water body that lies to the east of the country, Tanzania shares three major lakes (Nyasa/Malawi, Tanganyika, and Victoria) with other countries in the region. Other lakes in the country include Masoko, Manyara, Natron, Eyasi, and Rukwa. Tanzania also has many permanent and seasonal rivers. Main rivers include the Kilombero, Mara, Pangani, Ruaha, Rufiji, Ruvu, and Ruvuma.

Tanzania's wetlands cover about 10 percent of the country. They are classified as marine and coastal wetlands, inland wetland systems, rivers and inland flood plains, and artificial wetlands. The marine and coastal wetlands include the mangrove estuary swamps, coral reefs, seaweed and grasses, and intertidal mudflats. The inland wetlands include the Rift Valley lakes (Balangida, Eyasi, Manyara, Natron, Nyasa, Rukwa, and Tanganyika), some depression swamps (Bahi and Wembere), and Lake Victoria. The shores of the Rift Valley lakes provide a habitat for birds, while Lake Natron serves as the largest flamingo breeding ground in Africa. The soda lakes (Eyasi, Manyara, Natron, and Ngorongoro) are their feeding grounds. The waters of these lakes and the adjacent land are often inhabited by wildlife, which is a major tourist attraction in Tanzania.

Some swamps are important breeding sites for fish. Lake Tanganyika is home to about 217 endemic fish species, while Lake Nyasa/Malawi has the most diverse fish species population (over 600 species). Both lakes are world famous for their variety of aquarium fish. Lake Tanganyika is important nationally for sardine, while Lake Victoria has a naturally rich and diverse indigenous fish fauna (178–208 species). However, the introduction of Nile perch has led to the disappearance of several indigenous species.

3.1.4. Groundwater Resources

Groundwater availability is mainly controlled by geology and climate, and is unevenly distributed across the country. The groundwater has huge potential for complementing the surface water sources, it accounts for over 97 % of the accessible global freshwater resource. In many countries, Tanzania included groundwater is often the main source for domestic water supply apart from widely being used for irrigated agriculture and industry (NBS, 2017).

As of 2017, there are 65 registered groundwater drilling companies and 13 registered groundwater exploration companies (MoWI, Jan 2018). The main persistent challenge, which continues to be a hindrance to groundwater utilization and development, is paucity of data. More efforts are needed in order to get relevant information on available and minable groundwater resources (NBS, 2017).

3.1.5. International Water Issues

Tanzania shares six international lakes and five international rivers including three of the largest African river basins - Nile, Congo and Zambezi, and seven international aquifers. This is more than any other nation in Africa in comparison. A larger part of the country's international borders are water bodies. The Ruvuma River forms a boarder with Mozambique, Lake Tanganyika with the Democratic Republic of the Congo, Zambia and Burundi, Lake Nyasa and the Songwe River with Malawi, the Kagera River with Rwanda and Uganda and Lake Victoria with Uganda and Kenya. As a result, the United Republic of Tanzania is part of numerous transboundary institutions and agreements for the management of these shared water resources (NBS, 2017).

Some important international agreements on the use of water resources are: - the SADC's Shared Water Course Systems Protocol, Lake Tanganyika Authority (LTA), the Joint Water Commission Agreement between Tanzania and Mozambique in 2007, the Lake Victoria Tripartite Agreement, Cooperative Framework Agreement for the River Nile Basin ratified in 2015 (NBS, 2017).

3.1.6. Biodiversity and Protected Areas

Throughout the country, a network of freshwater rivers and lakes provides drinking water, sustains agriculture and provides hydropower. Lake Victoria, the largest lake in Africa and recognized for its high levels of endemic fish species, supports a large fishing industry and provides food security and jobs for surrounding residents. Tanzania's coastline hosts numerous fringing and patch reefs, important both ecologically and socio-economically as major fishing grounds and tourist attractions. These resources are key to maintaining healthy and productive landscapes, and are intricately linked with energy generation, agriculture, and human consumption.

The country's biodiversity and unparalleled wildlife are globally renowned. Tanzania hosts diverse, distinct, and iconic ecosystems and species. About a third of the country's total land area is officially under protection, one of the world's highest ratios. Tanzania boasts 19 national parks, including the Ruaha National Park – the largest national park in East Africa (with an area of 20,226 km2), the famous Kilimanjaro National Park, and the Serengeti National Park. The latter is well-known for its large herds of wildebeest, and their annual migration, one of Africa's most spectacular natural events. Tanzania also hosts 25 game reserves including the Selous game reserve, a UNESCO World Heritage Site and Africa's largest game reserve (with an area of over 50,000 km2). The country has three marine parks, 15 marine reserves, and multiple forest reserves and woodlands (World Bank. 2019).

3.1.7. Vulnerability to Disasters and Climate-Related Hazards

Tanzanian cities are increasingly vulnerable to disasters and climate-related hazards. The average annual temperature rose by 1°C between 1960 to 2006, and precipitation is becoming increasingly unpredictable.[5] Urban areas have witnessed widespread flooding in recent decades. Dar es Salaam and Mwanza (the two largest cities in the country) are especially impacted by river floods. Arusha, Mbeya, and Mwanza, which have more rugged terrain and steep slopes, are affected by landslides, although to a lesser extent. Coastal municipalities including Bagamoyo, Lindi, Mtwara, and Tanga are potentially vulnerable to sea level rise and coastal flooding (World Bank 2016). With more frequent and intense rainfall patterns, climate impacts will likely exacerbate floods and droughts and increase the occurrence of diseases like cholera, which could present an undue social and economic burden on cities and households. The ability of cities to adapt, mitigate, and learn from acute shocks and chronic stresses resulting from climate change is therefore critical (TACTIC's PAD, 2021).

3.2. Baseline Socioeconomic Conditions of Tanzania

3.2.1 Population

The national population, currently around 59 million, is expected to exceed 102 million by 2040. The urban population is expected to increase even more quickly, from just over 34 percent of the population in 2018 to 49 percent by 2040 (UN-DESA 2018). Population growth in most Tanzanian

[5] Tanzania Country Environmental Analysis, 2019

cities is driven largely by natural population growth with the exception of Dar es Salaam, where it is driven evenly by net migration and natural population growth.[6] In 2012, four Tanzanian cities produced more than half of the country's GDP and are expected to represent almost 60 percent of the country's GDP in 2030. Urban areas also account for the majority of the country's physical, financial, human, academic, and technological capital (TACTIC's PAD, 2021).

3.2.2 Urbanization

Tanzania's urban areas currently consist of a primary city of Dar es Salaam, seven medium-sized cities with populations between 250,000 and 1 million, and 37 smaller urban areas.[7] Dar es Salaam has been Tanzania's largest city since before Tanzania's independence in 1961 and continues to dominate the urban landscape today. As of the most recent census (NBS 2013), Dar es Salaam's population was 4.4 million and it is currently estimated at over 6 million. If historic growth trends continue, Dar es Salaam is expected to reach megacity status of more than 10 million residents by 2030.[8] However, Dar es Salaam is not the only city that is growing fast. Five medium-sized cities with more than 250,000 people and thirty small cities with less than 250,000 people are growing at an average of 4.1% and many more at higher rates. Geita's average population growth rate in the 2002-2022 period is projected at 12.6%, followed by Lindi at 8.7% and Tunduma at 8.6%, compared to Dar es Salaam's 7.2%. Medium-sized cities draw sustenance from the agricultural activity of rural areas, but their prosperity also spills over to small villages and rural hinterlands through the generation of nonfarm employment opportunities, consumption linkages, and remittances (TACTIC's PAD, 2021).

3.2.3 Road Network

Tanzania has a total road network of 36,258 km comprising of trunk roads, regional roads and district roads as described in the table below.

Table 10: Tanzania's Road Network

	Type of road	**Distance (Km)**
1.	**Trunk roads**	
	Paved trunk roads	8,211
	Unpaved trunk roads	4,011
	Total trunk roads	**12,222**
2.	**Regional Roads**	
	Paved regional roads	1,508
	Unpaved regional roads	22,004
	Total regional roads	**23,512**
3.	**District Designated Roads**	
	Paved district designated roads	33
	Unpaved district designated roads	491
	Total district designated roads	524
	Total Road Network	**36,258**

Source: *TANROADS website, January 2022*

[6] Tanzania Urbanization Review, 2021

[7] The definition of "urban" used in this report is that of PO-RALG (President's Office – Regional Administration and Local Government), which is responsible for classification of local government authorities. Population data is from National Bureau of Statistics from 2012, the year of the most recent Population and Housing Census.

[8] Tanzania Urbanization Review 2021

3.2.4 Poverty

The poverty rate in Tanzania has been declining gradually. The national poverty headcount has improved from 34.4 percent of population in 2007 to 28.2 percent in 2012 and further to 26.4 percent in 2018. Despite Tanzania's impressive GDP growth between 2012 and 2018, poverty reduction slowed, and growth has become less inclusive. Inequality has also risen during this period. The international poverty headcount (US$1.90 per day at 2011 purchasing power parity) remained high and unchanged during this period, at 49 percent (TACTIC's PAD, 2021).

3.2.5 COVID-19 Pandemic

Coronavirus Disease 2019 (COVID-19) has negatively impacted Tanzania's macroeconomic performance—decelerating GDP growth in 2020—although Tanzania is one of the few economies in the region that avoided recession.[9] The global economic slowdown adversely affected Tanzania's export-oriented industries, especially tourism and traditional exports, and has caused a drop in foreign investment. The exception is gold mining which has benefitted from rising prices since the onset of the pandemic. Although the government did not impose a lockdown, the pandemic initially spurred precautionary behaviors that slowed down domestic economic activity.

Tanzania's vulnerability to the global pandemic remains high, and risks are tilted to the downside. Under a severe outbreak, Tanzania's health care system would become heavily strained, and social distancing would paralyze most manufacturing and services. In early 2020, the Government of Tanzania (GoT) implemented critical measures aimed at containing the spread of COVID-19 and encouraged people to avoid unnecessary movements, practice hand hygiene and social distancing, and identified several public and private hospitals that would serve as isolation centers for people infected with COVID-19. The government reported COVID-19 cases up to April 28, 2020. The availability of official information on COVID-19 infection and mortality rates is important in assessing the effectiveness of national public health response. In February 2021, the Minister of Health, Community Development, Gender, Elderly, and Children restarted efforts to contain the pandemic, urging the general public to take precautionary measures against the spread of infectious diseases, including COVID-19, and urged wearing of masks, avoiding overcrowding in hospitals, and continued education of the population by health professionals (TACTIC's PAD, 2021).

3.2.6 Gender Issues

The FY18-FY22 Tanzania Country Partnership Framework (CPF) notes that gender disparities are still prevalent, cutting into women's well-being, earnings, and standards of living. Women participate in very few decisions related to their health or household purchases. Disparities in education are large; nearly twice as many women as men aged 20-24 years have had no formal education (19 versus 10 percent). Tanzania ranked 67 out of 153 countries in 2020 in the Global Gender Gap Report of the World Economic Forum; in terms of economic participation and opportunity, its rank was 63, with several indicators revealing continuing gaps between men and women (TACTIC's PAD, 2021).

3.2.7 Gender Based Violence

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

[9] World Bank. 2021. Tanzania Economic Update, 15th Edition.

physical damage than men when victimized (Odunga, 2021). The term GBV [10] 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 in Tanzania 2017/18 – 2021/22 (URT, 2016), 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.

[10] 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.

4. ENVIRONMENTAL AND SOCIAL MANAGEMENT PROCESS

4.1 Potential Impacts from Priority Subprojects

The TACTIC project proposes to deliver improved basic infrastructure in participating ULGAs. The project also aims to support urban local government authorities to develop unique investment pipelines that will meet their urban needs and catalyze their development potential. The project will support activities to strengthen these cities' urban management capabilities that are critical for efficient delivery and sustainable management of infrastructure and services. The project will enhance support to urban disaster risk management, and climate change adaptation through targeted Technical Assistance (TA) and risk-informed and climate-smart green solutions.

Potential environment and social impacts for the TACTIC project are expected from component 1 [especially land use planning and design of subprojects / technical assistance (TA)] and component 2 (Urban Infrastructure and Services). The expected physical activities include construction of select roads, drainage, bus stands or terminals, markets, slaughterhouse, landfills, and industrial clusters in selected urban areas, similar to what was financed by TSCP and ULGSP. It is anticipated that these activities will be executed in populated areas, largely involving existing basic infrastructure. The likely implementation sites are in the vicinity of residential housing areas and commercial centers that are likely to be affected by project works. Therefore, the project activities and implementation sites, the nature and extent of the project's potential risks and impacts is anticipated to be substantial. The potential E&S risks and impacts from civil works for all investment sub-projects are expected to be more or less similar in nature and type.

4.1.1 Potential Environmental Risks and Impacts

The potential environmental risks and impacts of the project, may include:

i. Loss of vegetation and land degradation due to borrow pits, quarries, and construction sites;

ii. Soil erosion resulting from inadequate spoil management leading to siltation/sediment transport from construction sites;

iii. Emission of dust and particulate materials, causing nuisances to surrounding families, religious buildings and businesses, especially to sensitive receptors (children, elders);

iv. Emission of undesirable noise levels due to the machinery and equipment especially in areas with health centres, homes for the elderly and schools;

v. Solid, liquid and hazardous waste generation;

vi. Cracking of houses due to vibrations from operating heavy equipment;

vii. Pollution from oil leakage, poor storage of fuel and related chemicals;

viii. Traffic disruption, pedestrian safety and traffic congestion during construction due to the increase of heavy traffic (of the construction itself and from traffic detours) especially for school children during construction and operation;

ix. Degradation of local roads due to heavy equipment and traffic detours; and

x. Accidents and injuries.

4.1.2 Potential Social Risks and Impacts

The potential social risks and impacts of the project, may include:

i. Land acquisition;

ii. Loss of access to natural resources;

iii. Loss of productive assets (structures, crops and trees);

iv. Economic and physical displacement via the need to relocate informal vendors, informal parking (mainly motorcycles) either permanently or temporarily for the period of construction;

v. Interrupted accessibility to dwellings and businesses during construction;

vi. Labor risks associated with unfair labor and working conditions;

vii. GBV and SEA/SH among workers and between workers and host communities;

viii. Child labour;

ix. Spread of HIV/AIDS, STDs and other infectious diseases like TB and COVID-19;

x. Risk of social tensions and/ or conflict;

xi. Increase in crime in the host communities;

xii. Social services (water, communication, electricity, etc.) disruption due accidental cutting of the infrastructure or during unavoidable relocation of the infrastructure during construction;

xiii. The risk is associated with poor engagement/ lack of access to grievance redress; and

xiv. Damage to cultural heritage resources.

Although likely to be substantial, the environmental and social risks and impacts are largely reversible, easily contained within the confines of the works sites and can be mitigated within the project duration. Offsite impacts will be mainly associated with borrow pits and quarries and crushing and batching plants, maintenance yards and construction camps. These impacts merit careful planning of construction activities and the application of strict environmental and social measures during design and construction phases.

Annex 3 contains generic impacts and mitigation measures for aggregated subprojects to be financed under TACTIC Project. These are the potential impacts and their respective generic mitigation measures. These are meant to assist all implementing agencies in ensuring that the objectives of this ESMF are satisfactorily achieved especially when overseeing preparation and

implementation of ESIAs and ESMPs. Subprojects screening (section 4.3 below) includes an exclusion criteria for the subprojects which cannot be financed under the TACTIC Project.

Figure 6: Proposed Bridge Site at Luiche River in Kigoma-Ujiji Municipality

Figure 7: Proposed Fish Market Site in Lindi Municipality

Figure 8: Current International Onion Market in Singida Municipality

Figure 9: Proposed Stand-alone Drain in Lindi Municipality

Figure 10: Existing Min-Bus Stand at Sabasaba in Dodoma City

4.2 Environmental and Social Management Process

Adopted from a recently Bank approved ESMF for RISE Program, **Figure 11** below presents and environmental and social management process that should be followed throughout the project cycle from sub-project selection to implementation.

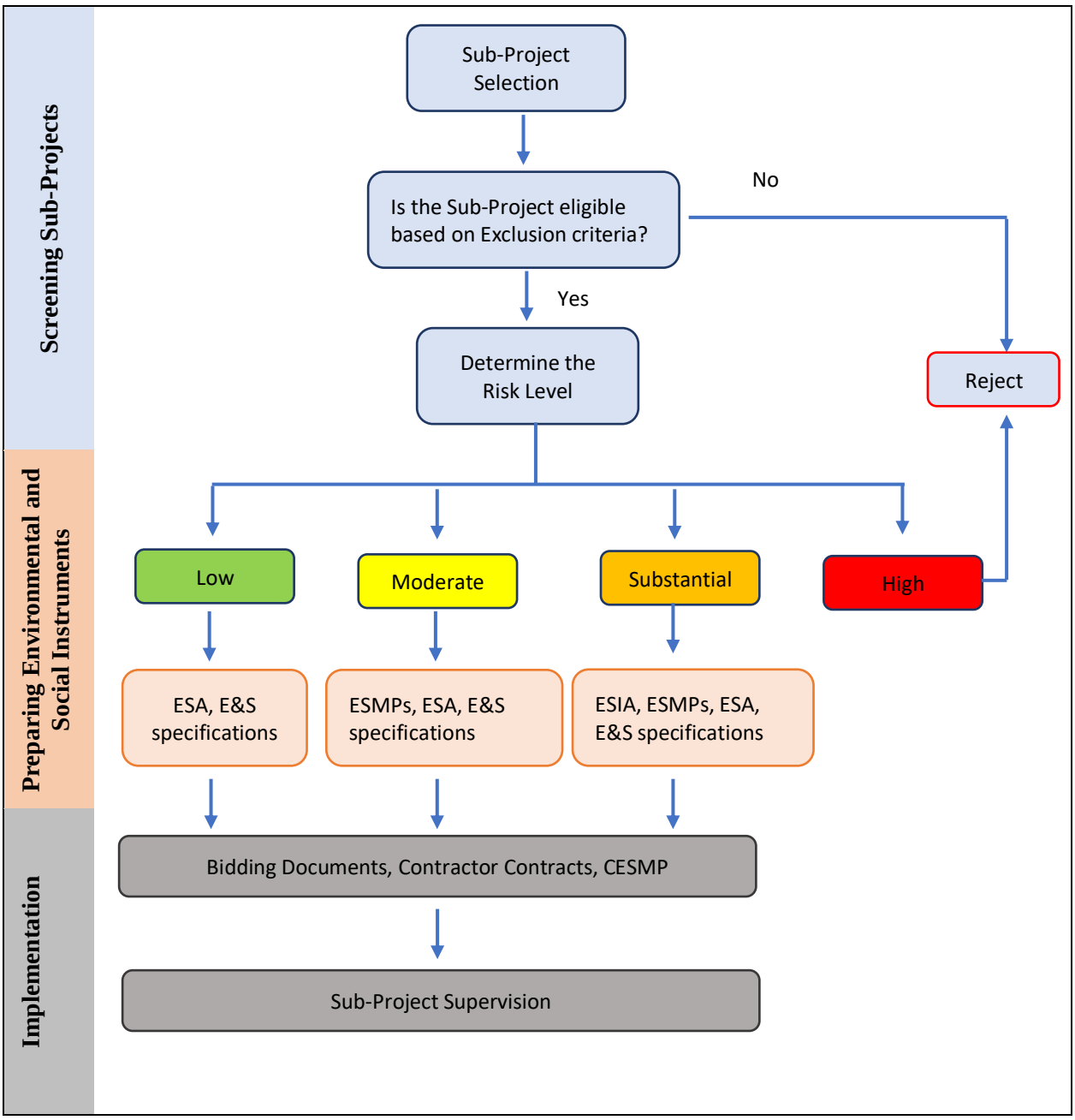

Figure 11: Environmental and Social Management Process for TACTIC Project

4.3 Screening Sub-Projects and Determination of Level of E&S Assessment

The screening of sub-projects to be implemented under the TACTIC Project follow a dedicated screening procedure with three elaborate steps as described below. The screening should be carried out at the feasibility stage and feed into the feasibility and design studies.

Step 1: Application of the Exclusion Criteria

This is the first step to be carried out by the WBCU. Each proposed subproject should be screened based on the exclusion criteria given below, as informed by TACTIC Project objectives on urban resilience and disaster management. If the potential project meets any of the criteria given in the list, then it should be rejected.

The projects will not:

i. take place in disaster prone areas unless it is meant to mitigate flood disasters;
ii. take place in protected areas or buffer zones of protected areas;
iii. lead to conversion or degradation of natural habitats such as wetlands; and
iv. involve land reclamation (i.e., drainage of wetlands or filling of water bodies to create land).

Subprojects that pass the Exclusion Criteria will be subjected to screening using a screening form whose template is included in **Annex 4**.

Step 2: Determining the Environmental and Social Risk Rating

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 11 below**.**

Table 11: 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

Sensitivity	Description
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 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 12 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**.[11]

Table 12: 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

The role of the WBCU is to visit the proposed sub-project sites to ensure that the selected sub-projects meet the environmental and social risk rating level that is acceptable. If need be advice the LGAs to drop the sub-project or choose an alternative location; whichever is suitable for the situation. The WBCU team that undertakes screening comprises of social experts, environmental experts, engineers and land use experts.

[11] 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

Step 3: Definition of required level of effort

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 13 below. For all sub-projects with impacts on land as a social impact details of the mitigation have been elaborated in the RPF and further RAPs will provide details for handling each subproject.

Table 13: Environmental and Social Efforts to be undertaken

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

High Risk: Projects identified to be of High risk will be rejected.

Substantial risk: Sub-projects should undertake an ESIA to inform the project design including assessment of direct, indirect and 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 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.

From the list of priority investment subprojects for Tier 1 and 2 LGAs as included in **Annex 1**, Table 14 below presents categories of subprojects that are tentatively identified as ones to be implemented in sensitive sites and/or have substantial risks. Overall, most of the subprojects are likely to have substantial risks.

Table 14: Tentative List of TACTIC Sub-projects with Substantial Risks

	Type of subprojects	Description of risks
1.	Construction of fish market and supportive infrastructure e.g. Mkuyuni fish market in Mwanza, Mangrove fish market in Lindi; Nyarusurya Fish Landing Site in Musoma, and mixed crop and fish market in Chato	These projects will be implemented within 1-5 km (or less) from ecologically sensitive habitats or critical ecosystems i.e. Lake Victoria (Mwanza, Musoma and Chato) and Indian Ocean (Lindi)
2.	The proposed extension of Wafipa – Kagera road (1.3km) and provision of Bridge on river Luiche in Kigoma.	Luiche River terminates into Lake Tanganyika
3.	Construction of Sea bank protection structure in Lindi	Coastal zone/ecosystem
4.	Construction/upgrading/improvement of urban roads in most of the participating ULGAs.	Likely to involve land acquisition with lots of other site-specific risks and impacts/nuisance to the surrounding communities including sensitive receptors.
5.	Construction of crop markets and storage facilities	In addition to other risks, these subprojects will need well planned (involving meaningful and early stakeholder consultation) temporary relocations.
6.	Construction of modern bus terminals and existing bus stands, minibus stations, and lorry parking	
7.	Some of the stand-alone drains	Their length and where they passes pose some considerable risks.
8.	Construction of slaughterhouses; abattoir; and livestock market	Potential health and safety risks likely to be substantial.

For Moderate risk Sub-projects: Site-specific ESMPs (or ESIAs) 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. Tentatively, very few subprojects under TACTIC Project are likely to have moderate risks like extension of some of the storm water drains, river conservation and controlled dumpsites, based on results of the sub-project screening.

For Low risk Sub-projects, the impacts can be managed through the E&S specifications for contractors with oversight by the Supervision engineer/consultant. TACTIC subprojects like minor rehabilitation of office interiors without major structural work, equipment purchases and installation of slaughter house/abattoir equipment, etc may be low risk.

All sub-projects with substantial and moderate risks shall be required to obtain environmental clearance or EIA certificates by undergoing *Procedures for Carrying out EIA and Environmental Audit* (included in **Annex 6**) which is recently being managed via NEMC's EIA Online System[12] since Nov 2020.

4.4 Preparing Environmental and Social Safeguard Documents

4.4.1 Preparing ESIA and ESMP

An ESIA along with an ESMP shall be prepared based on the outlines given in the **Annex 7**. 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 8**. 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 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 should provide the Design consultants with the ESIAs and ESMPs so that the E&S mitigation measures identified are included in the design and budgeted.

[12] https://eia.nemc.or.tz/pms/web/vig.eu

4.4.2 Developing ESMPs

Following a detailed site screening, environmental and social checklists should be prepared for the subprojects that won't require preparing ESIA/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.);
- The agency responsible for implementation; and
- Required budget for mitigation measures.

Issues to be addressed during site screening include:

- 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;
- Areas 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 or wildlife;
- 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 risk identified and evaluated, mitigation hierarchy must be applied. This includes:

- Anticipate and avoid risks and impacts;
- Where avoidance is not possible, minimize or reduce risks and impacts to acceptable level
- Once risks and impacts have been minimized or reduced, mitigate; and
- Where significant residual impacts remain, compensate for or offset them, where technically and financially feasible.

The potential mitigation measures 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 and utilities;
- 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;
- Workers' camp management plans;
- Site specific ESMPs for the Asphalt plants;
- Stakeholder engagement and timely information disclosure

Based on the issues identified during site screening, site specific ESIAs and/or 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, livelihood restoration). Conducting the site screening and preparing the site specific ESIAs and ESMPs is the responsibility of the WBCU and needs to be approved by the World Bank prior to finalization of subproject designs.

4.4.3 Undertaking Environmental and Social Audit

The project will finance rehabilitation and upgrading of some existing facilities (e.g. abattoir, industrial parks). 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 9** 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.

4.4.4 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 10** and World Bank Group Environment, Health and Safety Guidelines (EHS)[13]. For all Low risk sub-projects, contractors should follow these Environmental and Social Specifications.

4.5 Implementation

4.5.1 Bidding Documents and Contracts

The site specific ESMPs requirements for sub-projects and E&S Specifications for Contractors will be incorporated into bidding documents for the works by the implementing agencies. Contractors must be aware of their obligations upfront and demonstrate their understanding of the

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

requirements and costs and resources for implementing the E&S (including health and safety) requirements and conducting self-monitoring in their proposals. Contractors' contracts will include all environmental, social, health and safety requirements, including requirements for the contractor to develop C-ESMPs during construction for issues such as noise, traffic, waste management, HIV/AIDS, labor and grievances by workers and communities and carrying out self-monitoring during implementation. Purchase of materials must be only from approved sites.

4.5.2 Construction ESMPs

Based on requirements of the ESMPs, contractors are required to develop their ESMPs i.e. C-ESMPs for all environmental and social issues relevant to the activities under the contract. The purpose of the construction ESMP is to draft method statements for the implementation of relevant mitigation measures for the contractor to avoid, minimize or mitigate effects on the community, environment and surrounding area during construction. C-ESMPs are 'live' documents that should be reviewed and updated at regular intervals throughout the project life cycle. Guided by E&S specifications for the contractors in **Annex 10**, contractors shall prepare and implement C-ESMPs that shall be reviewed and approved by the Supervision Engineer/Consultant before the start of construction activities.

The C-ESMP may be structured as follows:

1. **INTRODUCTION**
    - Project Background
    - Summary of Basic Sub-Project Data/Information
    - Objective of ESMP
    - Sub-project Description
    - Baseline Environmental and Social Information of the Sub-project Area
    - Project Impacts

2. **ENVIRONMENTAL AND SOCIAL MANAGEMENT STRUCTURE**
    - Environmental and Social Policy
    - Environmental and Social Management Organization
    - Staff roles and responsibilities
    - Names and contact information for staff for implementing the C-ESMP
    - Approval and Licensing Requirements (Statutory Permits, Certificates and Licences for the Project)

3. **MANAGEMENT OF ENVIRONMENTAL IMPACTS**
    - Camp Sites Establishment and Operations
    - Management of Borrow Pits and Quarry Sites
    - Stone Crusher Plant Site Establishment and Operations
    - Asphalt Plant Establishment and Operations
    - Traffic Management Plan
    - Conservation of Vegetation Cover
    - Soil Erosion and Flood Control
    - Management of Spoil Materials, Siltation/Sediment Transport
    - Management of Solid, Liquid and Hazardous Waste

- Protection of Water Resources
- Protection of Wildlife
- Control of Air, Dust and Noise Pollution
- Control of Vibrations
- Sanitary Accommodation

4. MANAGEMENT OF SOCIAL IMPACTS

- Land Acquisition for Camp, Quarry, Crusher and Borrow Sites
- Management of Camp, Quarry, Crusher and Borrow Sites
- Management of Labour Issues
  - Workers Contracts
  - Code of Ethical Conduct (CEC)
  - Employment Opportunity to Local Community Members
  - Prevention of Child Labour
  - Workers' Social Welfare
  - HSE Trainings
  - Workers Redundancy Plan
- GBV) and SEA Action Plans
- Stakeholder Engagement and Communication Strategy
- Community Health and Safety Plan
- Grievance Redress Mechanism (GRM)
- Crime Management Plan (CMP)
- Chance Find Objects (Artefacts) Procedure
- HIV/AIDS, STDs, TB, Malaria and COVID-19 awareness and prevention programs
- Relocation and Protection of Public Utilities
- Corporate Social Responsibility

5. ESMP MONITORING, SCHEDULES, REPORTING AND BUDGET

- Monitoring Plan for ESMP Implementation
- Monitoring Objective
- ESMP Implementation Schedules and Tools
- ESMP Reporting Format
- ESMP Review
- ESMP Implementation Budget

4.5.3 Environmental and Social Supervision during Construction

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 11.** Where non-compliances are observed, the Supervision engineer/consultant will 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.

4.6 Meeting ESS Requirements

In addition to ESIA, ESMP, CESMP and Environmental and social specifications – all stemming from this ESMF, a number of other instruments are needed to meet the requirements of the World Bank's ESSs. The RPF, SEP, and LMP should be referred to as needed. Table 15 lists the instruments required to comply with the ESSs.

Table 15: Instruments Required to Meet the ESSs

ESSs	Instruments
ESS 1: Assessment and Management of Environmental and Social Risks and Impacts	• ESMF will be applied to all sub-projects under components 2 and technical assistance activities • ESIA with ESMP for Substantial Risk sub-projects • Site specific ESMP for Moderate risk projects • ESA for existing facilities (e.g. abattoir, industry parks) • Environmental and Social Specifications for Contractors • C-ESMP
ESS 2: Labor and Working Conditions	• LMP for TACTIC Project guide contractors to prepare their own LMPs • Contractor's Collective Bargaining Agreements • Code of Ethical Conduct to be signed by all workers (permanent or temporary) • Risk Assessment • Contractor's Occupational Health and Safety Management Plan (HSMP) • Incident /accident log • GRM for workers by contractors • Workers Redundancy Plan (WRP)
ESS 3: Resource Efficiency and Pollution Prevention and Management	• Waste Management plan outlined in the Environmental and Social Specifications for Contractors, based on the screening and the ESIA/ESMP findings • Inclusion of relevant provisions into ESIA, ESMP
ESS 4: Community Health and Safety	• Site-specific ESIA or ESMP • Community Health and Safety plan outlined in the Environmental and Social Specifications for Contractors and ESMP • ESA for existing facilities (e.g. abattoir, industry parks) • LMP for TACTIC Project guide contractors to prepare their own LMPs • GRM included in SEP for TACTIC Project • GRM by the contractor • SEA/H Action Plan
ESS 5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	• Apply RPF for land acquisition or restrictions on land use.
ESS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources	• Indirect impacts addressed in ESIA for Substantial Risk sub-projects. • E&S Specifications for Contractor include special measures for flora and fauna.
ESS 7: Indigenous People/Sub-Saharan African Historically Underserved Traditional Local Communities (IP/SSAHUTLC)	The project will mainly be implemented in urban areas where communities that meet the requirements of ESS7 are generally not located in Tanzania. As such, this standard is not considered relevant. However, screening will be undertaken for all sub-projects as part of ESIA preparation to confirm the absence of such communities. If IP/SSAHUTLC are found, the project would seek agreement from the Bank for the subproject to go ahead and the required instruments.

ESSs	Instruments
ESS 8: Cultural Heritage	• Chance Find Procedures included in the E&S specifications for contractors
ESS 9: Financial Intermediaries	Not applicable
ESS 10: Stakeholders Engagement and Information Disclosure	• SEP for TACTIC Project • Consultations are included in all E&S instruments

4.7 Technical Assistance

Technical assistance activities under Component 1 will support the preparatory work needed for cities to achieve these benchmarks. During the first two years of the project, urban performance benchmarks will not be triggered to allow the ULGAs time to demonstrate improved urban management functions. Areas that the urban performance grants could potentially target include: (i) implementation of completed master plans or general planning schemes by developing detailed plans for priority areas; (ii) preparation of a service delivery strategy (e.g. for drainage maintenance, solid waste management, and sanitation); (iii) improved cost recovery and sustainability of solid waste collection and sanitation services; and (iv) survival rate of trees planted. Urban performance grants will be triggered twice: on Year 3 (US$35 million) and on Year 5 (US$35 million) and will be limited to the best performing six cities.

Table 16: Applying the ESF to TA Activities

Type of TA	Screening	Instruments to be Prepared
Capacity Building	Usually this does not have potential adverse E&S implications or risks.	None
Strengthen data collection, sharing, and management for the implementation of general and detailed planning schemes, enforcement and development control, and support own source revenue collection under *Component 1a: ICT for Urban Management.*	Analysis of potential E&S issues and risks specifically associated with e-waste management/disposal following the ESF requirements.	Based on the procedure described in sections 4.2, 4.3, 4.4 and 4.5 of this ESMF the instruments to be prepared should be identified during the screening stage, though e-Waste Management Plan is likely to be the most appropriate tool to be prepared.
Planning, implementation, operations and maintenance of completed infrastructure financed under TSCP and ULGSP, including abattoirs, bus stands/terminals, markets, open space, drainage, street lights, and solid waste management (e.g. collection, transport, disposal, centralized fee collection, landfill operations and management) under *Component 1b: PPPs for Urban Service Delivery.*	Each of the proposed infrastructure operation and maintenance to be supported, must be screened for its potential E&S impacts based on the steps described in section 3.3 of this ESMF	Based on the procedure described in sections 4.3, 4.4 and 4.5 of the ESMF the instruments to be prepared should be identified during the screening stage.
Mainstreaming Urban Resilience through (a) risk identification; (b) risk reduction; and (c) disaster preparedness and emergency management under *Component 1c: Mainstreaming Urban Resilience.*	Analysis of potential impacts both positive and negative could indirectly link with ESF through proposals to address issues including disaster risk, flood mitigations measures and sanitation facilities (ESS1, ESS2, ESS3, ESS4); and land administration activities (ESS5).	Based on the procedure described in sections 4.2, 4.3, 4.4 and 4.5 of this ESMF the instruments to be prepared should be identified during the screening stage.

4.8 Public Consultation

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.

To ensure that the stakeholder engagement is well coordinated; the SEP recommends that the LGAs to follow 6-step process (Figure 12 below) for each phase of the TACTIC sub-project for stakeholder engagement.

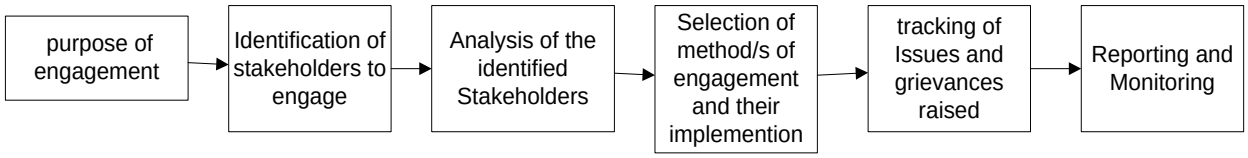

Figure 12: Stakeholders Engagement Process under TACTIC Project

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.

4.9 Occupational Health and Safety

The WBCU with support from the supervision consultant will ensure regular training to permanent and temporary workers on occupational health and safety to workers and information relevant to health risk including malaria, yellow fever, hepatitis, and pandemics like COVID-19 etc. is provided to workers. During the construction period the contractor shall provide, equip and maintain adequate personal protective equipment (PPE), first-aid stations and sign boards directing where these services are situated and transport in case of emergency. Appropriate protective gear including, but not limited to helmets, heavy duty gloves, safety vests and boots, will be provided to site workers and visitors. Guided by E&S specifications for the contractors in **Annex 10,** contractors will be required to prepare and implement Health and Safety Management Plans (HSMPs) that shall be reviewed and approved by the Supervision Engineer/Consultant before the start of construction activities.

The HSMP may be structured as follows:

1. **INTRODUCTION**
   - Project Background
   - General purpose, scope, objective and structure of the document
   - Scope of work and sub-project description
   - Definition of Key OHS Terms
   - Health and Safety Policy

2. **ORGANIZATIONAL CHART AND RESPONSIBILITIES**
   - Organizational Chart
   - Staff roles and responsibilities

- Names and contact information for staff who are accountable for implementing HSMP

3. HEALTH AND SAFETY MANAGEMENT SYSTEM

- Safety Training and Promotion
- Safety Inspection and Follow up Actions
- Reporting of Accidents, Incidents & Investigation and Accident Statistics
- Hazard Identification and Risk Assessment
- Industrial Health and Hygiene
- Personal Protective Equipment
- First Aid Facilities
- Fire Prevention and Fighting Facilities
- Road Safety Management

4. SAFETY IN VARIOUS CONSTRUCTION ACTIVITIES AND SITES

- Camp Sites
- Borrow Pits and Quarry Areas
- Diversions
- Excavation
- Reinforcement Steel Work
- Concreting
- Asphalt Plant and Asphalting at Site
- Concrete Mixers and Batching Plant
- Materials and Equipment Handling
- Working at Height
- Heavy Equipment and Workshop
- Cable Laying, Termination and Jointing and Electrical Works
- Portable Power and Hand Tools
- Transportation
- Fuel Station and General Chemical Handling
- Explosive Handling
- Crushing Plant Safety
- Safety in Blasting
- Working With Nuclear Source

5. EMEGERNCY PREPAREDNESS AND RESPONSE

6. HEALTH AND SAFETY MONITORING PLAN, SCHEDULES AND BUDGET

4.10 GBV and SEA in the Workplace

The TACTIC Project will identify potential specific risks and impacts for women and children during subprojects implementation. Experience has shown, for instance, that the influx of workers can increase Gender Based Violence (GBV) risks for communities where construction is carried out, such as increasing the rates of sexual exploitation and abuse (SEA). The TACTIC Project will put into place different prevention and mitigation measures (including requiring Contractors to establish action plans that will show how GBV and SEA cases will be prevented or handled at

their worksites; and collaborate with local authorities and relevant NGOs to deal with GBV and SEA that might be caused by the project implementation) for the specific risks for women and children that the sub-project can entail and, will be linked to the GRM, both at Project and LGA levels. Contractors' GBV and SEA Action Plans will be approved by Supervision Consultant before commencement of construction activities.

During the design stage, WBCU will commission GBV mapping that will be done at the TACTIC Project level and the sub-projects and Contractors will borrow from the project mapping to prepare their GBV and SEA plans. The GRM will refer survivors to the services (either formal or informal) most capable to provide care. Awareness raising will be provided to communities on different mechanisms of the project to respond to SEA and on the way to place complaints into the GRM. The bidding documents for contractors will require the development of a Code of Ethical Conduct (CEC), which the PIU will need to approve**,** regular training for workers on the contents of the CEC and, depending on the level of risk, for a GBV Action Plan with a clear Response and Accountability Framework. Monitoring mechanisms will be put into place to ensure that mitigation and response measures are in place and working accordingly.

Specific provisions of the GRM will be prepared for complaints related to SEA that could be derived from the project to ensure the survivor's confidentiality and rights. To properly address GBV risks, the GRM needs to be in place prior to contractors mobilizing. The GRM should not ask for, or record, information on more than three aspects related to the GBV incident:

i. the nature of the complaint (what the complainant says in her/his own words without direct questioning; and

ii. if, to the best of their knowledge, the perpetrator was associated with the project, and

iii. if, possible, the age and sex of the survivors.

Different entry points where survivors can place complaints confidentiality shall be identified and linked to the GRM as shown in Figure 13 below. The GRM Protocol should have a specific section on GBV related complaints. This shall be developed with the support of specialized organizations in the matter.

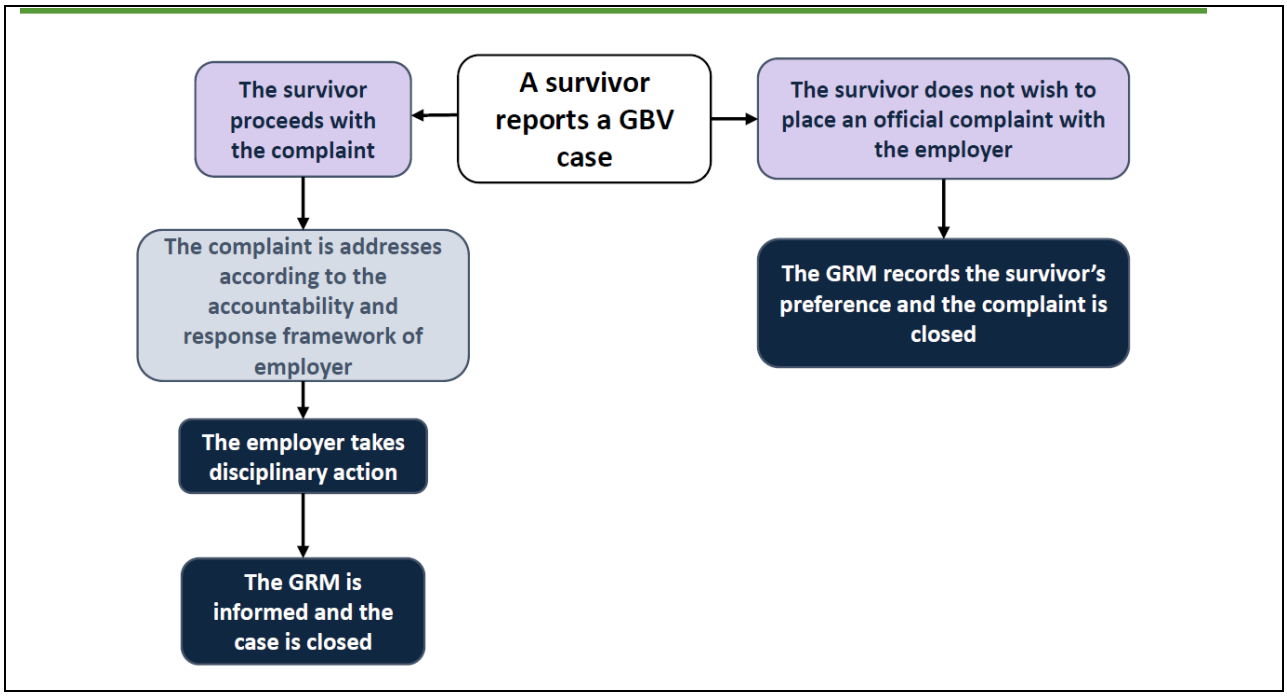

Figure 13: GRM Protocol for GBV Survivors

As presented earlier in section 1.2, the TACTIC Project will contribute to close gender gaps in employment by enhancing and promoting women employment during all stages of subprojects implementation. Women will be among the most benefited groups from some of the proposed sub-projects, for example, the proposed Mkuyuni fish market in Mwanza City 80% of the users during the operation will be women.

4.11 Compliance with National Environmental Regulations

In addition to meeting the requirements of this ESMF, the WBCU and PIUs at LGAs level will ensure all sub-projects fulfil the national environmental and social requirements and all necessary permits are obtained, as mentioned in section 2.2 and 2.3. A tentative list of such legal approvals is given in Table 17 below. As the table may not be exhaustive, Contractors under TACTIC Project will obtain such other legal documents from the responsible authorities.

Table 17: Legal E&S Approvals to be Obtained during TACTIC Project Implementation

SN	**Required Certificate, Permit or Licence**	**Relevant Act/ Regulation**	**Responsible Authority**	**Who to apply**
1.	EIA certificate	Environmental Management Act No. 20, of 2004	VPO through NEMC	Participating LGAs/WBCU
2.	Building permit: Obtain permission to commence construction works	The Local Government Laws (Miscellaneous Amendments) Act No. 13 of 2006	LGAs	Participating LGAs/WBCU
3.	Certificates of Workplace Registration	Occupational Health and Safety Act, 2003, S. 15-17	Occupational Health and Safety Authority (OSHA)	Contractors

SN	**Required Certificate, Permit or Licence**	**Relevant Act/ Regulation**	**Responsible Authority**	**Who to apply**
4.	Fire Safety Certificate	Fire and Rescue Act, No. 14 of 2007	Commissioner General of Fire and Rescue Force, Ministry of Home Affairs	Contractors
5.	Workers Compensation Fund (WCF) registration certificate	The Workers Compensation Act No. 20 of 2008.	Workers Compensation Fund	Contractor
6.	Primary Mining License	Mining Act, 2010	Ministry of Minerals	Participating LGAs/WBCU
7.	Licence to Purchase or Acquire Explosives	Explosives Act, No 9, 2002	Ministry of Energy and Minerals	Contractors
8.	Water Use Permit for the use of surface and underground water	Water Resources Management Act, No. 11 of 2009	Basin Water Boards	Contractor
9.	Borehole drilling permit	Water Resources Management Act, No. 11 of 2009	Basin Water Boards	Contractor
10.	Solid Waste Disposal permit	Environmental Management Act No. 20, of 2004	LGAs	Contractors

5. GRIEVANCE REDRESS MECHANISMS

Grievance redress mechanism (GRM) involves a formal process for receiving, evaluating and redressing program-related grievances from affected communities and the public. The TACTIC Project 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).

5.1 Procedures for Grievance Management

Grievances related to land take will be handled following the GRM detailed in the RPF for TACTIC Project while all other types of grievances will be handled as per the details in the SEP and LMP for TACTIC Project. 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 mechanism including provisions for arbitration in the courts.

5.2 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).

5.3 Responsibility for Implementing Grievance Management Procedures

The SEP for TACTIC Project has a dedicated section on GRM 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 level and be expanded to handle all types of grievances arising from implementation of all sub-projects under the TACTIC project. LGAs 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 TACTIC Project.

6. SPECIFIC ROLES AND RESPONSIBILITIES FOR E&S MANAGEMENT

The 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 shown in **Figure 14 below**.

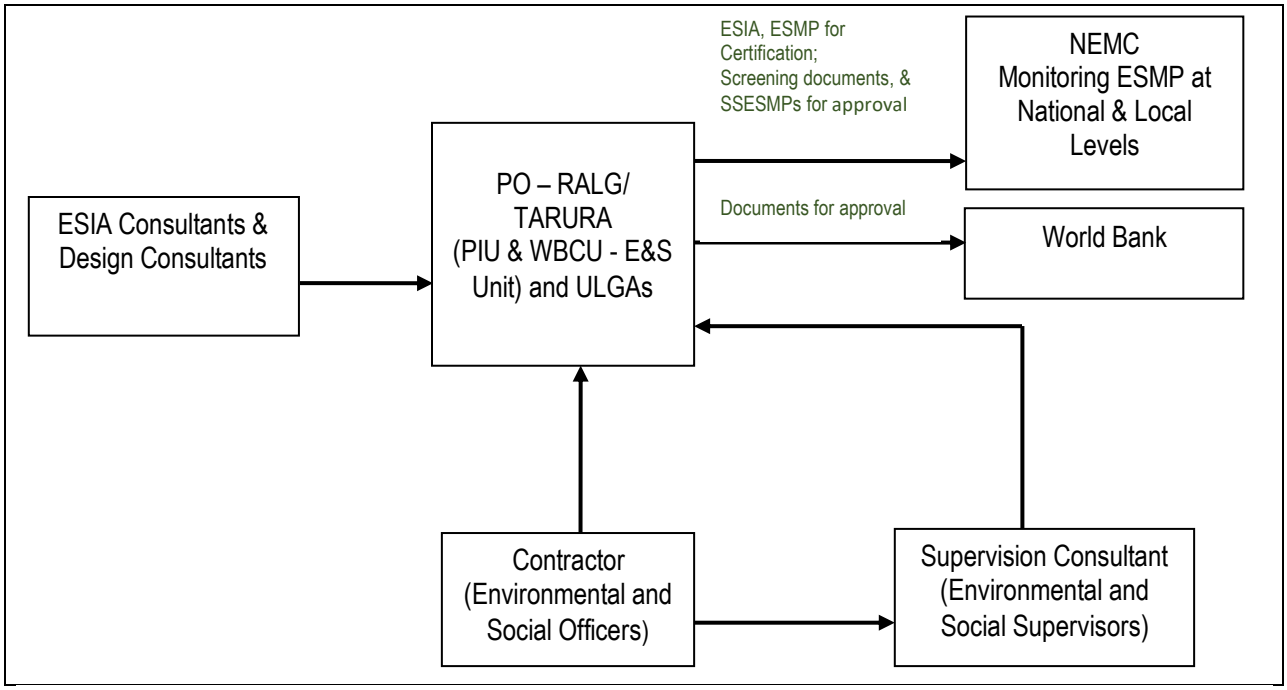

Figure 14: Institutional Setup for Environmental and Social Management under TACTIC Project

Specific roles and responsibilities for E&S management under TACTIC Project are described in the following subsections.

6.1 Implementing Agencies

The project will have two implementing agencies – PO-RALG/TARURA and ULGAs. 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 ULGAs. 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 ULGAs will be responsible to implement the work, including sub-projects procurement, contract management, safeguards, resettlement, M&E, and project reporting to WBCU. Each ULGA will establish a full time Project Implementation Unit (PIU) staffed with dedicated team of officers to carry out these responsibilities. Tier 1 and 2 ULGAs have experience in working with Bank financed projects (TSCP and ULGSP) and their capacity is known to be sufficient; however,

Tier 3 LGAs will require some additional implementation support from consultants and the WBCU.

The E&S Units comprising of E&S Specialists and Expert Consultants at WBCU headquarters will be responsible to:

i. Ensure that the ESMF is implemented in compliance with National Legislations and the World Bank Group Environmental and Social Standards (ESSs) requirements;
ii. Determine the scope of environmental and social risks i.e. identify the magnitude, sensitivity and risk category of the sub-projects; both
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 oversee functionality of the project Grievance Redress Mechanisms (GRMs);
vi. Send ESIAs 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 ESIAs (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. Ensure that contractors have an Environmental, Health and Safety Officer (EHS), who are familiar with the compliance requirements, including WB EHS guidelines;
xi. Ensure supervision of the civil works either by hiring a supervision consultant or through designated environmental supervisors in the team of the supervision engineer;
xii. Conduct inspection of the sites and review progress reports by the supervision engineer/consultant during civil works;
xiii. In case of any major accident and incident, notify the World Bank within 24 hours;
xiv. If IP/SSAHUTLC are found during ESIA studies, inform and seek agreement from the World Bank for the subproject to go ahead and the required instruments; and
xv. Send progress reports every 3 months to the World Bank.

The E&S Units comprising of E&S Specialists and Expert Consultants at PIU at participating ULGAs will be responsible to:

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

iii. Apply the Exclusion List to the potential sub-projects;
iv. Facilitate public consultations with Project Affected Persons (PAPs) and other project stakeholders in preparation of ESIA/ESMP and oversee functionality of the project Grievance Redress Mechanisms (GRMs);
v. Ensure that the necessary environmental authorizations and permits are obtained; both
vi. Ensure the relevant elements of the ESIAs (including budget) are incorporated into final designs;
vii. Provide site-specific ESMPs to the design consultants to incorporate E&S measures identified;
viii. Ensure that contractors have an Environmental, Health and Safety Officer (EHS), who are familiar with the compliance requirements, including WB EHS guidelines;
ix. Conduct inspection of the sites and review progress reports by the supervision engineer/consultant during civil works;
x. In case of any major accident and incident, notify the Occupational Safety and Health Authority (OSHA) and WBCU.

6.2 ESIA Consultants

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 ESIAs and ESMPs based on the procedures described in the ESMF 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 SSEMPs;
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 ESIAs and ESMPs.

6.3 Design Consultants

Some of the environmental and social impacts observed with urban projects are associated with design, site selection or even consideration of stakeholders' requirements. Therefore this ESMF recommends the design consultant and other relevant authorities to consider E&S parameters as summarized in Table 16 below. 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 ESIAs, ESMPS into the designs of the subprojects (including necessary budget) and ensure consistency with the design guidelines and specifications as relevant – see Table 18 below; and
iii. Provide cost estimates for implementing the design requirements.

Table 18: Some Key E&S Considerations for Design Consultants

	Key E&S parameter	Design considerations / who to consult
1.	Environmental aspects	Include rain water harvesting, green belts; storm water management, etc.
2.	Solid waste management structures	Include composters or any other appropriate facilities as part of construction
3.	Stakeholder requirements	TANROADS, TARURA, Police, utility companies like TANESCO, TTCL, Basin Water Boards/Authorities etc.
4.	Stakeholder needs	Women, special needs groups, etc. for e.g. women will need more toilets for subprojects like Mkuyuni fish market in Mwanza.
5.	Specific activities within constructed subprojects	Bus terminals; onion and fish markets, etc.
6.	Baseline data collection	Data related to the construction and operation of the subproject to be constructed e.g. climatic data, hydrological and geotechnical data, soil, natural hazards and disasters, typologies of users/beneficiaries.
7.	Health and Safety	Protection of workers, visitors and public from any injury or ill-health.

6.4 Supervision Engineer/Consultant

The PIU 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 measures[14]. The duties of the officer responsible for E&S supervision shall include the following:

i. Assist the PIU to ensure that the necessary environmental, social, 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, social, health and safety matters;
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), and Traffic Management Plans (TMPs) etc. together with the PIU;
iv. Review, approve and monitor 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's Environmental Code of Practice for Road Works (URT, 2009);

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

vi. Take appropriate action if the specifications are not followed as outlined in the contract and site-specific ESMP/CESMP;
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 environmental, social, health and safety (ESHS) impacts, and/or when the contractor(s) fails to implement the ESMP requirements / remedial actions;
x. Provide training to the contractor on the ESHS requirements to be followed;
xi. Monitor the contractor's ESHS 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 19 below summarizes the required personnel qualifications, certifications and experience.

Table 19: 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 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

6.5 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;
iv. Prepare and implement HSMP, GMP, Community Health Management Plan, LMP, GBV prevention action plan, and TMP (see guidelines in **Annex 12**);
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. Regularly 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 ESHS 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 and WB Standards.

In order to satisfactorily perform the above listed duties, the contractor shall appoint the staff described in Table 20 below to oversee the ESHS compliance requirements.

Table 20: 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 Manager	Degree in social sciences or equivalent and registered with 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

6.6 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 and TMPs.
iii. Review quarterly reports by the implementing agencies;
iv. Monitor compliance with the ESMF, SEP, LMP, ESCP and RPF;
v. Advise on the required instruments when informed of the presence of IP/SSAHUTLC for the subproject to go ahead; and
vi. Undertake implementation support Missions.

7. TRAINING AND CAPACITY BUILDING FOR ESMF IMPLEMENTATION

7.1 PO-RALG and TARURA

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 TACTIC Project. However, a training needs assessment may have to be undertaken during the design stage 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.

7.2 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 Bank has worked in the past with most of the participating LGAs (under TSCP and LGSP) and their capacity for meeting Bank's ESSs is known to be sufficient though might need some training in application of new requirements on labor, GBV etc. However, LGAs (especially the 18 new ones under Tier 3) will require some additional implementation support from consultants and the WBCU.

Two types of capacity building of the LGAs are foreseen:

i. WBCU will organize training program for capacity building of the new LGAs and enhancing that of the ones implementing TSCP and ULGSP in the following aspects:
   - World Bank's ESF;
   - How to use TACTIC Project E&S instruments (ESMF, RPF, SEP and LMP) including new requirements on labor, GBV etc.;
   - Subproject and site screening;
   - Resettlement issues;
   - Stakeholder Engagement;
   - Waste management;
   - Grievance handling;
   - GBV prevention action plan
   - 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.

7.3 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 10** and **Annex 11** respectively.

8. BUDGET FOR ESMF IMPLEMENTATION

Key items and costs related to ESMF implementation include: institutional development activities, training program, technical assistance, allowances for the review and approval of subproject management plans and annual reviews. In this regard, the WBCU will play a guiding role.

8.1 Training Needs Assessment (TNA)

Cost estimates are for payment in the form of consultancy services to private or public environmental and social practitioners. The estimated costs for these needs assessments are to cover all 45 participating LGAs.

8.2 Technical Training of LGAs Designated Staff in E&S Management

About 225 to 450 designated E&S staff (5 to 10) from the implementing LGAs will be trained in the topics described in section 7.2. This could include sub-project sector specialists (i.e. Municipal Engineer), Environmental Management Officers (EMO) and staff from departments responsible social planning/Community Development, Economic Planning, Urban Planning, Land and Health. This training would be provided in the form of two 5-day courses, with about 45 to 50 participants each. Cost for each course would include: per diem, food, transport, accommodation, conference hall, incidentals for participants, trainers and support persons.

Considering that staff turnover in the LGAs is often high, contingent budget has been considered in section 8.6 to ensure that any new staff are trained before they assume their duties with the project, and have a mechanism to do that on-demand as well as ensure there is a contingency plan in case of staffing gaps.

8.3 Workshop for Design Consultants

As mentioned earlier in section 5.3, some of the environmental and social impacts associated with constructed urban projects emanates from design faults related to site selection and inadequate consideration of stakeholders' requirements. Therefore this ESMF recommends workshops for Design Consultants on why and how to incorporate E&S considerations into the designs.

8.4 Workshop for Contractors and Supervision Engineers/Consultants

In order to ensure that they satisfactorily fulfil their roles and responsibilities as described in section 3.4 of this ESMF, WBCU in collaboration with relevant national entities such as NEMC, OSHA, and Workers Compensation Fund (WCF) will provide annual/biannual training workshops on environmental, social, health and safety requirements for Contractors and Supervision Engineers/Consultants. WB will also be invited to participate in the training as facilitator.

About 5 people from each contractor and consultant will participate in the workshop. This will be a two/three days workshop whose cost will include per diem, food, transport, accommodation, conference hall, incidentals for participants, resource persons and support person).

8.5 Cost for Preparation of ESIAs and Implementation of ESMPs

From the current list of priority investment subprojects identified by Tier 1 and 2 LGAs as included in **Annex 1**, each of the participating will tentatively be required to undertake at least 3 separate ESIAs. This is with the understanding that some of the subprojects like fish markets will need detailed ESIAs while other subprojects (e.g. roads/bus stands, storm water drains, crop markets/storage facilities, etc.) could be combined/grouped into one ESIA. Table 21 below presents a tentative grouping of subprojects and key experts for ESIA studies.

Table 21: Tentative Grouping of Subprojects and Key Experts for ESIAs

	Grouped subprojects	**Key ESIA Experts**
1.	Construction of urban roads to bitumen standard (asphalt concrete standard); bridges; and footbridges subprojects	**i. ESIA Team Leader/Environmental Expert** • Shall be responsible for the proper conduct of the entire study and shall be the principal contact person between the team and the Client. • The ESIA Expert shall have a degree in environment management, environmental engineering, environmental education and environmental science. A postgraduate qualification in above professional is an added advantage; • He/She must have a cumulative experience of 5 years in undertaking environmental impact assessment; • He/She must have done an ESIA on at least five (5) projects of a similar nature within the past five (5) years; • He/she must be registered as an EIA Expert; • He/She must have at least 3 years working experience in Sub-Saharan Africa; and • Fluency in written and spoken English are mandatory. ii. **Sociologist/ RAP Expert** • A holder of a degree in social science or related disciplines. Post graduate qualifications in social science are an added advantage; • He/She must have a cumulative experience of 5 years in undertaking social impact assessment; • He/She must have done social studies on at least five (5) similar projects within the five (5) years; • He/She must have at least 3 years working experience in Sub-Saharan Africa; • Experience working for 3 years on gender and GBV related issues; and • Fluency in both written and spoken English and Kiswahili are mandatory.
2.	Construction of modern bus terminals and existing bus stands, minibus stations, and lorry parking subprojects	As above
3.	Construction of crop markets, economic clusters and storage facilities subprojects	As above
4.	Construction of slaughterhouses; abattoir; and livestock market subprojects	As above
5.	Construction of fish markets and sea bank protection wall subproject	As above but a Marine Ecologist with at least 5 years of experience in similar projects should be also a key expert.

However, the exact number of the proposed subprojects requiring detailed ESIAs; preliminary environmental and social assessments; and preparation of ESMPs will be determined when the exact locations of the subprojects are known and screened by NEMC. These assessments and preparation of ESMPs will be undertaken by private certified environmental and social practitioners (individuals or firms) i.e. design consultants/ESIA consultants.

The cost for preparation of ESIAs and implementation of ESMPs will be covered by WBCU based on costs submitted by Design Consultants/ESIA Consultants and Contractors during the bidding process. Therefore, cost estimates for the same are not included in this ESMF.

8.6 Summary of Budget for ESMF Implementation by WBCU

Summary of cost estimates for the activities that will have to be undertaken by WBCU for effective implementation of the ESMF are summarized in Table 22 below. The cost for implementation of other safeguard documents (RPF, SEP, LMP and GRM) are presented separately in each of them.

Table 22: Budget for ESMF Implementation by WBCU

S/N	Activity	Cost per TACTIC Project Year (USD)						Total (USD)
		1	2	3	4	5	6	
1.	Implementation of ESMF	500,000	500,000	500,000	500,000	500,000	500,000	**3,000,000**
2.	ESIAs and ESMP preparations for Tier 1	4,500,000						**4,500,000**
3.	Training Needs Assessment	100,000						**100,000**
4.	Technical Training to WBCU	100,000						**100,000**
5.	Technical training to ULGAs	250,000						**250,000**
6.	Refresher workshops to WBCU and ULGAs			200,000		200,000		**400,000**
7.	Workshops to Design Consultants	15,000		15,000		15,000		**45,000**
8.	Workshops to Contractors and Supervision Consultants	30,000		30,000		30,000		**90,000**
9.	Community leaders awareness raising and sensitization	50,000	50,000	50,000	50,000	50,000	50,000	**300,000**
10.	Contingent training of LGAs staff	10,000	10,000	10,000	10,000	10,000	10,000	**60,000**
	TOTAL	**5,555,000**	**560,000**	**805,000**	**560,000**	**805,000**	**560,000**	**8,845,000**

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ANNEXES

Annex 1. List of Priority Subprojects for Tier 1 and 2 LGAs

A: TIER 1 LGAs

Municipality/City	Project
Arusha	Construction of Bus Terminal at Bondeni City Area in Muriet Ward
	Improvement of existing Central Bus Stand and Drainage at Themi Living Garden
	Redevelopment of Kilombero Market
	Upgrading to asphalt concrete of 2.7km road to connect the proposed Bondeni City Bus Terminal
	Upgrading to asphalt concrete of 4.8 km at Engosheraton road
	Upgrading to asphalt concrete of 4.8 km of Kibo road
	Upgrading to asphalt concrete of 4.0 km of Olasiti road
Kigoma	Construction of storm water drains (Bangwe, Burega, Rutale, and extension of Mlole and Katonyanga drains)[15]
	Extension of Wafipa – Kagera road (1.3km) and provision of bridge on Luiche River and access road (1km) on other side of the river
	Upgrading of Old Kasulu road (6.5km)
	Upgrading of Bangwe-Burega-Ujiji Road (7.5km)
Dodoma	Construction of Local Markets at Mkonze and Miyuji Communities
	Major improvement/Redevelopment of existing Sabasaba CBD Market,
	Improvement of existing Majengo Market (within the City Centre)
	Construction of mini-bus stands at Sabasaba, Michese, Chang'ombe, Mkonze, Nzuguni and Kizota Communities
	Construction of gender sensitive features (Footbridges) at Ntyuka, Chaduru and Maili Mbili Communities
	Construction of 10.0km Nzuguni-Tambuka Reli Road
	Construction of 8.0 km Road
	Upgrading of 3.5Km Roads
	Extension of Ilazo/Ipagala storm water drainage
	Construction of Warehouse and Building for Accommodation and other Services at Nala Lorry Park
Tabora	Construction of Bus Terminal and Connecting Roads
	Redevelopment of existing Tabora CBD Market
	Construction of urban roads (6km)
Mwanza	Mkuyuni Fish Market
	Rehabilitation of Mirongo River (to mitigate flooding in the downstream)[16]
	Construction of Igoma-Buhongwa Road 14km, part of the ring road that is economically critical for Mwanza

[15] See details in Annex 5.3
[16] See details in Annex 5.3

Ilemela	Kirumba Central Market, surrounding access roads (2.3km),
	Buswelu - Busenga - Coca Cola road 3.3 km,
	Buswelu-Nyamadoke -Nyamhongolo Road (9.5km)
Geita	Mkolani-Mwatulole Road (5.9 km)
	Nyankumbu to Kivukoni Secondary school Road (3.9 km)
	6km of access roads and drainage for SMEs Industrial area,
	Construction of Magogo Bus Terminal
Kahama	Zongomela industrial area upgrading (12.6 km of roads, minibus stand, and commercial area)
	Improvement of 7km roads at Kahama Central Business District (CBD)
	Construction of Bus Terminal at Mbula
	Construction of 3km Storm Water Drainage
	Upgrading of Sango Market
Morogoro	Construction of 5km Storm water drainage system in Flood prone Areas
	Construction of New Roads 10km to Asphalt Concrete Standard in Morogoro Municipality
Songea	Construction of Manzese 'A' Modern Market and 3km access road
	Roads in CBD (7.5 km)
Sumbawanga	Proposed development of Industrial area and associated infrastructures/facilities at Kanondo Industrial area
	Proposed Construction of 11Kms of Sumbawanga Municipal roads
Mbeya	Ilomba Machinjioni road (3.8 km)
	Tanesco Sae Kisanji -Uwata (1.3 km)
	Rejico – Nonde- Mbalizi Rd (1.7 km)
	Airport - Samora - Tanesco Sae Kisanji, and Kabwe Block T Sido (3.2 km)
	Block T - Kiwira - Makungulu. and Juhudi Road (3.3 km)
	Iziwa Road (4 km)
	Kihumbe – BOT (1.0 km)
	Uyole - Itezi (2.0 km)
	Kalobe Road (2.6 Km)
	Construction of Central Bus Terminal at Old Airport
	Daladala Bus Stop at Old Airport
	Improvement of Soweto Market
	Construction of Grain and Fruit Market at Old Airport
	Improvement of Sokomatola Market
	Improvement and extension of drainage system at Nzovwe,Ilolo, Isyesye/Ilemi,and Iyela.

B: TIER 2 LGAs

LGAs	Name of Subproject
Babati TC	Construction of Babati Bus Terminal
	Upgrading of Town Roads 10.2 km to Bitumen standard
	Construction 5 kilometres of drainage system (stand-alone drain)
Bariadi TC	Construction of Dump Site for Solid Waste (Land Fill)
	Construction of urban roads to bitumen standard (12.24 km)
	Upgrading of lorry parking by Constructing 70 shops, 3 warehouses, mini garage and waiting building
	Bariadi main market
	Bariadi Slaughterhouse
	Bariadi Livestock market
Bukoba MC	Construction of Kyakailabwa Bus Stand
	Construction of Central Market
	Construction of Kashai Market
	Upgrading of Municipal Roads to Bitumen Standard (7km)
	Construction of New Slaughterhouse
	Conservation of River Kanoni
	Construction of controlled dumpsite
Geita TC	Construction of Magogo Bus stand
	Upgrading of Nyankumbu Market
	Construction of controlled dumpsite
	Upgrading of road to asphalt concrete standard from Magogo VTC-NHC-Waja girls 3.2km
	Upgrading of road to asphalt standard from Nyankumbu to kivukoni Secondary school 3.9 km
	Upgrading of road to asphalt concrete standard from Mkolani to Mwatulole 5.9km
	SME industrial area
Iringa MC	Rehabilitation of Urban roads In Iringa Town (12 km) to Bitumen Standard
	Construction of Kihesa Modern Market.
	construction of controlled dumpsite at Mkoga
Kibaha TC	Upgrading of Visiga - Zegereni road 12.5km to asphalt concrete road at Kibaha Town.
	construction of modern dump site at MISUGUSUGU
	Construction of Mwanalugali Market.

LGAs	Name of Subproject
Korogwe TC	A: Upgrading of Roads to Asphalt Concrete Standard (13.2km)
	1. NMB-Ramia-Magunga Hospital Road 2.8 km.
	2. New bus stand-Morden Market Road 1.2 km.
	3. Lutheran - Mountain View Road 0.34km
	4. Sheramia-Mamba Club Road 1.2km.
	5. Bomani 1 Road 0.6km
	6. Bomani 3 Road 0.6km
	7. Bagamoyo-Mgombezi-Kibo Road 6.5km
	B: Construction of Drainage structures (1.8km)
	1.Drainage from Sheramia area to river Mbeza (1.0km)
	2.Drainage from Korogwe Teachers' hostel to river Mbeza 0.8km
Lindi MC	Abattoir equipment and Machineries
	Construction of the Modern Bus Terminal at Mitwero
	Construction of the Modern Central Market
	Construction of the Modern Fish market
	Upgrading of CBD 10 KM Roads to bitumen standards with streetlights
	Construction of Stand Alone Drain and provision of walkways to the ULGSP completed Roads
	Sea bank protection
Morogoro MC	Construction of 10km Storm water drainage system in Flood prone Areas
	Construction of Commuter Bus Phase II and Lorry Parking in Morogoro Municipal Council
	Construction of New Roads 10km to Asphalt Concrete Standard in Morogoro Municipal
Moshi MC	Construction of sanitary landfill
	Decommissioning of Njoro/ Kaloleni dumping site
	Storm water major drainage works 5km
	Improvement of Mbuyuni Market at Bondeni ward
	Upgrading of12 km road to Asphalt concrete.
Mpanda TC	Construction of 10 km of tarmac roads
	Rehabilitation of storage facility at Misunkumilo
	Construction of modern market at Kazima
	Construction of controlled dumpsite
	Construction of slaughterhouse at Magamba ward
	Construction of Modern parking at Mizengo Pinda Bus Terminal
Musoma MC	Construction of Nyasho Morden Market.

LGAs	Name of Subproject
	Construction of Bweri Bus Terminal
	Improvement of Nyarusurya Fish Landing Site
	Upgrading of Town and Ring Roads to Bitumen Standard 12.668km
	Construction of Kiagangala slaughterhouse and Improved Cattle Market.
Njombe TC	Improvement of the Proposed Street Roads to Asphalt Concrete Standards(19.1km)
	Mpechi Sokoni - Melinze (1.9km)
	Songea road - Nazareth (1.8km)
	Chaugingi - Magoda - Uwemba road (2.8Km)
	Nzengelendete - Utalingolo (2.2km)
	Mgendela Road - Power Station (2.2 Km)
	Kituo cha Hija (Mjimwema - Msete) Road (2Km)
	NBC-KIBENA road (1.4 Km)
	Lutilage - Joshoni (Makaburini) Road (1km)
	Airport Road (0.4Km)
	Mpechi Secondary Road (0.4km)
	Agreement Road (1.25km)
	Lunyanywi-Ikisa Road (1.75km)
	Construction of the proposed Njombe TC Irish Potatoes Pack House and Market Centre
Shinyanga MC	Construction of Kambarage Modern Market
	Construction of Regional Bus Terminal Ibadakuli
	Construction of 12 Km of tarmac road at Shinyanga Municipal.
Singida MC	Construction of International Onion market at Misuna
	Construction of the new Singida Central Market including 2.5km access roads
	Improvement of Misuna Bus Terminal
	Upgrading of Municipal Roads 8 kilometers to Bitumen standard
	Construction of stand-alone storm water drain of 1.4kilometers at Minga.
	Purchase, installation and commissioning of streetlights for the Road of length of 9 kilometers within CBD area
	Construction of modern Abattoir at Ng'aida
	Mandewa Modern Market
Songea MC	Construction Manzense 'A' modern Market with its acces 3km roads around
	Construction of controlled dumpsite
	Upgrading of road to Asphalt concrete standard 12km from Majengo to Subira
	Purchase of Abbatoir equipment
	Construction of Milling and Agro-processing Cluster
Sumbawanga MC	Proposed Construction of Crop produce Market (Rukwa International Crop Market) at Kanondo Industrial area
	Proposed Construction of 11 Kms of Sumbawanga Municipal Urban roads to bitumen standard (Asphalt concrete)
	Construction of controlled dumpsite at Mbalika area

LGAs	Name of Subproject
	Proposed Construction of community Economic Empowerment Centre.
	Community Agribusiness incubator center.
Tabora MC	Construction of Modern Terminal/Bus stand
	Construction of Slaughterhouse
	Construction of Market
	Construction of a controlled dumpsite
Kahama TC	Improvement of roads at Zongomela Industrial Park
	Improvement of roads at Kahama Central Business District (CBD)
	Construction of Bus Terminal at Mbula and Upgrading of Sango Market
	Construction of Busoka controlled dumpsite
	Construction of Storm Water Drainage
	Construction of Slaughterhouse at Busoka

Annex 2: Stakeholders' Views and Concerns

No	Name/Institution	Information Shared	Views/Concern	Response and Use in Report
	KASULU TC			
1.	People with disability representative	-TACTIC project Brief -Preparation of ESMF, RPF, and SEP documents -Likely Positive and Negative Impacts associated with the Project	The projects design needs to be friendly to people with disabilities.	The TACTIC's sub projects will come with structures designed and areas that are friendly to people with disabilities.
2.	TARURA Kasulu TC		When will the physical implementation start?	We are in the early stages of project's preparation, and you will be informed when the implementation is about to start.
			For roads projects there is a need to minimize/avoid resettlement to avoid/minimize compensation issues.	The comment has been taken and will be incorporated
3.	Planning Officer Kasulu TC		What is the total budget for each council?	Once the sub projects have been proposed, their budget will be known. Although there is no fixed budget councils due their difference and magnitude.
4.	Water Authority		Who will be responsible for the relocation of utilities? E.g. water utilities	The respective LGA in collaboration with the respective utility authority
5.	Executive Director - Kasulu TC		How will the capacity building be? The LMP should capture employment of locals as well as issues of minimum wages for workers	Capacity building is one of TACTIC's components. Therefore, Kasulu TC staffs will be capacitated as the project implementation continues.
6.	Community Representative		To ensure that the projects benefit the surrounding community, will these frameworks provide directives for that?	The TACTIC's SEP is the framework that will ensure that surrounding community's benefit from its sub projects by engaging them in all project phases. RPF will ensure to relocate and compensate surrounding communities before implementation. ESMF will ensure communities are environmentally and socially safe in all project phases as it assists in ways to mitigate and respond to environmental and social uncertainties.
7.	Town Planning Officer		The criteria provided for projects selection should consider the benefits for the respective council	Views have been taken and will be incorporated according to the selection and priorities that the Kasulu council will make.

No	Name/Institution	Information Shared	Views/Concern	Response and Use in Report
	KIGOMA UJIJI MC			
1.	Community Representative	TACTIC project Brief Preparation of ESMF, RPF, and SEP documents Introduction of Kigoma Ujiji MC proposed projects (Done by Council official) -Likely Positive and Negative Impacts associated with the Project	We are thankful for consulting about the TACTIC project, we have been involved since selection of projects to be executed.	You will be consulted until completion of the project.
2.	Nyakitonto Youth For Development Tanzania NGO		The project implementation should be transparent for better accountability	The project will be transparent in all its phases
			Community sensitization on projects should involve local NGOs to enhance projects ownership and sustainability	NGOs will be involved
3.	Water Authority		Early sharing of project information especially road works is important to avoid destruction of underground utilities e.g. water pipes as the water authority is expecting to implement a water project along the road	Early sharing of project information to stakeholders will be done during ESIA, RAP studies and detailed designs; including reviews on master plans or any planned settlements.

No	Name/Institution	Information Shared	Views/Concern	Response and Use in Report
4.	Bangwe WEO		Environmental Management consideration is important especially borrow pits reinstatement as the major challenge in Bangwe if they are not reinstated after completion of roads works.	ESIA, ESMP, borrow pits reinstatement plans, etc. will be prepared and implemented by Contractors.
			Assessment studies should be conducted early particularly on land availability to avoid grievances	Assessments such as project specific ESIA and RAP will be conducted early to ensure early compensation, relocation, pose mitigation measures and minimize grievances.
5.	Lake Tanganyika Water Basin Authority		Construction of storm water drains and stand-alone drains should take into consideration the issue of siltation	-Addressed in the ESMF to direct project -awareness on the land use -periodic maintenance of drains.
			It is important to involve institutions that enforce water and environmental legislations i.e. water basin authorities and NEMC during in order to understand the ecology of sub projects areas to come up with a resilient design.	All relevant stakeholders will be consulted including the mentioned ones for a real characteristic of ecology, and its relation to the municipal's master plan to come up with project designs that do not compromise the existing ecology.
			TARURA and Kigoma Ujiji MC should ensure that contractors have permits to use water for construction to avoid pollution of water sources.	This will be addressed by ESIA and ESMP
6.	NEMC		ESIA studies should be conducted on time for projects to have environmental certificates from NEMC before its physical implementation.	This ESMF entails that national requirements, including obtaining environmental approvals, are closely adhered to.
7.	Chairperson (River Luiche)		Siltation at river Luiche should be taken into account	This will be addressed by ESIA and ESMP
8.	RAS Office Representative		We suggest this meeting report to be shared back for clarity.	Will be disclosed on website and workshop for Stakeholders
			The RAS office to be consulted at every stage is important for projects follow-up.	The RAS office is consulted
			The RAS office needs to be involved in HIV/AIDS and GBV issues selection of NGOs for awareness campaigns	The RAS office will be involved in environmental social and issues including HIIV/AIDS, and GBV
			Identification and distribution of activities to be done by women and youth is important and has to be specified in the framework	Specified

No	Name/Institution	Information Shared	Views/Concern	Response and Use in Report
9.	Luiche River Sailor	TACTIC project Brief Preparation of ESMF, RPF, and SEP documents Introduction of Kigoma Ujiji MC proposed projects (Done by Council official.	The bridge construction will be a disadvantage for my income generation as I depend much on sailing people and goods to other side of the river. But I am happy about the proposed project, as it will simplify transportation and will bring development in my village.	Mechanisms for alternative income will be considered
10.	Primary School Pupils		It is difficult to cross the river during rainy seasons due to water overflows; a situation that doesn't allow us to go to school. We are happy about the proposed bridge construction as we will be able to attend school in all seasons of the year.	Bridge construction is partly meant to address this problem.
	BUKOBA MC			
1.	Head – Department of Environment	TACTIC project Brief Preparation of ESMF, RPF, and SEP documents Introduction of Bukoba MC proposed projects.	I suggest the TACTIC project to include the maintenance component and its budget for its sustainability.	The comment has been taken and will be handed for a discussion.
2.	Kashai Halisi Ward Chairperson		Consultation with Kashai market vendors should be conducted early to facilitate smooth temporary relocation (the proposed temporary relocation site is Pepsi area) Contractors should provide employment to locals	After this meeting we will visit Kashai market to gather information from vendors.
3.	Motorcycle Association Chairperson		The project to consider routine maintenance of existing roads surrounding the central market especially cleaning of drains.	Thank you for your comment, it has been taken and will be incorporated.
4.	Community Representative		Will all projects be implemented together? If not, the suggestion is to start with the construction of Kyakairabwa Bus Stand	Your suggestion has been taken and will be taken into account.
5.	Okoa Mazingira Group –NGO Chairperson		Road side drains should be properly directed into rivers to avoid floods in nearby settlements	One of the TACTIS's project goal is to reduce vulnerability to disasters including floods. TACTIC's ESMF will guide other sub projects specific studies such as ESIA to inform design of structures (market, roads, and bus terminals) with proper drains to avoid overflow of storm water into settlements.
6.	Ward Chairperson		It is important to involve local government authority especially ward level at every stage.	SEP will ensure this

No	Name/Institution	Information Shared	Views/Concern	Response and Use in Report
7.	The Water Basin Authority		All stand-alone drains designs should involve the basin authority and respective local communities to understand the ecology of the area before implementation.	All stand-alone drain stakeholders will be consulted and involved to come up with designs of resilient structures.
			During projects implementation, contractors must get permits from basin water authorities for water uses.	The comment has been taken and will be addressed.
8.	Kashai Markets Leader		The designs should take into account the volume of vendors who are inside and outside of the market	The comment has been taken and will be addressed accordingly.
9.	Bukoba RAS Office Representative		The location of controlled dumpsite needs to be out of town and that of the market	The comment has been taken and will be addressed accordingly.
			It is important that consultation to involve local communities for projects sustainability.	SEP ensures this
10.	Kashai market vendors	TACTIC project Brief Preparation of ESMF, RPF, and SEP documents Introduction of Bukoba MC proposed projects.	We already had a meeting here in the market, and we voted that we need a new one to ensure safety of our goods. Thus, we are happy that you still willing to upgrade.	This ESMF is meant to bring the project in a more sustainable manner.
			We already discussed in the previous meeting during ULGSP; that we will not relocate until a new business friendly relocation area has been identified and we should be involved	RPF/ Entitlement There will be sufficient stakeholders engagement
			We request a new market to have affordable monthly charges.	Operation and maintenance
			The proposed market needs to have enough space to accommodate vendors that are currently outside the market.	The comment has been taken and will be addressed accordingly.
			We should be given first priority in space distribution after completion of construction of the proposed market before new vendors get a chance.	
			We are happy about the project's information and we would like to participate in small works during implementation.	You will be engaged for your participation in construction works if qualified.
	CHATO TC			
	Chato TC	TACTIC project Brief Preparation of ESMF, RPF, and SEP documents	• There should be an establishment of transport mechanism of solid waste from the market to the dump site • It is important for the design to ensure there is a storage facilities of solid waste, storm water drainage for the Kasenda market, police and migration office as well • The modern market should include; offices, Bank services, and modern toilet as well as lodges for guests • The market should provide packing for the bodaboda and taxi	The comment incorporated on design Stakeholders will be engaged in the entire process of project design and implementation.

No	Name/Institution	Information Shared	Views/Concern	Response and Use in Report
			• If possible, include a bio-gas station use wastes from the market • The proposed design should be shared for discussion with other stakeholders • The design of the project should consider city planning • Engagement of the stakeholders to get their concern at the earliest stage • The LMP should clearly stipulate how locals should be considered in employment opportunities • Awareness campaign to the market users on possibility of pandemic diseases, environmental hazards should be conducted • Environmental issues to be emphasized during design and implementation • Early Compensation for affected people once identified	
	MUSOMA MC			
1.	Musoma MC	TACTIC project Brief Preparation of ESMF, RPF, and SEP documents Introduction of Musoma MC proposed projects	• Improvement of access road to the market/mwaloni and it should be in tarmac standard • Considering of the actual data from Valley offices to strengthen the infrastructures. • There should be a place of freezing ice and if possible, all those materials used like fridges along the market area. • Preventing contractors from dumping contraction materials for a long period of time to avoid environmental impacts. • Conduct thorough evaluation with the contractor to identify the existing water pipes within the project to avoid the effect of drainage • The government should consider strict laws on eradicating illegal fishing • The design consultant should ensure they collect data from the water basin offices for sustainability of the infrastructures.	The comment has been taken on board and will be incorporated during design
2.	NGOs		• HIV/AIDS awareness should be conducted before, during and after implementation of the projects. • There should be Bottom-up Approach. For the purpose of spreading awareness for the selected project to create the	Will be incorporated during implementation

No	Name/Institution	Information Shared	Views/Concern	Response and Use in Report
			spirit of ownership to the community and avoiding any conflict	
			• Enhance Environmental conservation near fish landing site	ESIA and ESMP to address
3.	Fish vendors Makoko landing site	TACTIC project Brief Preparation of ESMF, RPF, and SEP documents Introduction of proposed Fish market project	• The project should involve upgrading the access road to the market to Tarmac level • Within the market; there should be an area specified for petty traders that include food vendors etc. • Other necessities should include a police station, separate parking of bajajis, boda-boda and buses/daladala. • The design should consider sanitation facilities including quality and enough toilets. • It's important to consider proper mechanism for solid and liquid waste. • The construction activities can consider how to co-exist with the market users during construction to make continuation of business as normal instead of shifting them. • There should be a modification of good and quality place for drying other products from the lake • There should be a place for ice making, freezing ice and if possible, all those materials used like fridges along the market area. • Preventing contractors from dumping contraction materials for a long period of time to avoid environmental impacts.	- Mitigation/Enhancement measures - Entitlement matrix - Data collection during design
	TARIME TC			
	Tarime MC	TACTIC project Brief Preparation of ESMF, RPF, and SEP documents	• The budget for implementation of sub-project should be enough to cover the associated cost regards. • Number of sub-projects recommended under sub-project is it stipulated or we can come up with an exhaustive list	-Prepare a list but should be within recommended TACTIC -Actual budget will be determined during design
	SINGIDA MC			
	Singida MC	TACTIC project Brief Preparation of ESMF, RPF, and SEP documents	• Relocation of utilities should be budgeted for.	
			• There is need of conducting early meeting with utilities stakeholders before execution of the project like TANESCO, TANROADS, SUWASA, TTCL • Collaboration between the stakeholders and municipal during the implementation	

No	Name/Institution	Information Shared	Views/Concern	Response and Use in Report
		Introduction of Singida MC proposed projects	• Community Engagement must be taken care during the selection of the project and which to start with and the budget.	
	Onion International Market		• Consideration of packing for bodaboda, Bajaj and trucks • If necessary, people can be transfer to the previous market to allow construction • The design should consider establishing drainage system along the onion market • A Weight bridge should be part of the market • Proper plan of the market to ensure all activities associated with onion market are in cooperated and should ensure proper preservations of onion from damages • Ensure good sanitary and toilet facilities, clean water • Road/access contraction towards the market • Establishment of shorts foundation/poles to ensure sufficient air for onions to dry • Place for grading activities • Space for drying the onions • Building offices for other social services • There should be a health/first aid center, police, and fire extinguisher service. • Establishment of solid waste(dampo) • Market office should be built. • There should be a wall fence to around the market • Consideration of sheds	Will be considered in the design
	KAHAMA TC			
1.	Bus terminal	TACTIC project Brief Preparation of ESMF, RPF, and SEP documents Introduction of Kahama TC proposed projects	• The Mbulu bus stand has 40,000sqm and the council already has a title deed; ESIA-design-feasibility done • The current bus terminal is not sufficient for the town use • Most of the proposed sub-projects have been carefully selected to meet peoples need	Will be considered in the design
2.	Market (Sokoni)		• With regard to market we already have alternative location for relocating the vendors • There has been detail consultation with relevant stakeholders	Will be considered in the design
3.	Innocent WE/Ward Livestock Officer		• Consider type of data to be collected for such facilities i.e. male, female, type of products, quantity of solid waste e.tc	There will be separate grievance committees

No	Name/Institution	Information Shared	Views/Concern	Response and Use in Report
			• Separate grievances for each sub- project • Consider administrative issues with the sub-project	
4.	C/Person Market		• There is a storm water issue it should be considered • Consider those who were there from the beginning • Establish leadership • Consider the type of products to be sold and mode of selling them i.e. wholesale and retail.	Will be considered in the design
5.	Prisca Masana-(Secretary)		• Locals should be informed of their responsibilities to take care of the infrastructure • The road should be part of the market-ensure access • Kahama has several markets but most of them their infrastructure is poor so this should be done differently	Will be considered in the design
6.	M/Kiti (Bus Terminal)		• There should be leaders for different sections e.g. Agents, Shops etc. • Appreciate to be involved • Accept the new site • There should be an office for agents and design should consider demand	Will be considered in the design
7.	Elikana Charles-Katori- DSM		Appreciate involvement, it should not be only views but reality e.g., why should we pay for toilet, gate etc.	O&M issue
8.	Noel- Arusha-Bukoba (Arusha express)		• The design should consider Agents v/v bus owners • Consider food vendors, Traffic police • There are international travelers therefore immigration services are important	Will be considered in the design
9.	Sued Simba-Business man		• The cost of business rooms should considerate	Will be considered in the design
10.	Food Vendors		• Allocate an area for food vendors to sell their food, • Allocate an area for solid waste collection.	Will be considered in the design
11.	Shoemakers		• Put into consideration the shoemakers	Will be considered in the design
12.	C/Person for Bodaboda		• Put into consideration the Bodaboda	Will be considered in the design
13.	Secretary for Taxi driver		• Provision of a Stand for Taxis, Daladala and Lorries. • Construction of waiting shades whose design should consider the easiest way to enter.eg taxi, etc. • During operation, terms and conditions should apply	Will be considered in the design
14.	Agent		Toilet services should be provided and stakeholders of the stand should not pay to get the service.	Will be considered in the design

No	Name/Institution	Information Shared	Views/Concern	Response and Use in Report
15.	Muhasibu wa vibanda stendi		• We will be affected RAP entitlement • Provision of services like Hospital for first aid, Police stations, Immigration and fire service	RPF/RAP to address Will be considered in the design
16.	Fruit sellers		Should also be consider	Will be considered in the design
17.	C/Person - Igaimili Steet		Consider Security of the stand	Will be considered in the design
18.	Magina Petro		Allocate an area for parking bicycles	Will be considered in the design
19.	Omary Abdulla		Provide Notice for e.g. Change of location	
20.	Influential Person		• We are grateful for the project; it will completely change Kahama Town. Many Towns in Tanzania don't appear attractive because we implement projects without stakeholder's engagement • It's good to have roads in areas with concentration BUT the problem with this is compensation, it becomes very high, so we need to be careful we selection of projects • Stakeholders engagement is very important • Capacity Building should continue in all areas that the project is passing, this can minimize compensation impacts as well • All social services associated with bus terminals should be in place, e.g. banks, police, health etc.	Will be considered in the design
21.	SHEHAPI NGO		Kahama is a gate way so improvement should accommodate other neighboring Councils	Will be considered in the design
22.	SADS NGO		There should be water harvesting for sustainable economic activities Should also involve NGOs dealing with Health issues.	Design concept
	Environmental NGOs		Livestock keepers are a challenge in towns, they let their livestock feed on trees etc. Livestock Bylaws should be enforced.	O & M
	SHIDEFA		• Start identifying the positive and negative impacts of the project • Regarding the issue of population dynamics, there is a need to consider interventions of e.g. HIV/AIDS, COVID19, provision of condoms, awareness creation etc. • All beneficiaries Data should be considered including population growth.	Will be considered in the design

No	Name/Institution	Information Shared	Views/Concern	Response and Use in Report
	Zogomela- Association of Business People _ Gerald Gwanga		• Construction of 14.7 Kilometers road-which will help the people there • If possible, the Kilometers should be retained	Will be considered in the design
	Solid Waste Collection Company		• There is a problem with infrastructure to go and collect waste. • There is a problem with damp site regarding the entrance and exit. • Important to ensure that there is light • Ensure availability of Equipment's e.g. bull dozer • Fencing the Damp site for security purposes	Will be considered in the design
	D.Ngwale-AS Community Development		• Consider smart technology e.g. Solar for petty traders to use. • ESIA should look at what petty traders are using as source of energy so the design can consider bio- gas from the organic waste • Ensure detail data is collected prior to compensation of land for markets, bus terminals to minimize grievances.	Will be considered in the design
	Gerald Mhendo- NGOs		• Community Development Officers at Ward Level should be involved since they are the link between people and Town Executive Director(TED) • There is a problem of street Children from different parts of the country- there should be a strategy on how to handle them • Officials and Contractors should make good use of the locals for sustainability	Will be considered in the design
	Lulu Abdulla- NGO		• Selection of Storm Water	Will be considered in the design
	Ezra-Environment- AS- Mwanyeleji		• Capacity Building of teams should start now especially on contract management, supervision of contract	LMP
			• Council should start plans on how to start sorting solid waste at household level • Need for by-laws to ensure proper solid waste management • Prepare ESMPs and TMPs	Will be considered in the design
	Zongomela (Popular woman)		• The Stand should have an area for food vendors • There should be SHS engagement; those likely to be affected should be informed early to avoid conflicts	Will be considered in the design

No	Name/Institution	Information Shared	Views/Concern	Response and Use in Report
			• Sorting of solid waste; some might be used to produce energy, manure etc.	
	Environment NGOs		• Involve Stakeholders such as TANROADS, TARURA, TANESCO, etc. • Build capacity to ensure sustainability of the sub-projects on environmental aspects	Will be considered in the design O & M
	DC		• Awareness creation is on-going • We should ensure that some of the advertised works remain in Kahama. • Obtain skilled labour, food venders e.tc from Kahama • Some of these should be reflected in our contracts	SEP LMP
	TARURA-RC		• Consultants of the project design and supervision should be the same firm-to reduce cost and delay • Design consultant should have detailed SEP of utility authorities. You can engage RC and DC office to harmonize such situations • Procurement set up should be centralized • Labour issues should be well stipulated	- Procurement will be informed - SEP accommodate - LMP
	Zongomela-Dodoma Stand and Zongomela area business community		• Entrance/Exit-should consider advise from stakeholders • Increase the amount of electricity in the areas • Fence construction for safety and Security • Allow revenue collection • Machingas should stay inside the stand • It's important to improve roads and drainage as well as marking of street names • Consider solid waste collection points	Will be considered in the design
	Bodaboda Chairman		Locate area for Bodaboda	Will be considered in the design
	MWANZA CC			
	Director Mwanza City Council	TACTIC project Brief Preparation of ESMF, RPF, and SEP, LMP documents Introduction of Mwanza CC proposed projects	• The proposed design for fish market is to have two models together, which are: the ferry market design of Dar es Salaam and the Kirumba fish market so as to enhance business and income generation to approximately 3000 women who are 90% of the population in the existing market. • The design to have combined structures for additional services e.g. hotels.	Will be considered in the design

No	Name/Institution	Information Shared	Views/Concern	Response and Use in Report
	Chairperson –Fish market		Kamanga site is the biggest fish business center, they need to be involved in the discussion of the fish market design.	SEP/ESIA/Design consultant
	Fish Market Representatives		The current fish market is small. We would like to be shown the area of the new fish market. And will we be relocated to a new fish market?	After this meeting we are going to show you the proposed area for the new fish market. It has 22 acres.
			Will the new fish market area accommodate women shrimping off the Mswahili shore?	Priority will be those within the existing market
			We suggest the proposed market to an area for ice provision as the existing ones are privately owned.	Design will accommodate
	TANROADS		The Buhongwa – Kishiri – Igoma road, TANROADs was also considering to develop we will then let TACTIC implement- we shall communicate formally.	MCC to follow up with TANROADs
	TANESCO		The proposed fish market's capacity needs to be known early for TANESCO to plan early what kind of electricity capacity and electricity lines are needed to be distributed.	You will be informed in details during specific sub- project assessment studies i.e. detailed engineering design
	Mwanza RAS's Office		• How will siltation be handled in the proposed sub project of construction of Mlongo river drain? However, the river's upstream is in Ilemela, thus I think constructing a drain from Nyamagana will not be helpful enough, will the project cover both LGAs. • Tree planting along the drain to manage erosion.	The drain is within the storm water master plan which covers Mwanza CC and Ilemela MC
	Gender Organization stakeholder		The proposed fish market project should consider spaces for people with disabilities, sanitation for women and rest areas for children.	The ESMF will direct project specific ESIA study to address special needs to vulnerable and special groups including women and people with disabilities.
	Youth organization chairperson		How are the youth of Mwanza CC benefit from these proposed projects? Especially employment	Employment opportunities during implementation of the project will benefit the youth.
	Community Representative		The proposed fish market area is located near the regional road, for the pedestrian safety there has to be a crossing bridge.	The comment has been taken for incorporation
	Beach Management Chairman		Because the proposed fish market area is located near the Mswahili shore, we suggest that the project could include upgrading of the shore as well.	The comment has been taken for incorporation
	Mswahili shore fish vendors		We request the Mswahili shore to be improved to have spaces for drying fish and shrimps as well as adding washrooms as the existing ones do not meet the needs of the existing vendors.	The comment has been taken for incorporation
			We propose a new fish market to have affordable taxes.	Comment has been taken for incorporation

No	Name/Institution	Information Shared	Views/Concern	Response and Use in Report
	Lake Victoria basin officer	TACTIC project Brief Preparation of ESMF, RPF, and SEP documents Introduction of Mwanza CC proposed projects.	• The design consultant should consult our office for sharing design and data • During construction the contractor has to pay and apply for various permits	Noted
	SUMBAWANGA MC			
	Sumbawanga Municipality	TACTIC project Brief Preparation of ESMF, RPF, and SEP documents Introduction of Sumbawanga MC proposed projects	• The Municipal has alteration on some of the project, which were previously registered in TACTIC project, which are feeder roads around the bus stand Katumba bus stand in Katumba street which is 1.6 Km should be included in Tactic project the Road is very important as it will enhance access around the bus stand and the surrounding community. • The proposed area for a Municipal hospital, area for proposed six satellite town, and 120 residential plots in area, has poor access road. The road is 2.5 km • Solid waste production in Municipal is about 50- 60 tonnes of solid waste per day, the existing dumpsite is not fenced cannot accommodate the massive production of waste, modern dumpsite associated with facilities like modern solid waste truck will help • The area for the designated project has being acquired no any resettlement issues in this project. The proposed area for the dumpsite is about 5 km to the nearest village. • Sumbawanga is a business habour and among major maize producers in Tanzania, over 65% of people of Sumbawanga population engage in agricultural activities we need a modern market which will be associated with facilities including parking area for trucks, godowns and storage warehouses.	TARURA Regional coordinator will work closely with municipality during all project phases All stakeholder including TANESCO, TTCL and water Authority will be consulted prior project implementation All the roads leading to social services centers will be included in TACTIC Awareness creation to community concerning the project in all project phases

No	Name/Institution	Information Shared	Views/Concern	Response and Use in Report
			• The Municipality has acquired and allocated all of the prime land for the proposed project developments compensation has being done. • Sensitization and awareness for the community regarding the protection of the road and its facilities. • The project designs should consider the safety of disabled and children. • TANESCO, TTCL, and RUWASA should be fully informed during the mobilization of the project, as this utility will relocated (for linear project)	
	TUNDUMA TC			
	Tunduma TC	TACTIC project Brief Preparation of ESMF, RPF, and SEP documents	• Waste collection is a challenge to the whole TC, waste generation capacity of 400 tones/day. In the master-plan, ***sanitary landfill*** area is located about 2km from residential area. The proposed sanitary landfill has a total area of about 21.4 acres, located at Numole in Chiwezi Ward. • Title deed of ownership of the area to be under the TC is in progress. Proposed to have waste collection trucks, waste collection containers. • Sewerage disposal - the whole Tunduma TC has no facility for sewarage disposal (Waste Water Stabilization Ponds). Two privately owned trucks serve the community, the collected sewer has to be transported to Mbeya for disposal in the Waste Water Stabilization Ponds. • Currently Accessibility to burial sites especially during rainy seasons is a challenge. TC master plan considered to set aside burial areas on different locations.	Dumpsite and sewage system construction will be included in TACTIC All roads leading to social services and the one leading to burial places will be included in TACTIC project
	KONDOA TC			
	Kondoa Town Council	TACTIC project Brief Preparation of ESMF, RPF, LMP and SEP documents	• We are thankful to the GOT towards implementation of different projects toward poverty eradication in Tanzania. • Kondoa TC has allocated land for different projects.	The designs will include infrastructures for disables, children All stakeholder will be consulted during all [project phases

No	Name/Institution	Information Shared	Views/Concern	Response and Use in Report
			• The existing dumpsite can be upgraded, the area is approximately 4 hectares and about 6 km from residents, no encroachers. • The municipality has a slaughter house which need to be upgraded, the town council has compensated all of people. • All of the stakeholders should be engaged during all project phases especially for construction of a bus stand, bus drivers, should be consulted for their views and concerns. • Locals should be a priority for employment • The town council intends to construct lorry packing area, the area is approximately 7 acres, all of the compensation issues have been cleared and the documents are available. • Designs for roads construction should include other commuter, i.e. disabled and children. • The proposed market should include other facilities i.e. sanitary issues, solid waste management area, • Sensitization to community during all project phases.	TARURA council manager will collaborate closely with District Executive Director (DED), on selection of roads to be included in TACTIC project Encroachers will be not be allowed to encroach in proposed project areas
	DODOMA CC			
1	Dodoma City (Tier 2)	TACTIC project Brief Preparation of ESMF, RPF, and SEP documents introduction of Dodoma CC proposed projects	• Wami - Ruvu basin should be consulted in the hydrological and ground water studies and consideration of green areas for recharge of ground water • Sabasaba, Bonanza, Majengo market leaders asked to be consulted so that they can give their opinions on the designs of the proposed building. • Design has to consider the future population growth projections • An access road to the markets and provision of water, toilets and facilities for people with special needs should also be considered. • The Nzuguni - Mahomanyika road being an important alternative road to Government City, Chamwino and joining the Hombolo road has to be considered to be included possibility of this road during rainy season is a big challenge. • Nzuguni road serve the community in Nzuguni ward which its population is increasing spontaneously and the only alternative route to Government City.	Wami Ruvu will be consulted during all project phases (from mobilization to operation of the project) Prior to project implementation all stakeholders will consulted The designs of the project will provide provisions to disabled The town council is working hard for implementation of different projects, Nzuguni road will be included on upcoming projects The TARURA Environmental Team advised that there should be a means of controlling the huge flow downstream the drainage to be built so that it can minimize

No	Name/Institution	Information Shared	Views/Concern	Response and Use in Report
			• The proposed bus stands and markets should consider provisions to people with special needs.	the space as the space is already encroached and building
	TANGA CC			
	Tanga City Council	Introduction to Tactic Project	• We are thankful for the implementation of the project • We would like to invest on project development for income generation, business stimulation, this will enable expansion of our town, generating projects • For market we would wish the management to be consulted during the designs of the market	During project implementations all stakeholders shall be consulted
			• During designing phase for proposed project (roads, markets, bus stand,) all stakeholders should be consulted from local government, institutions, CBO etc. • All business man/women in the market will be relocated temporarily to another area for them to proceed with their business • Improvement of fish market, will increases the revenue for the government • Designs should favor disabled • Women should be given priority on employment • If people will be compensated, it should be fair • Stakeholders to be engaged during the whole cycle of the subproject right from the design phase. For example, existing fish market and the Central market to be eqioed with "the appropriate size and shape of "vizimba" required by users". • When designing a modern fish market issues of well-designed cold rooms, solid and liquid waste systems and preferred" kizimba" should be considered and implemented into design. The sizing and shapes of the vizimba are so important to the fish business people. Such consideration and especially installation on cold rooms will raise the quality of fish being sold and hence raise the earnings and revenues earned by the Government	All market users will be consulted during project implementation (from mobilization phase The town council will make sure that women are given priority in employment Cold room facilities will be included in the designs
	LINDI MC			
1.	Lindi Municipal Council	Introduction TACTIC project; preparation of the	• The modern market should include areas for petty traders and other entrepreneurs especially women. This should also be done in the fish market.	Will be considered in the design

No	Name/Institution	Information Shared	Views/Concern	Response and Use in Report
		ESMF, RPF and SEP Document Proposed sub-projects includes sea bank protection and beach beautification; abattoir equipment and machineries; construction of modern fish market; and construction of the modern central market	• Toilets at the bus terminals and markets should consider people with special needs • The proposed area for fish market is small, muddy and not safe, because it is very close to the road and roundabout- they afraid of accidents. (Mangrove area). They suggested another area near by the existing *"Mwalo"* • For the stand-alone drain, thorough consultation should be done to local residents, as they know source of water, and water ways so that to avoid future impacts • Market to include parking for cars, bajaji and bodaboda	
		Construction of the Modern Bus Terminal at Mitwero Upgrading of CBD 10KM roads to bitumen standards with street lights Construction of stand-alone drain and provision of walk ways to the ULGSP Completed roads	• The modern fish market should include; area for processing fish, cold rooms for storage, fish auction areas- *"minada",* and *"mama lishe"* • The mangrove area should not be used as fish market area, because the mangroves help to conserve the environment. • Awareness should be provided to the abattoir users, both sellers and buyers. • There should be a difference of skip pad (*"Vizimba")* in the design- for whole sellers and retailers. • Stakeholders' engagement should be done in a broader way, especially with TANESCO, TANROADS and water authority even during implementation. • Early notice should be given to the people who might be relocated to avoid conflicts during compensation. • During implementation of the project, environmental management should be a key aspect to avoid environmental destruction. • Solid waste management and equipment should be considered in the markets design. • Office and conference centers should be included in the design of the market and bus terminal. • Fish market should include changing room for them to keep their uniforms and other equipment.	The land belongs to the Council and they have title deed so there will be no compensation issues

Annex 3: Generic Impacts and Mitigation Measures for Different Subprojects

A. GENERIC IMPACTS AND RESPECTIVE MITIGATION MEASURES FOR CONSTRUCTION OF URBAN ROADS TO BITUMEN STANDARD (ASPHALT CONCRETE STANDARD); BRIDGES; AND FOOTBRIDGES SUBPROJECTS

Subproject phase	Environmental and Social Impacts		Mitigation Measures	Relevant ESS Tools
Mobilization and Construction	1.	Increased pressure on water resources	-Contractors to get permits from Water Supply and Sanitation Authority and water basin offices for their share allocation of water; and to install water storage tanks.	ESMP
	2.	Soils and groundwater contamination	-Prepare a Hazardous Substance Control System and Emergency Response Plans that will include preparations for quick and safe clean-up of accidental spills.	Hazardous Waste Management Plan (HWMP) and Emergencies Response Plans (ERP).
	3.	Air pollution	-Water sprinkling on surfaces that produce dust; -Regular air quality tests to enhance air quality monitoring; -Provide PPEs such as nose masks to site workers; -Regular health check-ups to workers ascertain their health standards;	ESMP
	4.	Noise and excessive vibration generation	-Construction activities should be carried only during the day when most of the neighbors are active or are carrying on with their normal day chores. The appropriate time could be between 0800hrs to 1800hrs. - PPEs i.e. earmuffs and earplugs should be provided to site workers when operating on noisy machineries and in a noisy environment.	ESMP
	7	solid/liquid wastes generation	-Installation and proper operation systems for wastewater treatment, recycling of debris, and backfilling. -Provision of litter bins, containers and refuse collection facilities. -Provision of temporary site dumping site approved by the construction supervision consultant and relevant local authorities prior to collection and disposal through a licensed waste collector. -Establish an agreement for regular waste collection by a licensed waste operator.	Waste Management Plan/ESMP
	8	Health and safety Impacts to workers and communities	-Work as per pre-approved method statement only after getting required permit to work -Carry out site specific risk assessment before start of work and implement the required controls -Provide required welfare facilities for the workforce -Take measure to prevent unauthorized entry of community as well as not to effect community with their activities. -Using properly fitting personal protective equipment (PPE) to avoid injuries and illness including working/safety boots, overalls, helmets, goggles, earmuffs, masks, gloves etc.; -COVID-19 prevention measures -Adapt effective emergency response plans i.e. First Aid and medical facilities. -Make arrangements with local health facilities in case of serious emergency. -Ensure food provided by local individuals is hygienically prepared and to allow only authorized food vendors to supply food for site workers. - Reporting to OSHA, National team and WB within 24 hours of occurrence of any accident or near miss which can cause fatal or permanent disability.	HSMP

Subproject phase	Environmental and Social Impacts		Mitigation Measures	Relevant ESS Tools
			-Prepare and implement HSMP in the format given in section 4.9.	
	9	Traffic congestion and accidents	-To develop a traffic management plan for the traffic around construction site e.g. using alternative roads. -Proper traffic control signage should be installed. This includes road signage to be erected near all the entrances and junctions to control construction traffic. -Delivery of materials should be planned at night when there is minimal traffic. -Prepare a plan for communication with residents and businesses surrounding the construction site. Effective communication with local stakeholders is essential to minimize the inconvenience and ensure safety of the surrounding community.	TMP & SEP
	10	Increased risk of HIV/AIDS transmission	-Site Specific Code of Ethical Conduct to be signed by all workers to encourage respect to local communities. -A safety, health and environment induction course shall be conducted to all site workers, with more emphasis on HIV/AIDS.	CoC & ESMP
	11	Complaints and Grievances/Social Conflicts	-Ensure all stakeholders are consulted early and their opinions are taken into consideration; -Provide grievance redress mechanism for all stakeholders; -Advice the community at the vicinity on grievances reporting channel; -Prioritizing the local manpower for both skilled and unskilled labour; -Implement the proposed grievance resolution mechanism.	ESMP, SEP, LMP, & RAP
	12	Disturbance of utility structures i.e. water pipelines, electricity networks, etc.	-Consultation with responsible authorities such as TANESO, Water and Sanitation Authorities, TTCL etc. for proper relocation of utilities to avoid cut off services to communities in the whole project cycle -Where necessary, provision of temporary alternative solutions to communities (water, power, etc.).	SEP, RPF
Demobilization of Construction Phase	1.	Solid wastes (scraps and debris onsite)	-The waste should be properly segregated and separated to facilitate recycling of some useful waste materials; e.g. stones can be used for backfills. -Integrated solid waste management system may also be adopted through hierarchy of options like source reduction, recycling, composting and re-use. -All the solid wastes should be collected by the Municipality as a responsible organ for waste collection and disposal.	ESMP & Waste Management Plan
	2.	Land degradation at borrow pits and quarry sites	-All borrow pits and quarry sites to be used as source of construction materials should be reinstated after completion of construction activities.	ESMP
Operation	1.	Irresponsible operation of vehicles e.g. overspeeding	-Installation and regular repair or replacement of traffic signs; -Road safety awareness to road users at the vicinity	TMP
Decommissioning	1.	Solid wastes (scraps and debris onsite)	-The waste should be properly segregated and separated to facilitate recycling of some useful waste materials; e.g. stones can be used for backfills. -Integrated solid waste management system may also be adopted through hierarchy of options like source reduction, recycling, composting and re-use. -All the solid wastes should be collected by the Municipality as a responsible organ for waste collection and disposal.	ESMP & Waste Management Plan
	2.	Air, Water and Soil Pollution	-Solid and liquid waste resulting from demolition or dismantling works will be managed as described in the mobilization and construction phase.	ESMP

Subproject phase	Environmental and Social Impacts		Mitigation Measures	Relevant ESS Tools
	3.	Health and Safety Concerns	-Work as per pre-approved method statement only after getting required permit to work -Carry out site specific risk assessment before start of work and implement the required controls -Provide required welfare facilities for the workforce -Take measure to prevent unauthorized entry of community as well as not to effect community with their activities. -Provision of PPE to site workers to avoid injuries and illness i.e. working/safety boots, overalls, helmets, goggles, earmuffs, masks, gloves etc. -A first aid kit should be provided within the site. This should be fully equipped at all times and should be managed by qualified persons. -Make arrangements with local health facilities in case of serious emergency. -Regular OHS trainings to site workers including drugs, alcohol, pandemics, epidemics, etc. -Prepare and implement HSMP in the format given in section 4.9.	HSMP

B. GENERIC IMPACTS AND RESPECTIVE MITIGATION MEASURES FOR CONSTRUCTION OF MODERN BUS TERMINALS AND EXISTING BUS STANDS, MINIBUS STATIONS, AND LORRY PARKING SUBPROJECTS

Subproject phase	Environmental and Social Impacts		Mitigation Measures	Relevant ESS Tools
Mobilization and Construction	1.	Land Take and Resettlement	Proper Valuation and compensations to PAPs	RPF
	2.	Loss of employment in adjacent commercial facilities	Follow RPF and RAP recommendations	RPF
	3.	Disruption of Transportation and Utility Service Provision	Project steering committee and include a Utility Working Group comprising of Heads of the various utility bodies including TANESCO, DAWASA, TTCL, etc.	RPF
	4.	Air quality, noise and dust generation problems to nearby residents and pedestrians and/or disturb nearby activities.	Sprinkling of water and provision of protective gears to construction workers by the contractor.	ESMP
	5.	Risk of Soil contamination from oils and fuels	-Proper Hazardous waste management	ESMP
	6.	Soil erosion and flooding	-Proper drainage system	ESMP
	7.	Health and safety Impacts to workers and communities	-Work as per pre-approved method statement only after getting required permit to work -Carry out site specific risk assessment before start of work and implement the required controls -Provide required welfare facilities for the workforce -Take measure to prevent unauthorized entry of community as well as not to effect community with their activities. -Using properly fitting personal protective equipment (PPE) to avoid injuries and illness including working/safety boots, overalls, helmets, goggles, earmuffs, masks, gloves etc.;	HSMP

Subproject phase	Environmental and Social Impacts		Mitigation Measures	Relevant ESS Tools
			-Adapt effective emergency response plans i.e. First Aid and medical facilities. -Make arrangements with local health facilities in case of serious emergency. -COVID-19 prevention measures -Ensure food provided by local individuals is hygienically prepared and to allow only authorized food vendors to supply food for site workers. - Reporting to OSHA within 24 hours of occurrence of any accident or near miss which can cause fatal or permanent disability. -Prepare and implement HSMP in the format given in section 4.9.	
Demobilization		Solid wastes (scraps and debris onsite)	The waste should be properly segregated and separated to facilitate recycling of some useful waste materials; e.g. stones can be used for backfills. -Integrated solid waste management system may also be adopted through hierarchy of options like source reduction, recycling, composting and re-use. -All the solid wastes should be collected by the Municipality as a responsible organ for waste collection and disposal.	ESMP
Operation		Improved solid waste management	None	ESMP
	1.	Improved opportunities for creation of employment, diversification of livelihood and increased productivity		SEP, LMP
	2.	Improper parking and congestion	Demarcate areas for parking lorries, bused and minibuses separately with traffic signs showing specific regions/areas they travel to.	TMP
	3.			
Decommissioning	1.	Inappropriate disposal of different materials may involve environmental harm.	Recycling and disposal of waste to be done by a company with a license and experience in this type of decommissioning projects	ESMP

C. GENERIC IMPACTS AND RESPECTIVE MITIGATION MEASURES FOR CONSTRUCTION OF CROP MARKETS, ECONOMIC CLUSTERS AND STORAGE FACILITIES SUBPROJECTS

Subproject phase	Environmental and Social Impacts		Mitigation Measures	Relevant ESS Tools
Mobilization and construction	1.	Disrupted businesses and income	-Temporarily relocated and paid Disturbance Allowance -Early consultation to be done to impacted people -Awareness and sensitization to all market users (during the implementation of the subprojects)	RPF
	2.	Increase dust, noise, water pollution, solid/hazardous	-Adopt measures to avoid or minimize dust, noise, wastes, and other impacts -Prepare Environmental and Social Management plan (ESMP)	ESMP
	3.	Waste generation and littering	-Waste collection, recycling, re-use or transportation to approved dumping sites for proper disposal mechanisms according to guidelines set by respective local authority	ESMP

Subproject phase	Environmental and Social Impacts		Mitigation Measures	Relevant ESS Tools
	4.	Exposure to HIV/AIDS transmission	-Engage a qualified Service Provider (NGO) to establish and run a specific HIV/AIDS awareness and prevention program -Safety, health and environment induction courses-awareness	ESMP
	5.	Compensation/ resettlement	Valuation and compensations to PAPs	RPF
	6.	Impacts on water resources and management	Adoption of alternative strategies to avoid/minimize extraction from natural water bodies -Sourcing from authorized Municipal/community water supply systems	ESMP
	7.	impacts on community livelihoods-increase local government incomes	None	RPF, SEP, LMP
	8.	Oil spillage from the construction machinery and equipment	-Changing of such oils must be done at designated yards and the oils disposed off as per the requirements by the Tanzania Environmental Laws, Regulation and Policies.	ESMP
	9.	Health and safety Impacts to workers and communities	-Work as per pre-approved method statement only after getting required permit to work -Carry out site specific risk assessment before start of work and implement the required controls -Provide required welfare facilities for the workforce -Take measure to prevent unauthorized entry of community as well as not to effect community with their activities. -Using properly fitting personal protective equipment (PPE) to avoid injuries and illness including working/safety boots, overalls, helmets, goggles, earmuffs, masks, gloves etc.; -Adapt effective emergency response plans i.e. First Aid and medical facilities. -Make arrangements with local health facilities in case of serious emergency. -COVID-19 prevention measures -Ensure food provided by local individuals is hygienically prepared and to allow only authorized food vendors to supply food for site workers. - Reporting to OSHA within 24 hours of occurrence of any accident or near miss which can cause fatal or permanent disability. -Prepare and implement HSMP in the format given in section 4.9.	HSMP
Demobilization		Increase in the level of debris as a result of excavation and demolition works	Re-use of some of the materials and depositing in designated dumpsites of non-reusable debris as per the laws of Tanzania.	ESMP
	1.	Oil spillage from the construction machinery and equipment	Changing of such oils must be done at designated yards and the oils disposed off as per the requirements by the Tanzania Environmental Laws, Regulation and Policies.	
Operation		Increased economic activities	None	ESMP
	4.	Improved sanitary systems in the markets, solid waste management, drainage and storm water management,	None	ESMP

Subproject phase	Environmental and Social Impacts		Mitigation Measures	Relevant ESS Tools
	5.	Increase in solid waste generation	Proper segregation and management	ESMP
	6.	Increased spread of HIV/AIDS	Public education/ Make condoms available	ESMP
	7.	Fire incidence from the market may result to loss of life and property	-Training on firefighting and safety measure -Provide firefighting equipment -Provide fire assembling points and sensitize the market association	ESMP
Decommissioning	1.	increase in the level of debris as a result of excavation and demolition works	Re-use of some of the materials and depositing in designated dumpsites of non-reusable debris as per the laws of Tanzania.	ESMP
	2.	Inappropriate disposal of different materials may involve environmental harm.	Recycling and disposal of waste to be done by a company with a license and experience in this type of decommissioning projects	ESMP

D. GENERIC IMPACTS AND RESPECTIVE MITIGATION MEASURES FOR CONSTRUCTION OF FISH MARKETS AND SEA BANK PROTECTION WALL SUBPROJECTS

Subproject phase	Environmental and Social Impacts		Mitigation Measures	Relevant ESS Tools
Mobilization and construction	1.	Water Pollution due to increase of chemicals from construction materials	-Control and minimize use of various chemicals -proper solid and liquid waste management plan to minimize discharges into water	ESMP
	2.	Increased noise levels and Vibration due to construction	-Select plant and equipment and specific design work practices to ensure that noise emissions are minimized during construction and operation including all pumping equipment -Design to give due regard to temporary and permanent mitigation measures for noise and vibration from construction and operational vibration impacts.	ESMP
	3.	Health and safety Impacts to workers and communities	-Work as per pre-approved method statement only after getting required permit to work -Carry out site specific risk assessment before start of work and implement the required controls -Provide required welfare facilities for the workforce -Take measure to prevent unauthorized entry of community as well as not to effect community with their activities. -Using properly fitting personal protective equipment (PPE) to avoid injuries and illness including working/safety boots, overalls, helmets, goggles, earmuffs, masks, gloves etc.; -Adapt effective emergency response plans i.e. First Aid and medical facilities. -Make arrangements with local health facilities in case of serious emergency. -COVID-19 prevention measures -Ensure food provided by local individuals is hygienically prepared and to allow only authorized food vendors to supply food for site workers. - Reporting to OSHA within 24 hours of occurrence of any accident or near miss which can cause fatal or permanent disability. -Prepare and implement HSMP in the format given in section 4.9.	HSMP and TMP

Subproject phase	Environmental and Social Impacts		Mitigation Measures	Relevant ESS Tools
	4.	Increased generation of wastes along the beach	-provision of waste bins and segregate waste at source to ease disposal -educate and sensitize the workers and the general population about waste generation and disposal	ESMP
	5.	Increased incidence of transmission of HIV/AIDS and other communicable diseases	-communities and workers should be educated and made aware of such dangers, particularly of HIV/AIDS and water-borne diseases to ensure they take preventive measures	ESMP
Demobilization	1.	Solid wastes (scraps and debris onsite)	-The waste should be properly segregated and separated to facilitate recycling of some useful waste materials; e.g. stones can be used for backfills. -Integrated solid waste management system may also be adopted through hierarchy of options like source reduction, recycling, composting and re-use. -All the solid wastes should be collected by the Municipality as a responsible organ for waste collection and disposal	ESMP
	2.	Oil spillage from the machinery and other equipment during demobilization	-Changing of such oils must be done at designated yards and the oils disposed off as per the requirements by the Tanzania Environmental Laws, Regulation and Policies.	ESMP
Operation	1.	Drowning incidences	-Precautions and warning signs to be installed near the sea bank. -beach rules and regulations to be applied.	HSMP
	2.	Littering of solid waste around the sea bank.	- beach rules and regulations to be applied -Provision of waste bins.	ESMP
Decommissioning	1.	Pollution a contamination from demolished structures	-Changing of such oils must be done at designated yards and the oils disposed off as per the requirements by the Tanzania Environmental Laws, Regulation and Policies.	ESMP

E. GENERIC IMPACTS AND RESPECTIVE MITIGATION MEASURES FOR CONSTRUCTION OF SLAUGHTERHOUSES; ABATTOIR; AND LIVESTOCK MARKET SUBPROJECTS

Subproject phase	Environmental and Social Impacts		Mitigation Measures	Relevant ESS Tools
Mobilization and construction	1	loss of vegetative habitats will occur, physical site disturbance and noise from construction activities	Site selection to avoid sites of nature conservation value ensuring adequate survey of flora and fauna	ESMP
	2	Disease causing agents can spread rapidly, especially in intensive livestock operations. Animal diseases can enter a facility with new animals, on equipment, and on people.	Identify and segregate sick animals and develop management procedures for adequate removal and disposal of dead animals.	HSMP
	3	Air emissions from animal production include ammonia	Consider composting of manure/or other products to reduce odor emissions;	ESMP
	4	Environmental and human health effects of laboratory chemicals and reagents	Have a plan in place for the use, handling, storage and disposal of hazardous materials and waste; Have safety requirements in place for the handling, storage, and response to spills or exposures;	HSMP

Subproject phase	Environmental and Social Impacts		Mitigation Measures	Relevant ESS Tools
	5	Solid Waste generation	Consider mixing of waste feed with other recyclable materials destined for use as fertilizer, or else consider incineration or land disposal options, based on an assessment of potential impacts of each option to air, soils, and surface water / groundwater.	ESMP
	6	Health and safety Impacts to workers and communities	-Work as per pre-approved method statement only after getting required permit to work -Carry out site specific risk assessment before start of work and implement the required controls -Provide required welfare facilities for the workforce -Take measure to prevent unauthorized entry of community as well as not to effect community with their activities. -Using properly fitting personal protective equipment (PPE) to avoid injuries and illness including working/safety boots, overalls, helmets, goggles, earmuffs, masks, gloves etc.; -Adapt effective emergency response plans i.e. First Aid and medical facilities. -Make arrangements with local health facilities in case of serious emergency. -COVID-19 prevention measures -Ensure food provided by local individuals is hygienically prepared and to allow only authorized food vendors to supply food for site workers. - Reporting to OSHA within 24 hours of occurrence of any accident or near miss which can cause fatal or permanent disability. -Prepare and implement HSMP in the format given in section 4.9.	HSMP
Demobilization	6	Generation of spoils and other construction wastes	Develop a Waste Management Plan (WMP) -Promote waste avoidance; reduction; reuse and recycling as applicable -Ensure proper handling, and disposal of wastes (especially contaminated soil, concrete, oils, grease, lubricants, metals, etc.)	ESMP
Operation	7	Air emissions, soil and groundwater pollution from slaughter houses discharges as well as solid and biohazard waste	-put in place standard waste treatment plan -emission permit and control the air emission -Ground water monitoring point -Employ health and safety officer	ESMP
	8	Ground degradation and water contamination	-Prepare a Hazardous Substance Control System and Emergency Response Plans that will include preparations for quick and safe clean-up of accidental spills.	ESMP
Decommissioning	9	Air, Water and Soil Pollution	put in place standard waste treatment plan -emission permit and control the air emission -Ground water monitoring point	ESMP
		Soils and groundwater contamination	-Prepare a Hazardous Substance Control System and Emergency Response Plans that will include preparations for quick and safe clean-up of accidental spills happening in the middle of dismantling of existing structures.	ESMP

Annex 4: Template of Subproject Screening Form

The following form should be included in the Project Implementation Manual (PIM).

Sub-project name:	
Sub-project location (include map/sketch):	*Village/Mtaa, Ward, District/Municipality/Township, Region).*
Type of activity :	*(e.g., new construction, rehabilitation, periodic maintenance)*
Proposed date of commencement of work:	
Technical drawing/specifications reviewed :	*(circle answer): Yes No*

1. Exclusion Criteria

	Criteria	Yes	No
i.	The project will take place in disaster prone areas but is not meant to mitigate flood disasters?		
ii.	The project will take place in protected areas or buffer zones of protected areas?		
iii.	The project will lead to conversion or degradation of natural habitats such as wetlands?		
iv.	The project will involve land reclamation (i.e., drainage of wetlands or filling of water bodies to create land)?		

Subprojects that passes the Exclusion Criteria (i.e. without scoring any "Yes") will proceed with screening while those which scores "Yes" will be rejected.

2. Site Selection

When considering the location of a sub-project, rate the sensitivity of the proposed site in the following table according to the given criteria. Higher ratings do not necessarily mean that a site is unsuitable. They do indicate a real risk of causing undesirable adverse environmental and social effects, and that more substantial environmental and/or social planning may be required to adequately avoid, mitigate, or manage potential effects.

Issues	Site Sensitivity			Rating
	Low	Medium	High	
Natural habitats	No natural habitats present of any kind	No critical natural habitats; other natural habitats occur	Critical natural habitats present	
Water quality and water resource availability and use	Water flows exceed any existing demand; low intensity of water use; potential water use conflicts expected to be low; no potential water quality issues	Medium intensity of water use; multiple water users; water quality issues are important	Intensive water use; multiple water users; potential for conflicts is high; water quality issues are important	
Natural hazards vulnerability, floods, soil stability/ erosion	Flat terrain; no potential stability/erosion problems; no known volcanic/seismic/ flood risks	Medium slopes; some erosion potential; medium risks from volcanic/seismic/ flood/ hurricanes	Mountainous terrain; steep slopes; unstable soils; high erosion potential; volcanic, seismic, or flood risks	
Cultural property	No known or suspected cultural heritage sites	Suspected cultural heritage sites; known heritage sites in broader area of influence	Known heritage sites in project area	
Involuntary resettlement	Low population density; dispersed population; legal tenure is well-defined; well-defined water rights	Medium population density; mixed ownership and land tenure; well-defined water rights	High population density; major towns and villages; low-income families and/or illegal ownership of land; communal properties; unclear water rights	

Issues	Site Sensitivity			Rating
	Low	Medium	High	
Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities (IP/SSAHUTRC)	No IP/SSAHUTRC	Dispersed and mixed indigenous populations; highly acculturated indigenous populations	Indigenous territories, reserves and/or lands; vulnerable indigenous populations	

3. Checklist Questions

2.1 Physical data:	*Yes/No answers and bullet lists preferred except where descriptive detail is essential.*
Site area in ha	
Extension of or changes to existing alignment	
Any existing property to transfer to sub-project	
Any plans for new construction	

Refer to project application for this information.

2.2 Preliminary Environmental and Social Information:	*Yes/No answers and bullet lists preferred except where descriptive detail is essential.*
State the source of information available at this stage (i.e., proponent's report, EIA, or other environmental study, land tenure etc).	
Has there been litigation or complaints of any environmental or social nature directed against the proponent or sub-project?	

Refer to application and/or relevant environmental authority for this information.

2.3 Identify type of activities and likely environmental and social impacts:	*Yes/No answers and bullet lists preferred except where descriptive detail is essential.*
What are the likely environmental and social impacts, opportunities, risks, and liabilities associated with the sub-project?	

Refer to ESMF Chapter 4, Section 4.1

2.4 Potential Environmental and Social Impacts	
Determine environmental screening category:	*Yes/No answers and bullet lists preferred except where descriptive detail is essential.*
After compiling the above, determine which category the sub-project falls under based on the environmental categories low / moderate / substantial / high risks.	

Refer to ESMF Chapter 4, Section 4.3 – Screening Sub-projects

2.5 Mitigation of Potential Pollution:	*Yes/No answers and bullet lists preferred except where descriptive detail is essential.*
Does the sub-project have the potential to pollute the environment or contravene any environmental laws and regulations?	
Will the sub-project require pesticide use?	
If so, then the proposal must detail the methodology and equipment incorporated in the design to constrain pollution within the laws and regulations and address pesticide use, storage, and handling.	
Does the design adequately detail mitigating measures?	

Refer to ESMF Chapter 4

2.6 Environmental Assessment Report or environmental studies required:	*Yes/No answers and bullet lists preferred except where descriptive detail is essential.*
If screening identifies environmental issues that require an EIA or a study, does the proposal include the EIA or study?	
Indicate the scope and time frame of any outstanding environmental study.	

Refer to ESMF Chapter 4

2.7 Required Environmental Monitoring Plan:	*Yes/No answers and bullet lists preferred except where descriptive detail is essential.*
If the screening identifies environmental issues that require long-term or intermittent monitoring (e.g., effluent, gaseous discharges, water quality, soil quality, air quality, noise), does the proposal detail adequate monitoring requirements?	

Refer to ESMF Chapter 4

2.8 Public participation/information requirements:	*Yes/No answers and bullet lists preferred except where descriptive detail is essential.*
Does the proposal require, under national or local laws, the public to be informed, consulted, or involved?	
Has consultation been completed?	
Indicate the time frame of any outstanding consultation process.	

Refer to Chapter 2 – Relevant legislative and institutional framework and SEP

2.9 Land and resettlement:	*Yes/No answers and bullet lists preferred except where descriptive detail is essential.*
What is the likelihood of land purchase for the sub-project?	
How will the proponent go about land purchase?	
What level or type of compensation is planned?	
Who will monitor actual payments?	

Refer to the Resettlement Policy Framework.(RPF)

2.10 Actions:	
List outstanding actions to be cleared before sub-project appraisal.	
Approval/rejection	*Yes/No answers and bullet lists preferred except where descriptive detail is essential.*
If proposal is rejected for environmental reasons, should the sub-project be reconsidered? What additional data would be required for re-consideration?	

2.11 Recommendations:

	Rejected because it not pass the exclusion criteria
	Requires an ESIA and/or RAP to be submitted on date
	Requires ESMP, to be submitted on date
	Requires ESA, to be submitted on date
	Does not require further environmental studies

Reviewer	
Name:	
Signature:	
Date:	

Annex 5: 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 6: 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 dully 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 I 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 7: 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 EHSGs 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 8: 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 an 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 9: 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 10: E&S Specifications for Contractors[17]

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 TACTIC Project.

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 TACTIC Project, 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 TACTIC Project 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.

[17] The Contractor will have to follow the World Bank Group General Environmental, Health and Safety Guidelines as well 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 standards[18] 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;

[18] 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

- 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.

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 property secure transported materials.
- Transport vehicle e.g. dumper, book 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*[19].

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

[19] https://www.osha.go.tz/storage/publications/LawsRegulations/sw1496149205-BUILDING%20AND%20CONSTRUCTION%20RULES,%202015.pdf

belt), flagmen, etc. The Contractor will be required to describe in their HSMP how both mechanical and manual handling will be done.

Ecological Considerations

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 tress 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 compliant swiftly. For complaints by community members if a resolution is not possible, the compliant 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 musk 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 of 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 11: 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 activities[20] 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 ESIAs, 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

[20] The 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.

ESIA/ESMP, condition of contracts and make recommendations to the PIU about how best to improve the 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 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.

Annex 12: Guidelines for Preparation of TMP for Construction Projects

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 offices for construction updates.

Yours truly,

<Contractor>

cc:
Supervision Consultant
PO-RALG or TARURA

Annex 13: Baseline Environmental and Social Conditions of the Participating ULGAs

1. Geita Town Council

- **Environmental conditions**

The Geita region is characterized by two remarkable natural features. Lowlands with varying between 270 and 500 m above sea level and the highlands (Mountains) areas is situated in the altitude ranging between 1,100 and 1,300 meters above the sea level and covers total area of 1080.3 sq. Km. The Council has natural forest occupying 38 percent of the total area of Geita Town in which there are two forest reserves namely; Geita Forest Reserve occupying an area of 47,700 hectares and Usindakwe Forest Reserve occupying an area of 450 hectares. Geita Town Council occupies only 38,160 hectares and the rest 9,540 hectares of Geita Forest Reserve occupied by Geita District Council. However, all these forests are under Tanzania Forest Services Agency (TFS).

The Town council is characterized by undulating land spotted with hills and mountains: mostly by black cotton soil, loam, sand, sandy loam and clay loam soil which are suitable for growing varieties of crops including cassava, bananas, sweet potatoes, beans, groundnuts, paddy, maize, cotton, millet, sim-sim, wheat, passion fruits, finger millet, sisal, among others. In terms of climatic condition, the council experiences a variety of climatic conditions, ranging between 22^0C and 30^0C (temperature) with average rainfall of 900 mm to 1200 mm per annum. The main rainy season of the council is from September to December (the 'short rains rains') with a second season between March and May (the 'short rains') and from June to September the region experiences a dry season.

On the other side, the Town council comprises of both natural and planted vegetation. The natural vegetation includes Miombo and Misani while the dominant planted vegetation is pines. There are also patches of bushes occupied by shrubs, bushes and grasses, scattered trees, and few baobab trees.

The council shares three major water bodies consisting 1438.5354 Hectares (rivers, ponds, and dams). Activities generated from water bodies include fishing, irrigation and domestic uses. However, most of the ponds are used to feed livestock.

- **Socioeconomic conditions**

According to (2012 census) Geita Town has a total population of 192,707 with 95,107 being male and 97,600 female with an average household size of 6.5 which is far beyond that of the Region and National average which stood at 6.1 and 4.8 respectively. Sukuma and Zinza are the most dominant tribes which account for 65 and 30 percentages of the population respectively.

The economic activities that take place in Geita Town include large and small scale mining, agriculture, livestock keeping, industries, trade and commerce, forestry, fishing and tourism. The gold mineral is the main one in Geita Town and has led to extensive mining activities in urban area and the region at large. The important area for gold mining is Mtakuja Ward and Isamilo Village. There are also sand mining activities and stone crushing carried out to make building materials available for constructions.

The Geita town has a total area of 124070.5937 Ha. The total area occupied by residential is 15683.0823 Hectares and 52% (8154.4 Hectares) of total residential areas are unplanned settlements which includes Kambarage, Shilabela, Mwatulole, Mbugani, Nyankumbu, and Ihayabuyaga, while the planned residential area covers a total land of 7528.68Ha, which comprises Bomani, Nyamalembo, Magereza, Mseto, urban centre, Kagera, Bombambili, Magogo, Buhalahala and Kanyala. Other areas are covered by institutions (544.6889 Hectares), commercial areas (132 Ha), urban agriculture (55,735.02 Ha), and mining areas (17,632.851 Ha).

The transport and communication land use in the town covers a total area of 2034.29 Hectares. The mobility of traffic and goods are enabled by roads infrastructure which in total covers an area of 1229.3 Hectares. Geita Town Council road networks has total number of 360.5 kilometers, whereby 3.2 kilometre is bituminized. About 71.5 percent of earth roads are in poor condition and become impassable during the rainy season.
Many households in Geita Town are not able to access to clean, piped water with exception of about 3.4 percent urban and 17 percent of rural households which are served with safe water from boreholes and shallow wells respectively.

The solid waste management facilities of the council consisting dumpsite (10.5 Ha) located at Bombambili and both household, industrial, institutional, construction, demolition debris, dead animals and sanitation residue are disposed of. The existing damp site is not enough to cater for both existing and future use. Medical wastes from Geita Hospital and government health centres are incinerated in an on-site. Also, hazardous waste collection points and its disposal sites are not available in the council. Due to the financial constraints, recycling that need collection, sorting machines and skills is not conducted. Solid waste collection services are partially outsourced to 6 registered community groups originated from 4 wards. These CBOs collect refuse fees for solid waste collection services rendered to residents before being collected by council track to the dumping site.

Waste water management is managed by Geita Urban Water Supply and Sanitation Authority (GEUWASA). Currently, wastewater is disposed in Geita reservation forest. Waste water management has known two types of Sewage disposal. However, in Geita Town Council, only one type is used. The Geita town by 2015 had 55 pre-primary schools, 55 primary schools, 16 secondary schools, vocational training 4 and higher learning education 9. Between the year 2013-2015 the Gross primary and secondary enrolment rate was 54,810 (primary) and 25,588 (secondary).

Also, the Geita town has only 18 health facilities (Hospital 1, 4 health centers and 13 dispensaries), while the main leading diseases are malaria, acute respiratory infections, pneumonia, diarrhoea disease, skin infection, urinary tract infection, intestinal worms, sexual transmitted diseases, emergency oral health care, anaemia, high prevalence of STI/HIV/AIDS and protein energy malnutrition.

2. Tabora Municipality

- **Environmental Conditions**

Tabora Municipal Council lies between Latitudes $4^0$52' and $5^0$9 South and Longitude $32^0$39' and $33^0$00E. The municipal is characterized by a warm climate with temperatures reaching their peak in September - October just before the onset of the rainy season. There is a slightly cooler period from May to July, marked by onset of dry winds which continue until October. Rainfall is seasonal, falling almost from June to October during which occasional showers can be expected. About 41% of the total area is arable Land while natural forests; hills and ridges occupy 34%. 8% of the area is a planned area for human settlement. The Municipality provides education to 41 Villages and 154 streets regarding the side effects of environmental degradation. Tree planting campaigns has been initiated to control Soil erosion and its associated hazards that helps in ecosystem sustainability which supports both flora and fauna.

The major water bodies of the municipal are Kazima dam (with a capacity of 1.62 million cubic meters), boreholes and Igombe dam. Activities generated from water bodies are mainly water supply. Also, the municipal is drained by Igombe and Wall rivers, which flows westwards into the Malagalasi basin. Neither of these rivers is permanent, they only exist during rainy season.

The municipal has no storm water drainage systems that drain the water from the town area and the only drainage system is small gullies and depressions that collect storm water from the town areas and release to the swamp areas in the southern part along Sikonge road and the south western part of the town which ultimately leads to frequents floods. Soil and geology of the municipal comprises five types of soil (Rock and very shallow soils; Isenga soils; Kikungu Soils; Ipwisi Soils and Mbuga Soil), while the geology is characterized by intrusive granite and granodiorite formed during the archaic era.

There are two main forest reserves found within Tabora Municipality owned by the central government; these include: Igombe Forest Reserve found in North-West part of the municipality at Misha and Ikomwa wards and Urumwa Forest Reserve found in South-West of the municipality at Itetemia and Ntalikwa wards. The nature of these forest reserves are natural dominated by miombo woodlands.

The vegetation cover of Tabora Municipality is classified into upland and low land or wetland vegetation. In the uplands there are wood land, bush land and thicket grassland. Miombo woodland (brachystegia boehmii) are the dominant species within municipality, with mninga trees found in scattered patches.

- **Social conditions**

Tabora municipal has a total population of 226,999 according to Tanzania national census 2012, and Nyamwezi are the main ethnic group. Agriculture being the main economic activity, focusing on maize, rice, groundnuts, beans,

cowpeas, cassava, sweet potatoes and tobacco. Tabora is also famous for beekeeping (honey and beeswax) and forest timbering activities. Livestock farming is also an important economic activity in town. Much of the arable land in Tabora Municipality has been degraded due to poor irrigation practices and an increasing demand for land for agriculture, grazing and firewood. The industrial sector employs about 8929 people, 13.5% of which are in the formal sector.

Water supply is managed by the Tabora Urban Water Supply and Sanitation Authority (Tuwasa), sourced from Igombe and Kazima Dams. The current water supply coverage is between 68% and 78% of the population. The Lake Victoria water source is found to be sufficient to supply both the existing service areas and the new areas until 2025 with its current capacity of 80,000m^3/day, and until 2035 after increasing its capacity to full design level of 120,000m^3/day in 2025.
Unplanned areas cover an area of about 78 % of the municipality land area and they are home to the poor and under-privileged strata of the society.

In some settlements, there are bare minimum services such as piped water, electricity and sanitation facilities. The dwellings are mostly of mud or poor quality blocks with corroded corrugated iron sheets roofing. The poor environment in the settlements is ideal for prevalence of diseases such as malaria, water borne and other related diseases.

Produced wastes are managed by the Municipal council. The sewerage services covers about 2% of sewerage disposal facilities and 98% of the total households are served by on site sanitation facilities such as septic tanks and pit latrines. Sewerage services are mainly serves educational institutions and several commercial buildings in Gongoni, part of Malolo, Kanyenye and Chemchem Wards. About 12620m^3 of liquid waste are produced per day. On the other side about 120 tons of solid waste are produced per day, since the municipal has no land fill, these solid wastes are dumped in an empty ground near Tabora School which creates vermin and health problems to scavengers.
There are about 542.17 kilometers of road network in the municipality of which 121.91 km (tarmac), 141.13 km (gravel), and 279.13 km (earth roads).

In Tabora Municipal Council health facilities are provided through dispensaries, health center and hospitals. Until 2015 the municipal had one referral hospital (Kitete, owned by the central government), two health center (Ipuli and St. Philipo) and 38 dispensaries.

3. Newala Town Council

- **Environmental conditions**

Newala Town Council is characterized by Makonde Plateau which rises in a sheer escarpment at about 812 metres above sea level. The escarpment itself is between 200 - 300 meters high and stretches in an almost unbroken line across the horizon. The plateau is widely covered by cashew nut trees, as the main cash crop cultivated in Newala town council. The council found in the southeast of Tanzania between 39^{O} - 40^{O} East and latitude 10^{O} -11^{O} south with a total land area of 525.62 sq. kms where by all area has been covered by dry land only. The average annual precipitation is about 1,000mm with a poor distribution pattern that is irregular, with unreliable rainfall with the pronounced dry spell of one to two weeks' duration between Mid-January and Mid-February.

The town council has three major types of soil (sandy soils, loamy-sand soils and some parts loamy-gravel soils. Most of these soils have high nutrient contents and are suitable for a wide cultivation of Cashew nuts, Cassava, Maize and Groundnuts.

The Most parts of the town council including Makonde plateau are covered by the natural vegetation of cashew nuts trees. The natural vegetation has been disturbed by anthropogenic activities mainly at Makonde escarpment. The hydrology of the town council depend on Mkunya Spring that used for supplying water services the council population.

- **Social conditions:**

It has a total estimated population of 89,251 according to census 2012; the town council has an average household size of 3.4 with annual growth rate of 1.2%
The 99% of the Newala population is dominated by Makonde: The main economic activity has and always been cashew nut production. The Council has 2 medium sized industries producing Cashew nuts with productivity of 8500

Tons per year and created employment to 726 peoples. Also, there are more than 60 Micro and Small industries which have generated employment to more than 511 individuals.

The Council has a total land area of 525.62 sq. kms. About 43,126 hectares are the arable land suitable for agriculture activities. The potential area for irrigation is about 1,820 hectares of arable land. However, the council manages to utilize 795 hectares, (43.6 percent) of the potential estimated irrigation area. The Council has two irrigation schemes namely Chikwedu/Chipamanda and Lipeleng'enye. According to the 2012 Population and Housing Census data show that, only 37.4 percent of the population access clean, safe and affordable water, 50.2% of the population used rain water harvesting system.

There are about 50 pre and primary school and 11 secondary schools. Due to the current government policy of free education, the enrolment rate of pre and primary pupils from 2016 and 2018 has been increased from 2991 in 2016 to 3204 pupils in 2017, and 2920 pupils in 2018 (pre-primary), 129 % for 2016, 102% for 2017 and 83% for 2018 (primary).

Newala Town Council has 1 hospital, 1 health centre and 14 dispensaries. The presence of these facilities has improve health services and reduction of HIV infection from 5.1% in 2016 to 2.4% in 2018, while maternal mortality rate reduced from 190 in 2016 to 140 in 2018.
Road network in Newala Town Council is still not improved to the highest extent. There is a total of 578.84 km of road network in the Council. The earth roads have a network of 426.84 km (74%), gravel roads have a network of 130.25 km (23%) while tarmac road makes 21.75 km (3%).

4. Korogwe Town Council

- **Environmental conditions**

Korogwe Town Council lies between latitude 5°14'S and longitude of 38°23'E. The Council covers 212 square kilometres whereby 205.5 sq.kms (96.9%) is land area and 6.5 sq.kms (3.1%) is covered by water. Korogwe town council is characterised with tropical climate with the smallest amount of rainfall falls in February with an average of 42 mm. In May, the rainfall reaches its peak, with an average of 223 mm. The average temperature during the hot month (October-March) ranges from 29-32°C and during the cold month (May-October) the ranges from 23- 28°C.

The Town council comprises of both natural and planted vegetation. The woodland is the dominant natural vegetation while the dominant planted vegetation includes Eucalyptus camadulensis, Eucalyptus tereticornis, Casuaria equsitefolia, Cedrella mexicana, Terminalia superba and Acrocarpus fraxinifolius. Since it is endowed with forestry potential, the woodlands are lightly exploited to fulfil demands on fuel wood, charcoal, timber and building materials. Efforts have been made to preserve certain forests with a view to prevent effect of over deforestation. So far, the council has a total of 968.88 hectares of natural forest reserve, and forest plantations covering 16,577.96 hectares, making a total forest cover of 17,546.84 hectares of forest in the council. It is characterized with tropical climate.

The topography of Korogwe town council is characterized by lowland and mountainous areas with altitude ranging from 500 to 1 000 meters above sea level. The council is drained by Pangani River, Lwengera tributaries and other small tributaries which flow from the mountains. The Korogwe town council is mainly dominated by the red clay loam soils in the mountainous zone and brown sandy soils in the dry plain zone.

- **Social conditions**

According to the 2012 Census, Korogwe Town council has a total population of 68,308, with a population density of 322 persons per sq. km; 80% of the whole population is occupied by Sambaa and Zigua as the largest ethnic groups.
The main economic activities includes Agriculture (food and cash crops) that depend on rainfed and irrigation, Livestock keeping (goat, cattle, and cattle), natural resources (tourism, beekeeping). Agricultural be the main source of income, have been the key contributor to the council's per capital GDP compared other activities in the council. A total of 10,024 out of 15,489 households in the council, equivalent to 64.7 percent were engaged in agricultural activities (2012 National Population Census).

The Korogwe TC has 33 pre-primary, 32 primary and 12 secondary schools and the level of education in 2012, adult literacy rate for males (93.9 percent) was significantly higher than that of females (87.3 percent). Generally, proportion of literacy rate and level of education attained by the community gauge the quality of human resource of the country.

Korogwe TC road network covers about 257.9 kilometers. Trunk roads constitutes 13 kilometers (5.0%) of town's road network, regional roads 35 kilometers (13.6 percent), District/Urban roads 162.4 kilometers (63.0 percent) and feeder roads 47.5 kilometers (18.4%). Since the economy of Korogwe Town Council is mostly based on agriculture. The economic effectiveness of the road network is therefore best assessed against agricultural production.
About 50% of the households in the council uses firewood for cooking, then charcoal 45.2%, electricity 1.7%, Paraffin 1.5%, Gas 0.8% and solar energy had 0.1%.
Sanitation facilities (toilets) in Korogwe Town Council shows that 15,029 (96.1%) of households were using toilets as the most common of disposing human waste and only 3.9% of the population in the council had no toilets. In Korogwe Town waste management is under Korogwe Township Council, however due to the massive production of solid waste and easy management the council has contracted subcontractors to collect and disposal waste in the market area, bus stand and external environment of the district hospital.

In terms of health infrastructure, until the end of 2018, Korogwe Town Council had 19 health facilities (1 hospital, 3 health centre and 15 dispensaries). The available health facilities were not enough to serve the growing population of the TC, the primary rural health centers in villages and Mitaa has been initiated and operated by Village/mtaa Health Workers (VHWs) with the assistance of Traditional Birth Attendants (TBAs) under the supervision of Village Health Committees (VHCs).

In 2015, a total of 23 SACCOs were registered in Korogwe Town Council where by 9 of them were active and 14 were dormant, with more male 2,258 than females 1,097. On the other hand, a total of TZS 5,301,501 was loaned to members between January and December 2015 and TZS 5,475,742 was recovered.

5. Mafinga Town Council

- **Environmental Conditions**

Mafinga town lies between latitude $8^0$0'S south of the equator and between longitudes $35^0$0'E east of the Greenwich. Despite the variation of climatic conditions throughout the year the weather is attractive because of its high altitude. Mafinga Town experiences an average daily temperature of 19 degrees centigrade with a daily range of about 5 degrees centigrade. The town receives rainfall once a year, occurring between October/December up to April/May in each year with the average annual rainfall ranges between 452mm to 1,000mm. The town has two drainage systems of the little Ruaha that has two branches (Mkewe – originated from Bumilayinga and Ndembela originated from Ifunda both flowing towards the Great Ruaha. The main water bodies namely Makalala and Mkombwe dams. These bodies are important and it is planned for fishing activities and Mkombwe dam is planned to be a recreation centre**.**

Mafinga Town Council has a total area of 953.0 square kilometre of which the land area is 936.0 square kilometre and water area is 17.0 square kilometre, the only area of which 11,350,000 square metres (1.2%) is surveyed. Furthermore, the proportion of un-surveyed plots designated for residential areas in Mafinga town council is 0.013 % with higher proportion in Sadani division (0.016%) followed by Ifwagi with 0.015%and Malangali with 0.008%.
The total land area of the council in 2015 is 93,600 hectares whereby 775 hectares was occupied by natural forest reserve area and 19,090 hectares was forest plantation area.

- **Social Conditions**

According to the 2012 Population and Housing Census, the total population of Mafinga Town Council was 71,641 persons; out of that 37,119 were females and 34,522 were males. The council is sparsely populated with population density of 77 persons per square kilometre with variation across divisions. Hehe and Bena are the major ethnic groups in the council which are found in all of the wards while Nyakyusa is found in only four wards.

The presence of historical sites in Mafinga town council is expected to increase the town's income and its people through tourism. The historical sites are the Mnyigumba graves and Boma (The late Chief Mkwawa's father Graves, Chief Mkwawa who was the chief of hehe tribe was the superior one in Iringa region) located in Rungemba ward and monitored by Mkwawa family at Mafinga town council. Another historical sites is Ulole caves located in Bumilayinga ward.

Mafinga Town Council road networks has total number of 416 kilometers, whereby Ifwagi division covers the longest road network (331 kilometers) followed by Sadani division with 54 kilometres and Malangali division with 31 kilometres. Road worthiness during the rainy season measures the effectiveness of the road network.

In 2015, The Town council has one hospital, three health centers and a total of 13 dispensaries. HIV infection among family blood donors and new AIDS cases in Mafinga Town Council in 2015 shows high incidence of new AIDS cases among female family donor with 12.1 percent compared to males with 10.1 percent. HIV prevalence rate in Mafinga Town is 14.9% higher than the national standard in 2015. This situation signifies the requirement of intervention to reduce the HIV prevalence at the area.

In 2015, Mafinga Town Council had 14 working spring as a source of water in the council, 58 working shallow wells, 5 permanent rivers as a source of water, two permanent dams and 3 piped scheme. On the other hand, result shows there were a number of water sources in the council which were not working which are 32 shallow wells. The main sources of water in urban were spring, dam and piped scheme. There were five working springs of which one spring is found in Wambi ward, two in changarawe and Boma ward. Other sources of urban water include one permanent dam and one piped scheme.
Mafinga Town council has a total of 32 pre and primary school and 16 secondary schools. Literacy wise, there is an increase in adult literacy rates in Mafinga Town Council from 85.5 percent in 2002 to 95.3 percent in 2012.

In terms of women vulnerability and gender: Due to beliefs and practices, which are deeply embedded within their own cultures. Women has been vulnerable in many cases, for example early marriage for children (bride purposes) has been a survival mechanism for families in times of economic crises and reduce the number of family members needing to be fed. The majority of women in the town council are restricted to their traditional roles during child hood that are family cooks and housekeepers, firewood and water collectors and farm labourers. Changes are being initiated at Town Council to address issues of gender inequality. One of these initiatives is the formation of women social and economic groups, participation in SACCOs, CBOs and other cooperative activities.

6. Arusha City Council

- **Environmental Conditions**

Arusha City Council is located in Northern Tanzania between latitude 20 and 60 South and Longitudes 34^0.50' and 380 East. It has a unique character of being surrounded by Arumeru District in all directions. The City has two agro-ecological zone (lands), which includes, highlands and lowlands. The highlands depend on irrigation in which flowers, vegetables, coffee and bananas are grown. The lowlands (semiarid) depend on the rainfall for the cultivation of food crops; maize and beans while cash crops are chickpea and pigeon peas. High land receives average rainfall of 1200mm while the low lands receive an average rainfall of 844mm. The city temperature composed of warm and cold ranging from 17^0C to 34^0C. The cold season is between mid-April and mid-August while the rest of the years are warm.

The City is composed of rivers and numerous small streams which have their headwater on the slope of mount Meru or on the slopes on the hills. Such rivers include Burka, Engarenaro, Naura, Themi and Kijenge all of which coverage to join Themi River to the Southern part of the City.
The soil of Arusha City is volcanic in origin and generally classified as andosoils. The most fertile land with high rainfall is on the moderate and steep slopes of Mt. Meru and its associated hills. On the steep slope of Mt. Meru's soil is incorporated with rocks of pyroclastic kind and sand. These areas are densely polluted with most land under cultivation.

The City natural vegetation can only be seen in protected hill areas such as areas surrounding Arumeru plateaus, Themi, Suye and Nemas and areas abandoned by farmers where natural regeneration takes place. Natural vegetation in the City comprising Hilltop Miombo (found on rocky hills mainly in protected areas) and Miombo woodland (found on hills and middle to lower slopes mainly in uncultivated or abandoned land). The vegetation is deprived mainly due to human activities and settlements. However, the City Council is doing the best possible to replenish the deprived natural trees with different exotic and modern trees in the City environment.
The city has 1 environmental monitoring laboratory responsible for monitoring Ph, Methane, Temperature, and Carbon dioxide.

- **Social Conditions**

According to 2012 Census, the population is 416,442 people. However, over 300,000 people come into the City in daytime and leave in evenings. The economy of Arusha City depends largely on Commerce, Industries, Small Scale Agriculture and Tourism. Commerce and Industrial activities contribute significantly to the GDP of the City as lustrated: 52% of employed people are in business operations, 14% employed in office work, 17% are in elementary

occupations and 19% are in agriculture while the remaining 6% are in plant operation assembly. The main industries in Arusha City are as follows: - Tanzania Breweries Ltd., Sunflag, Tanzania Pharmaceutical Industries [TPI], A to Z, (Treated mosquito net National Milling Corporation [Mills & Silos], Arusha Meat Company, Sunflag, CARMATEC and ABB Tanalec.

Agriculture forms one of the dominant sectors of the economy in the City. It provides employment to a significant number of people of the urban and rural community and it is characterized by small scale resources poor farmers. The rapid expansion of urban area is a major hindrance to intensive agricultural production.

As the northern tourism circuit, it receives the majority of tourist to the country. There are more than eleven tourist hotels and 84 registered tour operator companies. Major activities undertaken include Photographic safaris operations, hunting safaris operations, Accommodation and catering operations, Mountain climbing operations, Airline [scheduled and chartered services], travel agency and other Transport operations. Tourist attractions in the City include the famous Old German Boma, Cultural Heritage, Arusha Declaration Museum, Souvenirs and Batik Shops and the craft shops (Makonde carvings, batiki, Maasai beads necklaces and meerschaum pipes).

Though there are no mining activities of precious gems within the City, Arusha remains a famous marketing center for master-dealers in precious gemstones including Tanzanite, green gametes, green tourmaline, sapphires and rhodelite from Kiteto, Simanjiro, and Longido mining sites outside the City. Master dealer markets in the mentioned gems attract customers, and agents from outside and within Tanzania.

Arusha City faces socio-economic problems arising from rural-urban migration, rapid growth in urban population which has resulted in serious constraints on the very limited urban services. A large part of the City population has no access to basic amenities like clean and safe water, proper sanitation etc. The present water demand is approximately 42,000m^3 per day, but the supply capacity ranges between 35,000m^3 and 44,000m^3 per day in the dry and rainy season respectively. The service level is 92% of the population. Therefore, the deficit is 8% of the population. There is a high concentration of health facilities in the Central Business District (CBD) compared to the peripheral rural wards. There are three different medical services offered by the City, which include hospitals, Health Centers and Dispensaries. There are 5 hospitals, out of which 1 belong to Government. Others are 16 health Centers, 60 Dispensaries, 15 pharmacies and 150 medical stores.

HIV/AIDS continue to threaten the most productive part of the Arusha population. Since 1986 when the first cases were reported, the prevalence of HIV is still increasing and at the end of 2016 the prevalence was 4.4% from 4.1% in 2013 among the VCT client and blood donors, while among the antenatal is 7%. Deaths from AIDS have decreased following the introduction of ARVs where 315 people have been enrolled.
Unequal gender recognition and participation in formulating, implementing, and evaluating development plans in the council. In most cases this exercise is vested on men also inaccessibility to legal services and women rights.
The Arusha City is well linked to other areas of Tanzania by Air (Kilimanjaro International Airport and Arusha Airport). The total length of the road network within the City is 334.7kms out of which 196 km are earth roads, 54 km are morum and 84.7 km are paved roads.

The Muriet Landfill constructed between 2015-2018 is the only waste disposal facility in the city that all types of the produced wastes (Hazardous and Non-hazardous) are disposed of. Refuse generated is estimated at an average of 380 tons per day which is approximately 72% per day is collected and disposed of. The remaining 28% is not collected due to limited financial resources required for purchasing enough refuse collection trucks and other equipment resulting. The city has no designated area for collecting and disposal generated hazardous wastes. Management of liquid waste in unplanned areas is more difficult due to poor inaccessibility of cesspit emptier, little space for erection of pit latrine and high water table. In planned settlements, 84% of total households use septic tanks.

The city has two livestock markets (Morombo and Arusha meat), 3 crop markets (Elerai, Kilombero and Morombo) and 4 Retail/normal markets. Also, there is 1 slaughter house (Mianzini) and 2 abattoir located at Arusha meatu and Moshono.

7. Babati Town Council

- **Environmental Conditions**

The town is located on the Northen shores of Lake Babati. This Lake is one among the rift valley Lakes in East Africa which is found in Tanzania and specifically in Manyara region. The presence of Lake Babati provides economic support to the residents who engage in horticulture, brick making and fishing activities in Babati Town. Lakes are amongst the most productive ecosystems of the Earth. Lake Babati was declared as the hippopotamus reserve within the country thus influence tourism activities

The town is strongly associated with formation of the Rift Valley. The higher mountain ranges of Kwaraa Mountain lie from East to West part of the town, the mountains are covered by the Ufyome natural forests bring spring water that flow in Lake Babati which necessitates the conservation and protection initiatives. There is Kiru Valley in the North - East of the town and Lake Babati playing a leading role as the drainage collecting water that flow from the town centre during rain seasons, also there are extensive flat terrains in the Northern part of the town potential for urban development activities.

Babati town is sub-divided into two major climatic zones of highland and low-land zones. The town's average annual temperature is 20.2^0C while the average temperature for the coldest and warmest months of June and July is 15^0C and December is 21.8^0C respectively. Babati town experiences two rainy seasons short rainy season. The short rainy occurs from October to December and the long rainy season covers the period between March and May with an average annual rainfall of 831 mm. Also, the town council experiences floods which normally occur during the rainy seasons particularly in the areas near the depressions and the Lake Babati.

The town has both natural and manmade forests (15,760Ha**)** which falls under the protected (reserved) ones like Ufyome, Haraa, Bereko, Himiti, Bonga, Sawe, Chemchem and Managhat, forests preserve water catchment areas such as rivers and springs.

- **Social Conditions**

Agriculture is the leading economic activity which employs about 80% of Babati town residents. The economic structure of town does not only depend on agriculture, but also there are other economic activities such as fishing, forestry, bee keeping, mining and quarrying, trade and commerce, industrial activities and tourism. Livestock keeping is one among the economic activities widely conducted in Babati Town. It contributes about 14% of the town council economy. It is mainly practised in Sigino, Mutuka, and Nangara wards. Babati Town is 70 kilometers along the way to Tarangire National Park.

Other tourist attractions include Lake Babati which is the only national reserve for hippopotamus, Sigino Crater, Sururu Waterfalls and Mount Kwaraa which is attractive for hiking. Gorowa tribe practices are a source of cultural tourism as well as a historical site. According Environmental Profile (2005) Babati town receive an average of 50-60 tourists per year which contributes about 1.5 million TZS in tourism sector. The small number of tourists is attributed to poor road infrastructures and services within the town specifically lack of hotels and camping sites.

Also, there very few manufacturing and processing industries in Babati town. The town is dominated by small scale industries which involve processing of different raw materials. These industries include cannery, bakery, carpentry and ginnery, tailoring, ironsmith, garages, milling, sunflower oil extractors, perfume oil extracting plants and welding workshops.
Currently the population in Babati town is estimated to be at 105,610 people whereby 53,666 are male and 51,944 are female. The town has an average household size of 4.4 which is lower than the regional and the national average which stood at 5.2 and 4.8 respectively.

As of 2019, Babati has neither proper wastewater management system nor sanitary solid waste disposal. There are two separate craters outside of the central Babati designated for the crude dumping of solid and liquid wastes. These dumping sites are not lined or protected or cordoned off from the public. The management of wastewater in Babati is currently dependent exclusively on on-site sanitation systems and 90% of households own toilets of which 7.4% share these facilities. The most common type of toilet is a pit latrine with a slab, accounting for 42%. Half of households empty their toilets when they are full – the other half abandon them and build a new one.

8. Moshi Municipal Council

- **Environmental Conditions**

Moshi Municipal Council lies approximately $3^0$18's and $37^0$20'E and slopes from about 950m above sea level to the North to 700m above sea level to the South. It is located on the fertile southern slopes of Mt. Kilimanjaro at an altitude of 950 meters above sea level in the North to 700 meters above sea level in the South. The area of Moshi Municipality is 58sq.km. The town receives short rains from October to December and long rains from March to May. Also, in the past ten years the municipal council experiences one major floods which normally occur during the rainy seasons and to address the extreme disaster events the council has formulated disaster management committee.

Moshi Municipal council is virtually divided into three unequal parts by two permanent rivers: Rau to the East and Karanga to the West while Kiladeda forms the western boundary.
Rau forest reserve in Moshi Municipality is an important resource for over 400,000 people who live in Moshi Municipality. It is a source of water for domestic purposes and irrigation schemes in lower Moshi and home to important indigenous species such as oxystigma Msoo, Milicia excels.
Also the environmental monitoring facilities/centres in the municipality include 10 Water laboratories and 15 weather stations.

- **Social Conditions**

Chagga and Pare as ethnic tribes but the Municipal hosts almost all tribes available in Tanzania who come from different place inside and outside the country for various purposes including trade/business and industrial tourism. In the year 2020, the population is estimated to be 230,784 people (Males 112,836 and females 117,948). The Municipal is said to be highly populated with 3,489 people per square km. Unlike other towns in the country, current realistic estimates of the urban population should include additional estimates of 80,000 to 85,000 day-residents working in the town but spending nights in the surrounding rich and developed hinterland.

The economy of Moshi Municipality depends mostly in coffee and barley plantations as well as dairy and flower farms along the mountain slope, also TPC Sugar plantations and the Japanese-sponsored Lower Moshi Paddy Irrigation Project. Bananas, beans and maize are the main food crops for the ethnic people of the area. The town economy also depends on commerce, industry and tourism. The Municipality has a wide range of industries dealing with coffee curing, beverages and foodstuffs. It has good access to other towns in the country and abroad through roads, the Kilimanjaro International Airport (KIA) and modern communication facilities.

Moshi municipality consists of both planned and unplanned settlements. The 1995 Moshi Municipality Master Plan review team indicated that 30% of the area is residential. At present there are 18,200 houses out of which 9,300 have been constructed in planned 8,900 have been constructed in unplanned. The Central Area Redevelopment plan is encouraging construction of flats that are two to eight storley

Waste management is one of Moshi's major priorities. Moshi urban has 4 types of sewerage sanitation systems (Sewage system, Septic tanks, VIP latrines (ventilated improved pit latrines) and Soil pits). The Authority is also running a conventional system of collection, treatment and disposal of sewage from domestic, commercial, institutional and industrial centres within the Municipality. Also, the municipality has 1 landfill that all types of the produced wastes are disposed of. Refuse generated is estimated at an average of 7316 tons per month. The municipal council has no designated area for collecting and disposal generated hazardous wastes, though there is only two collection points (hazardous wastes) owned by private companies.

Moshi municipality has three crop markets and 12 Retail/normal markets where buyers and sellers within/outside of the municipality meet.
The municipality has 4 hospitals, 11 health centres, 36 dispensaries, 2 health laboratories and 6 clinics.
Moshi municipality is well linked to other areas of Tanzania by Air (Kilimanjaro International Airport - KIA) and the airport has been the centre that creating demand for cargo flight to Europe, Middle East and Asia.

9. Tanga City Council

- **Environmental Conditions**

The council lies between latitude -5°4'9.45'S and longitude of 39°5'51.8"E. Tanga City Council covers 607 square kilometers and it occupies about 0.7 percent of the Regional total land area of 84,594 sq. km. The City has an area of 600 km^2 of which 538 km^2 island and the remaining 62 km^2 is water bodies. The topography of the city extends inland to about 20 kilometers from the coast while the city landscape is featured by small rolling hills punctuated by valleys with rivers and streams, notably the Zigi, Nzimwi and Utofu in the north and Mgombani/Kalindu and Gombero in the south.

Tanga City council has a humid topical climate with temperatures ranging from 24^0 C to 33^0 C that influenced by coastal humidity and mangroves vegetation resulting into micro climate in specific localities and macro climate in larger areas. The city experiences dry season from January to mid-March that followed by three rainy spells, which are the long rains (March to May) with an average of 1000 mm to 1400 mm, the light rains (June to August) resulting to average of 100 mm and the short rains (October and ends in December) with an average of 500 mm to 800 mm of rainfall.

The City vegetation consists of natural forests (1500 Hectors), mangrove (1600 Hectors), bush land, and planted trees planted. Tanga City coastline is conserved with mangrove forests and there are 400 Hectors of mangoves that managed by 15 villages. Tanga City Natural forests are found in reserve areas of Mleni, Kolekole and unreserved area of Pongwe and Pande. Soil fertility is relatively high, and this is a moderately productive zone despite inconsistent and unreliable rains.

- **Social Conditions**

According to the 2012 Population and Housing Census, Tanga City Council had a total population of 273,332 with majority residing in urban areas. The major ethnic groups are Zigua, Sambaa, Bondei, Makonde and Digo. The Sambaa is the largest ethnic group in the council as the occupy 10.7% of Tanga population. The City Council is densely populated with an average population density of 502 persons per sq. km in 2012. Its population density increased from 446 persons per sq. km. in 2002 to 502 persons in 2012.

Business is the main activity providing source of income to the majority of the households residing in Tanga City. Most individuals are engaged in petty businesses, some are employed in various offices (public and private) including industries. Fishing is another main economic activity done by people residing in Tanga Coastal Belt with five fishing collection centers which are; Tongoni, Mwarongo, Mwambani Mchukuni, Kasera and Deep Sea. However, this activity contributes much on the council's per capita GDP. On the other hand, agricultural activities have a partial contribution of cash income in the council since only few people are engaged in the cultivation of cassava and vegetables only.

The main food crops grown in Tanga City Council were cassava, maize and cowpeas; the available data for food crop cultivation shows that, cassava was grown in a larger area compared to other food crops from 2011 to 2015. The household economy rests on two main pillars: crop production and fishing. Cassava and maize are the main food crops, although paddy is also produced in small quantities, along with cowpeas and green gram.

According to data from the 2012 Population and Housing Census show that 74.4 percent of the population of Tanga City used improved toilets as compared to 25.7 percent who used non-improved latrines.
Tanga City's has a total of 714 road network that consisting 84.22 km of tarmac roads, 90.49 km gravel roads, and 539.28 km of earth roads. Tanga City has abundant water sources from the Zigi River and Tanga Urban Water and Sewerage Authority (TUWASA) in the urban areas and Council rural water supply in the rural areas and about 56 98% of the City population are served with clean and safe water from the river.

10. Morogoro Municipal Council

- **Environmental Conditions**

Morogoro Municipality has a total land area of 531sq.kms. The land coverage constitutes 0.4% of the total regional area. The major physical features include the famous Uluguru Mountains, which lie in the south-eastern part, and Mindu mountains, which lie in the western part. The municipality ies at the crossings of Longitudes 37^0.0 East of the

Greenwich Meridian and Latitude 4^0.49' South of Equator. The town has a long history that can be traced way back from Slave trade where by Arabs used Morogoro as a stopover and a route for slave caravans from the hinterland to the Coast before shipping them to Far East through the Indian Ocean.

Land degradation especially at the slopes of Uluguru Mountains and along the rivers and stream. This phenomenon has been contributed by increased human activities such as farming and grazing. The most affected wards are Bigwa, Boma, Mlimani, Magadu, Luhungo and Mzinga.
The major water bodies in the municipality covers 403 Ha and include three main rivers (Morogoro, Kilakala, and Bigwa) with several tributaries which forms a number of alluvial flood plains. Other water resources include the Mindu Dam (which serves the industrial activities as well as domestic purposes), Ngerengere, Mlali, and Mzinga Rivers and Mindu Dam.

The Municipal is covered by loam, sandy loam and clay soil. The soils vary between red lateritic earth grey sand to silt hardpan and iron crust "mbuga". Moreover, there are sandy clay loam and reddish coloured soils on inter flute slopes that are saturated with water within 100 cms of the surface during the growing season. The majority of these soils have high nutrient contents and are considered suitable for a wide range of food and cash crops and therefore have the potential for profitable cultivation.

The Mindu Catchment Forest Reserve, which is located about 6 km west of Morogoro Town remain as the most important source of water to the Ngerengere River, which is the source of water to Mindu Reservoir and consequently the source of water to Morogoro Municipality. The forest is of the Eastern Arc type, as it contains species of restricted distribution, with biodiversity value being concentrated in certain vegetation types. These include woodland vegetation, evergreen forest and sub-montane forests. Other forest include Uluguru north forest reserve.

- **Social Conditions**

Morogoro Municipal Council had a population of 117,601 in year 1988; 227,921 in year 2002 and 315,866 in year 2012. It is indicated that the annual growth rate of Morogoro Municipal Council's population in 2012 was at 3.3%. (Census 2012). The majority of Waluguru occupy the largest part of the district area which covers all wards, followed by Wapogoro occupying some parts of the Municipal wards. In addition, the district is also occupied by other ethnic tribes including Wazaramo, Wakwere, Wachaga, Wasukuma, Wanyakyusa and Maasai.

The main economic activities in the municipality are agriculture, commercial and industries. The Municipality has a total of 19,226 ha for agricultural activities, where about 9,768 ha are in use and 65% of the workforce engaged in urban agriculture and 30% keep livestock. Industrial sector (mainly processing) in the municipality constitute 0.62% of the total municipal area and are located at Kihonda in spite that few are actually operating.

The common sanitation system used by the Municipal population is flushing toilets and septic tanks connected to soak away systems. Pit latrines are common in planned and unplanned areas due to the high cost of connection into sewerage system, low coverage of the sewerage system and non-availability of water supply. The Municipality has central sewerage which serves a total population of 18,302 accounting for approximately 5.08% of the total Municipal population with a total length of 38 Kilometres. The sewerage system covers the Central Business District (CBD) mainly Sabasaba, Mji Mkuu, Kingo, Boma and part of Mwembesongo, Mji Mpya, Mbuyuni and Mafiga Wards. It has also 6 wastewater treatment ponds out of which 4 are maturation, one facultative and one anaerobic. The waste water is normally disposed of at Mafisa Waste Stabilization Pond owned by MORUWASA.

Addition to the above, produced Solid wastes are disposed of at Kihonda dumping site and it is estimated a total of 250 tons of waste generated per day. About 55% of the entire population dump the produced wastes (Household waste, Commercial waste, Building materials waste, Worn out motor vehicles, and Industrial waste) to Kihonda dump and remaining 45% of households bury their solid wastes. Municipal has not designated the area for collecting and disposal produced hazardous wastes and only individuals collect and sold these waste to local vendors.

The municipality has 81 Pre-primary classes, 87 primary schools, 49 Secondary schools, 3 Vocational Centers and 4 Collages and University.
Also, there are 44 dispensaries, 13 health centres, 3 hospitals and pharmacies 130. The major epidemic diseases prevailing in the Municipality are Measles, Dysentery, Viral Eye infection, Rubella and Cholera.

11. Ifakara Town Council

- **Environmental Conditions**

The area of Ifakara town Council lies along the Kilombero Valley and part of it in the Rufiji Basin and Selous Game Reserve which extends to the Udzungwa Mountains National Park, covered by Miombo woodlands which is about 1,700 meters above sea level. The nature of catchment necessitates most water from Udzungwa Mountain to pass in Ifakara through Lumemo River. The river passes through the town towards the Kilombero River. The town council lies within one main agro-ecological zone called "Central zone" that suit the cultivation of such crops as paddy, maize, cassava and vegetable. The soil types are loamy, clay, sandy, and sandy – loamy. Ifakara Town Council has an area of 3,893 km sq with its topography mainly being flat. It is situated in a vast floodplain, between Kilombero River in the South-East and the Udzungwa Mountains in the North-West.

The rainfall pattern is bi-modal whereby short rains begin towards the end of November and end in January or February while long rains start in March and end in May or June. The average rainfall ranges from 1200 to 1600 mm. Since the town council being located in flood plains of Kilombero and Lumemo rivers, the Council experiences frequent floods during rain seasons cause destruction of infrastructures; roads, bridges and housing structures and farms.

- **Social Conditions**

According to population and housing Census 2012, the population of Ifakara Town had 106,424 people with the population growth rate of 2.8% per year. The growth rate is higher compared to regional and national figures of 2.4 % and 2.4% respectively. The ethnic people of Kilombero District are Ndamba, Mbunga and Ngindo. Other minor ethnic groups include Pogoro, Hehe, and Bena. However, in recent years, there are immigrants like Masai, Sukuma and Barbaigs who are engaged in livestock keeping and business activities. The town council economy mainly depends on agriculture, livestock and fisheries, Industrial & Commercial and Informal Sector.
Water supply services are operated and delivered by Ifakara Water Supply and Sanitation (IFAUWASA). About 47% of Ifakara Town Council's population is served with water from public hand pumps and water-pipe network extracted from underground water. The networks extend to about 25.7 km and currently 1,116 (20% of the entire population) customers have been connected with pipe network.

Sanitation in Ifakara Town is critical. It is estimated that 80% of the population uses pit latrines, 5% uses ventilated improved (VIP) latrines and 15% uses flush toilets. The latrines are of poor structural qualities. Septic tanks are mainly used in the new residential houses, institutions' offices and commercial buildings. Ventilated improved latrines (VIP) have been introduced in public institutions especially schools. The town council has no waste water disposal and treatment sites.

Ifakara Town has 12 health facilities including one Hospital (Privately owned), one Health Center (Government) and 10 Dispensaries (1 public and 9 private owned).
There are 39 Pre and Primary schools and 14 Secondary schools. Despite the increasing number of enrolled students from pre-primary to secondary schools, Students/pupils dropped out caused by truancy, pregnancy, and lack of basic requirement are the main challenges facing the education sector in the town.

12. Kibaha Town Council

- **Environmental Conditions**

Kibaha town has a total land area of 750sq.kms. The residential coverage constitutes 17,490 hectors (50%) of the total town area while 23% is full used for residential. The town council lies between latitude 6.8° South and longitude 38.2° and 38.5° east. The council is 40 km away from Dar es Salaam City. It is bordered by Kinondoni District to the East, Bagamoyo to the North, Kisarawe South and the Small Town of Mlandizi at North. It always experience hot and sunny weather throughout the year, with a maximum temperature in December while minimum temperatures occur in July.

- **Social Conditions**

The council has an estimated population of 128,488 people of which with household number of 17,788 and average size for household of 4.1. However, the population distribution pattern is linear clustering along the Morogoro – Dar es Salaam trunk road. Town Council covers an area of 750 km^2 is surface land. The average population density is estimated to be 171 people/ km^2. The town council has a strategic plan for combating and reducing HIV/AIDS infections from 8.7% to 5.7%; reducing stigma; improve service for the people living with HIV/AIDS; ensuring

environmental cleanliness and sanitation; facilitate accessibility to safe and clean water with improved infrastructures as well as enhancing conducive business environment for public and private investment.

Kibaha Town Council has a road network of 407.06 kilometers, out of which 7.135 are paved roads, 83.45 are gravel roads and 295.48 earth roads and 66.46 km of the gravel roads are passable with difficulties during dry season only. The main sources of water for domestic use are shallow wells, rainwater harvest tanks, boreholes and river water, piped scheme and dam. Percentage of Kibaha Town Council served with clean and safe water is 50.2 percent (64,500 people) out of total council population of 128,488.

Until 2017 the town council had 351 VICOBA. 703 women registered economic groups, 101 registered youth economic groups and 23 People Living with HIV economic groups. To improve women from marginalized state of economic life and their standard of living about 158,600,000/=Tsh were provided to 173 women economic groups. Solid waste generated from various places of the council are collected and disposed safely in temporary dumping area located at Kidimu Mtaa. It is estimated that 87 tons of solid waste are generated per day and only 51 tons per day are managed and being disposed of which is equal to 59 percentage of the generated solid waste.

The town council economy mainly depends on agriculture, livestock and fisheries (aquaculture), Industrial & Commercial and Informal Sector. The main economic activity in Kibaha Town Council is agriculture, which employs 70 percent of the total labour force. Crops cultivated include both cash and food crops such as cash nuts, oranges, mangoes and vegetables for cash and maize, cassava, etc., for food crops.
Kibaha town council has total of 39 government primary schools and 14 private schools as well as 37 Secondary schools whereby 13 Secondary schools are owned by the government and 24 Secondary schools are private schools. The town council has 23 health facilities (one hospital, five health centres and 17 dispensaries) in Kibaha Town Council of which nine of them are under nongovernment organization and 14 belongs to government. According to Health Department (2013), the major top diseases (in chronological order) comprise of malaria, pneumonia, diarrhoea, oral conditions, ARI, skin infections, cardiovascular diseases, intestinal worms, eye conditions, HIV/AIDS and anaemia

13. Dodoma City Council

- **Environmental Conditions**

Dodoma city council is a semiarid characterized by a marked seasonal rainfall distribution with a long dry season starting from late April to late November and a short wet season starting late November to the end of April. Average rainfall ranges from 550mm to 600mm per annum, although there are extremes like 743.3 mm (2000) and 365.7 mm (2005) which leading to the occurrences of floods in various areas of the city. The Council experiences uni-modal rainfall which is usually below average and is erratic, unpredictable associated with temperature fluctuations. Winds usually blows across the Municipal from southeast to northwest of the Council. The semi-arid nature of the area is a result of the dry wind. The wind speed increases in July with the strongest winds occurring on October.

The Council is characterized by broad upland plains which are part of East Africans Central Plateau. The Plains shelve gently down to mbuga swamps and separated by ranges of hills and punctuated by inselbergs, prominent, isolated rock outcrops. In their natural state, the plains are marked by open grassland with little or no tree or bush cover. The Dodoma hills rise about 400 metres above the general level of plains. They are of great charm, with gentle valleys dividing them, such as Ntyuka and Ruaha valleys. Bounding the northerly plain to the North east are the more mountainous Hombolo Hills, rising 900 meters above the plain. From the site of the capital these appear as a massive wall.

The Dodoma City council is endowed with forest resources. These include Adousonia digidata, Acacia species, Dalbergia nulano xylon, Terminalia species, Euphorbia triculi, Mangifera Indica, Ficus species and many others. Most of these are used for different purposes such as firewood, medicine, construction and fruits. The Greenbelt forest includes natural forests and exotic species. This forest surrounds Dodoma Municipal Council through Ihumwa, Zuzu, Bahi - road and Arusha-road. Most of the enriched species in this forest are; Leucaena lucocephala, Azadrachita indica, Adansoniadigitata and Syzigium cuminii.

The city has environmental monitoring facilities which include 1 Water laboratories owned by (DUWASA) and 1 soil laboratories (owned by TANROADS & TARURA) responsible for measuring soil fertility (nutrient deficiencies,

potential toxicities from excessive fertility and inhibitions from the presence of non-essential trace minerals) and looking microbiological quality, turbidity (for free chlorine residual and PH) where chlorination is used.

- **Social considerations**

About (85,945 Hectares) of the total area (2,769,000 hectares) is suitable for agriculture production. The rest of the land is subdivided in grazing land (65,337 hectares), forest reserves (26,731 hectares), and urban areas cover 1,522,950 hectares. According to the 2012 National Housing and Population Census, the population of Dodoma Municipal Council was 410,956 consisting of 199,487 males and 211,469 females representing (24%) and (1%) of the Dodoma region and National population respectively.

The major tribes in the Municipality include Gogo, Rangi, Sandawe, and few of the other tribes. The polygamist, extended families and male dominating decision making are among of the key culture of the areas, Mlenda is common for gogo people and Sandawe people and they are normally collected during wet seasons and dried for future use. About 75% of people's income in the Municipality is from agriculture and animal husbandry, 25% of the population is engaged in petty business such as retail shops, carpentry and food venders. Other activities include small and medium industries, consultancy and construction work. Main industrial products are wine, mattresses, furniture and mineral water. Others include honey, wax and herbs from the forests. Total arable land for smallholder farmers is 2,049km^2 equivalents to 204,900 hectares. This is equivalent to 74% of the total land which is 2,769.1 km (276,910 hectares). However, the land under crop cultivation is 1,960km^{2}only.This is 9.6% of arable land. It is anticipated that if modern crop production and improved animal husbandry is applied; the City could increase production of both food and cash crops tremendously.
Principal cash crops grown in the City include: groundnuts, grapes, simsim, sunflower, tomatoes, water lemon and rosella. The council has a marginal potential of irrigation development due to the geo-physical conditions in the area.

The Dodoma city has set aside 639.16 Ha for collecting, treatment and disposal of generated sewage from domestic (residential), commercial, institutional and industrial centres within the city. Also, the city has 1 landfill that all types of the produced wastes are disposed of. Refuse generated is estimated at an average of 8940 tons per month and 298 tons per day whereby residential area is 184.4 tones (61.88%), 9.48 tons from commercial (28.28%), Institutions 32.08 tons (10.76%), industries generate 18.76 tons (6.29%) and 34.52 tons (11.58%) generated from markets. The city council has no designated area for collecting and disposal generated hazardous wastes only hospitals and dispensary has incinerator for incinerating produced wastes.

The Dodoma city has 88 health facilities (7 hospital, 10 health centres and 71 dispensaries). There is six livestock markets, 4 crop markets and 5 normal/retail markets. Also, the city has 3 slaughter house and 1 abattoir.
Infrastructure facility, in the year of 2018 to 2020 the city constructed Storm water con Foot bridge. Road network consist local roads (city road: 413.74 km, feeder road: 555.70 km, Community Road: 116.35 km) which are under TARURA. TARURA's local roads are poor as the capital's road network, while 133 km (12.3%) of the total local roads are paved leaving 952.79 km (87.7%) of the local roads as either gravel or earth roads.

14. Singida Municipal Council

- **Environmental Conditions**

Singida Municipal Council covers a total area of 754 sq. kms (75400 hectares). The size of the land area is 730.5 sq. kms, which arable land is 293.5 sq. kms; forest area covers 93.5 sq. kms, 97.0 sq. kms for residence while grazing area covers 246.1 sq. kms and 23.5 sq.kms of water body.
It lies between latitudes 4^0 40' and $4^0$43' South of the Equator and longitude $34^0$30' and $34^0$53' East of Greenwich. It is the hub (Central part) of the Region with roads leading to Dodoma, Manyara, Arusha, Tabora, Kigoma, Shinyanga and Mwanza Regions. Municipal's large part of Singida Municipal is semi-arid, and the average annual rainfall ranges between 650-800 mm annually.
The most parts of Singida Municipal characterized with Sandy loamy soil, loamy silt soil and clay silt soil which are under depressions. Vegetation in the area is dominated by short grasses, shrubs, thicket bushes, and a typical characteristic of many semi-arid regions. There are also planted timber and fruity trees.

Singida Municipal council has got two permanent lakes namely Kindai and Singidani. There are also few seasonal dams/ponds, providing water for livestock and sometimes water for irrigation for horticultural crops. Much of the

plateau has internal drainage producing saline and alkaline lakes such as Singidani, Kindai. Rivers in the area are seasonal pouring their water into Lake Kindai and Singidani.

Availability of fertile land give room to community, NGOs, CBOs to plant trees at wards and streets which have no trees including open space and botanical garden. The council has also established Beach Management Unit at lake Kindai and Singidani to reduce threaten of life span of lake through increase of waste, sand and other impurities, to those lake and avoid destruction of production area of aquatic organisms through pollution by industries and peoples day to day activities especially premises near Lake Singidani especially, education on environment management to community continued and fine to those break the law eg industries and household fined due to pollution.

- **Social Conditions**

According to 2012 population census, Singida Municipal had a population of 150,379 people growing at the rate of 2.71% per year whereas males were 73,484 and females were 76,895. Out of the total population, about 49.28% of these people were living in urban areas and the rest 50.72% living in rural areas. The dominant ethnic groups are Nyaturu and Nyiramba which comprises about 80% of the total population. There are also minor tribes such as Kimbu, Gogo, Isanzu, Tuturu, Sukuma, Mang‟ati, Nyamwezi, Luo, Barbaig and Hardzebe believed to migrate from other areas for business.

Singida Municipal council is responsible to provide service in 19 villages; Singida Urban Water Supply and Sanitation Authority (SUWASA) is responsible to provide service in urban area. The major sources of water in the municipal includes: shallow well, deep well, rain water Harvest and hand pumps. The council makes extra efforts to mobilize people to construct and use of improved latrine, health education been given to the community on importance of construction and use latrine to control and prevent communicable diseases such as diarrhoea, typhoid, dysentery and other food borne, water washed and water related diseases.

By 2015 the council has total of 21 health facilities, of the total available 13 belong to the government, 6 to the private sector and 2 are voluntary agency facilities. Out of 21 health facilities available 10 health facilities are situated at 7mitaa. Shortage of medicines by 50% is due the monopoly system of supplies from MSD and has been major challenges affecting curative issues followed by High maternal mortality ratio by 199/100,000, high incidence of HIV/AIDS by 4.7%, TB detection rate by 40%, high prevalence rate of epidemics [cholera, meningitis, plague, measles, polio and Yellow fever] by 30%, High prevalence of malaria by 6.6%, and high prevalence of STI by 2%.

The economic activities of the municipality includes agriculture (farming and livestock keeping), beekeeping, industries and commercial activities.
Singida municipal council is well connected by road network by 95%, most roads in the Municipality are in good condition and are passable throughout the year. The Municipal council has a total of 606.2km of road networks where by 11.5km of tarmac 63.7km (gravel roads) and 531km is the Earth roads.
In terms of vulnerability, by 2015, the municipality had 561 vulnerable children from 18 wards. The root causes of most vulnerable children in Singida Municipal are divorce, death of parents (Orphan), income poverty, as well as those children abandoned by their parents.

The generated wastes (hazardous and non-hazardous) are managed by the municipality and about 102,151 kg of waste generated par day while the capacity of waste collected per day is 44,800kg, this implies that the municipal fail to collect about 35,200kg of waste per day. The solid-waste generated consists of food waste, paper, polyethylene, cloth, garden trimmings, construction debris (brick, concrete, sand, and dirt), wood, leaves and branches, metal, glass, skins and leather, animal waste, industrial waste, old appliances, and miscellaneous waste and disposed of at Manga dumping site. Since, municipal has no disposal sites for hazardous wastes, some of these wastes like plastic materials and iron bars are collected back by scavengers‟ and sold to the people in need where the goods are transported to other regions for recycling.

15. Kondoa Town Council

- **Environmental Conditions**

About 14,184 ha of Kondoa Town are covered by Natural forest: 16 ha are Central and 968 are Local Forest Reserves i.e. 10.4% of 8700 ha fall under the Swagaswaga game reserve, part of which belongs to Kondoa Town. Public forest

areas (unreserved forests) cover approximately 4,500 ha˙ Tree species in these forests are mainly dominated by Brachystegia species, Acacia species, Pterocarpus angolensis, Afzelia quansesis etc.

The town lies between latitude 4^0 12' to 5º 38', 5" south, and longitude 35^0 6' to 36^0 2' east. Much of the Town is plateau rising gradually from 900m above sea level to 2,190m above sea level. In the North, the Town borders with Kondoa District Council and Chemba District in the South. The town council was established on 1st July 2015. It has 8 wards, 25 villages and 11 mitaa in 2 divisions namely Kondoa Mjini and Kolo with 2 wards of Bolisa and Kolo. The landscape of Kondoa town consist of extensive undulating plateau and plains, arid to semi-arid in the East and Southeast and slightly more humid in the Northwest and west. Extensive complexes of rocky hills, steep escarpments, interrupt these and large seasonal flooded depressions.

Climatically, Kondoa Town is part of the semiarid area of the central plateau of Tanzania (average altitude of 1,200 m) with an average rainfall of between 500-1000 mm. About 85% of the annual rainfall, falls between December and March with a dry spell in February.
Kolo-Isabe escapements are a natural beautiful reserved forest. The area is allocated on the series of beautiful undulating escapements, starting from Kolo to Kisese village. Kolo-Isabe escapements are crossing over 10 villages. Traditional beekeeping is mostly practiced by most of beekeepers in Kondoa and the surrounding communities.

Surface Water Resources and Hydrology: The hydrology and drainage of the town council consists of a wonderful natural spring with hot water which found in Kondoa town. The spring has the capacity of producing 102,000 litres of water per hour and have attractive and natural protected ecosystem surrounding the natural water spring. It's also attractive for tourism activities to both local and international Tourists, public institutions, researchers, public employees and the whole community at large. About 120 International Tourists visiting in a year.

- **Social Conditions**

The Town depends on agriculture and animal husbandry, which are locally practiced in rural areas at subsistence level. The agriculture is characterized by low productivity resulting from low and erratic rainfall high, evade-transpiration and low moisture holding surface soils. The main crops grown in the Town include sorghum, bulrush millet and maize; major cash crops are maize, groundnuts, sunflower, castor seeds, sesame etc. Only about 20% of the farm produce is offered for the market. The total arable land of the Town is 20,127 ha. The land under cultivation is estimated at 19,127 ha. (This is about 24% of the total arable land). About 70% of the total area of the Town has potential for agriculture. Main crops grown are maize, finger millet, millet and sunflowers.

Livestock being the second in economy contributor, according to 2016 estimates the Town has a total of 102,296 livestock comprising 19,800 cattle, 18,216 goats, 3,356 sheep, 686 pigs, poultry 58,974 and 1,264 donkeys. According to the 2012 National Housing and Population Census, the Town has a population of 59,022 (Male: 29,177 Female: 29,845) with an average growth rate of 1.76% per annum. The average size of the household is 4.8 persons. The average Population density is 1:49 sq. km.

Rangi is the most dominant tribe at Kondoa town, Bantu speaking people who form about 80% of the Town population mainly inhabit the Town. Apart from prevalence of common diseases among the Town population, the infant and child mortality rates and maternal mortality and death rates are still high. Poor malnutrition and moderate malnutrition amongst children under five years are also prevalent, Kondoa Township is supplied with water from Bicha Borehole 216m^3 per day and the spring supplying 3284m^3 per day making the total of 3500m^3 per day against demand of 6200m^3 per day. The current and projected population figures based on 2012 census with the growth rate of 1.64% for the town are 29,533. The demand for water is inevitably going to increase greatly.

The town council has a total of 211.84km of the road network and 2.57km is tarmac, 92.6km (gravel) and 316.67km (earth roads). Town roads and feeder (gravel and earth) roads greatly deteriorates during rainy seasons, great deterioration happened in 1997/1998 season particularly due to heavy rains of El-Nino and lack of routine and periodic maintenance.

The level of social services such as medical and education services is relative good. There are 26 pre and primary schools and 12 secondary school in Kondoa Town; every village has a primary school, while some villages have more than one but the schools have insufficient staff to cope with increasing enrolment. There is 1 hospital and 10

dispensaries and communities have access to medical services, mainly dispensaries. The Town is faced by high occurrence of common preventable diseases such as Normal Deliveries Malaria severe, Pneumonia, Emergency surgical conditions, Diarrhoea Diseases, pneumonia, Anaemia and Clinical AIDS.

16. Tarime Town Council

- **Environmental Conditions**

The Town Council is situated between 1500 Mean Sea Level and 1600 Mean Sea level. It has got an area of 147 km^2. It is boarded by Kimusi stream and Mori river East wards, Tarime Hills on the South West, Msege stream on the North West and Msati stream as well as Mori River on the North East of the Town. Town Council is experiencing moderate type of rainfall which falls in two seasons starting between August to November and February to May each year. The amount of rainfall ranges approximately 1300 to 1800 mm. Tarime Town is characterized with temperature varying from 16^0C-20^0C.

Topographical features and natural vegetation is mainly characterized by sand and alluvial soil. The Council has rivers and valleys which are suitable for crop production under irrigation. However, currently only 53 hectares are utilized for Irrigation Agriculture in Tarime Town Council. Rain water harvesting provides important irrigation water source especially in Nyandurumo valley. About 8 villages are located in areas which are potential for irrigation farming.

- **Social Conditions**

Town council is dominated by two tribes namely: Kurya and Luo tribes. However, other tribes residing in the council includes Jita, Chaga and Haya. Most of people speak Swahili Language and some of them are using vernacular language of "Kurya", "Luo" and "Jita" basing on their origin.
According to National Census 2012 the Council has a total population of 78,037. The annual population growth rate stood at 2.7% with average household size of 5 people. The industry serves 90 % of the council's population in income generation for running the day to day activities. However, majority of the population (about 90%) depends mainly on traditional rain fed subsistence agriculture. The major cash crops grown in the council are coffee and tea, the main staple food includes: maize, cassava, beans, sweet potatoes, sorghum groundnuts and banana while vegetables such as kale, tomatoes, eggplants, cabbage, amaranths, and watermelon are widely grown in the Council. The habitants of Tarime Town Council practices (Intensive and Extensive system) of livestock keeping. The council has livestock border market at Magena that is not operating due to illegal smuggling of cattle and goat to Kenya.

The Town council has 10 fish ponds which are operating and owned by five farmers. Yields of these fish ponds are yet known because they keep for family consumption. The Council receives fish products from Lake Victoria and Mara River hence a need to perform a daily routine inspection at the market to ensure consumers health. Due to conducive environment for fish farming, few households have established modern fish pond farming in their areas. Fish mongering business is an important economic activity of some people in the town.
The number of people served by the present water supply infrastructure is insufficient to cover the present demand so it is required more water points through constructing new water schemes, rehabilitating and maintenance of the existing water infrastructure so as to increase population served now from 40% to at least 80% by 2017.The water supply in Tarime Town Council is very low compared to water demand of the community due to low establishment of new water projects and poor water infrastructure which needs rehabilitation and maintenance.

Tarime Town Council has a total of 19,203 Cattle. Where by 9,814 goat, 3,969 sheep, 37,935 chicken and 3,369 Ducks. The average of 5840 cattle and 4380 goat are slaughtered per year and their meet is sold locally within the town. The habitants of Tarime Town Council practices (Intensive and Extensive system) of livestock keeping. The council has livestock border market at Magena that is not operating due to illegal smuggling of cattle and goat to Kenya.

The Council has a total number of 32 pre and primary schools (26 are public and 6 are private) and 11 secondary schools of which 3 are public owned and 8 are private owned. The education sector in town is facing with various challenges including shortage of books in schools which affects teaching and learning process, Shortage of teaching and learning materials, drug abuse by students, early pregnancies and HIV/AIDS infection.

The town council runs one Government hospital, 3 Dispensaries Government owned, one health centre owned by Tarime Goodwill Foundation, 4 Private Dispensaries owned and 3 Faith Based Organisation. The top ten diseases

affecting the community in the town council includes: Diarrhea, ARI, Pneumonia, Intestinal worms, Malaria, Anemia Clinical AIDS, Emergency surgical condition, Ear condition and Skin disease.

There is one dumping site located at Starehe area where all solid wastes (from residences, industrial and factories) generated into the town council dumped. Like other LGA's the town council has no waste collection and disposal sites for generated hazardous wastes and are being collected by individual and sold to the people in need where the goods are transported to other regions for recycling or reuse.

FGM has been reported and documented in the council. In community FGM is still performed at a rate of approximately 80%. However in recent years the FGM is decreasing and the practice is now conducted in a secretive manner because of government opposition. FGM is associated with a number of health risks and consequences, including pain, bleeding and infection (consequence of the procedure) and Long-term consequences include: chronic pain, infections, decreased sexual enjoyment and psychological consequences such as post-traumatic stress disorder.

17. Kasulu Town Council

- **Environmental Conditions**

Kasulu Town Council covers total area of 878.8 Km^2 approximately 11.5% of the total area of Kasulu District. Kasulu Council receives enough rainfall which ranges from 1,300 mm to 1, 500 mm and the temperature ranges between 16°C-29°C degree centigrade which enables agricultural activities to improve productivity. Its soil is dark reddish clay loams at a big area of lowland and in highland relief the soil is black and brown alluvial soils. Kasulu Town Council is located in western part of Tanzania. Kigoma Region is between Longitude 29^0 06' and 30^0 55' East of prime meridian and Latitude $3^0$45' and 4^0 34'South of the Equator.

The major characteristic of the Council is categorized into low lands and highlands of 1,200m -1,800m a.s.l and plateaus of 914m-1,350m from the sea level. There is a woodlot in Kasulu Town Council covering 51 Ha. This woodlot is covered by Eucalyptus Salgina and Eucalyptus Maidenii total cubic metres of timber harvested annually from these woodlots is almost 500 m but very small number of volume of timber are sold out of Kasulu Town Council. The forest reserved owned by Town Council is almost 10 hectares of natural forest found at SUNZU hills covered by Miombo trees.

The surface water and hydrology of the council comprising Mgandizi River. The river is Council's proud of production of food crops like maize, beans, and banana and cassava. Mgandizi River is a perennial river characterised by grassland with a few acacia and riverine trees on both its upstream and downstream riparian's.

- **Social Conditions**

The 2012 population and housing Census recorded a total population of 208,244 comprising of 99,368 males (47.7%) and 108,876 females equals to (52.3%) in Kasulu Town, with the population growth rate of 2.4% per annum. The current population in 2017 is approximated to 234,452. Life expectancy of people estimated to be 52 years. The current population density is 57 people per km while each household carries 5.6 people by average.

Agriculture is the main income generating activity in the Council. Over 85% of inhabitants depend on crop and animal husbandry and the remaining percentages depend on other sectors, such as petty businesses. The main food crops are maize, beans, cassava, sweet potatoes and banana. The main cash crops include coffee, tobacco and sugar cane. The per capita income of each individual in the council is estimated to Tshs.685, 000/= per annum.

Coffee and banana produce are the major sources of income for the population in the highlands while maize, beans and cassava are the major sources of income in the lowlands respectively. Irrigation in Kasulu Town Council has been seen as protection against erratic rainfall and drought, it is an assurance against risks in crop production, increases volume of production and contributing in poverty reduction in the surrounding urban community by ensuring food security to household level. The education awareness within the Council is very intensive where by every ward and some streets/mitaa has a primary school, and almost every ward has a secondary school.

The Council has 2 Hospitals these are Kabanga Referral Hospital owned by Faith Based Organization (Roman Catholic) and Kasulu Town Hospital under government, 1 Health Centre owned by Government and 20 Dispensaries

of which 11 owned by public and 9 Dispensaries by private sectors. Malaria has been a leading killer disease, followed by Neonatal Condition. Others are AIDS/STI and TB. Children are most vulnerable group affected by these diseases.

It is estimated that 56.17% of the total population in the Council is accessible to clean water within the required walking distance of 400 meters. The Council has 11 Gravity piped schemes, 6 bore holes, 43 spring water scheme, 3 shallow wells and 8 rain water harvesting tanks. There are 208 source of water not yet utilized this comprises 57 shallow wells, 74 spring water and 56 streams.

18. Njombe Town Council

- **Environmental Conditions**

Historically, the name Njombe was derived from the Bena word ''Mdzombe,'' which is a big tree in Njombe. It is a small town in the Southern Highlands of Tanzania. Njombe Township is the District Headquarters with Town Council status. It lies at the crossings of Longitudes $34^0$25' and $35^0$27'east of the Greenwich Meridian and Latitude $9^0$10' and $9^0$45'south of the Equator.

Njombe Town Council is relatively homogeneous with gently undulating plains intersected by seasonally streams. Njombe Town Council has two main features, namely: -the highland zone that situated on the western escarpment, which covers most parts of Igominyi division, with rainfall ranging between 1,200 - 1,400mm per annum and temperatures of between 6^0 centigrade and 20^0 centigrade. The soil texture is acid in nature and the main crops grown are maize, tea, coffee, beans and round potatoes. The lower zone covered by black and loam soil, experiencing rainfall ranging between 1,000 to 1,200mm annually with temperatures ranging from 15^0 centigrade to 21^0 centigrade. Climate variation in Njombe Town Council is attributed mainly by high altitude and forest covers. The Town Council receives rainfall once a year, occurring between October/December up to March/April or sometimes May in each year.

It forms part of the East West escarpment, an area of flat and gently undulating plains broken in places by small hills. it has two main Rivers in the Council (Hagafilo and Luhuji) with several tributaries which are Iwugumi, Lufuo, Welela, Ngongwa, Luhuhu, Msolwa, Lutitu, Makweme, Kitefu, Ifusi, Lupali, Mwika Luhomenzo, Lupombwi, Mweludzi, Denyisonzo, Matofali, Moheli, Mkelema, Hwilindilindi and many more.

The town council had a total of 3,021 hectares of natural forest reserves which is equivalent to 0.9 percent of the town council land area of 321,200 hectares. Uwemba ward has the largest area with 1,863hectares (13.5 percent) of natural forest reserves followed by Yakobi ward with 675hectares (2.2 percent) of natural forest reserves area.

- **Social Conditions**

Njombe Town Council population has increased by 14.3 percent from 113,969 people in 2002 (54,056 males and 59,913 females) to 130,223 people counted in the 2012 Population and Housing Census (61,112 males and 69,111 females) resulting in a significant increase of 16,254 people during the inter-censal period. Between 2012 and 2018, the Council's population increased from 130,223 people in 2012 to 141,633 people in 2018 (Population Projections) equivalent to 8.8 percent. . In 2018, the population density of Njombe Town Council increased by 44 people per sq. km. This increase is above the regional average population density of 33 persons per sq.km. Among other reasons, the relatively large population density of Njombe Town Council has not been caused by the size of its land area but the rural – urban migration within the Region and the country as a whole since Njombe Town Council has become a Regional Headquarter.

Njombe Town Council had the highest per capita GDP in Njombe Region in a period between 2013 and 2014 followed by Njombe District Council and Ludewa District Council in 2015. Makambako Town Council had the least per capita GDP of TZS 859,232 in 2015. Njombe Town Council has variable number of economic opportunities with few industries. Commercial agriculture (crops, livestock, forestry and hunting) was reported to be the main source of income in the Council which engaged 85 percent of the residents. This is followed by services and other related activities (8 percent) while Industry and Construction activities (Manufacturing, electricity, water and construction) accounts only 7 percent.

Njombe Town Council is served by trunk, regional, district and feeder roads. There are about 1,245 km of road network in Njombe Town Council of which 116.5 km (9.4 percent) is tarmac, while 302.5 km or 24.3.3 percent (gravel road) and the remaining 826.0 km (66.3 percent) were earth roads. About 94.1% of the town roads are passable

throughout the year and only 5.9 percent are not passable throughout the year.

Health infrastructures in the Council has been increased from 52 of 2012 to 70 of 2018. This is an increase of 18 health facilities (34.6 percent) over a period of six years from 2012 - 2018.
Through Voluntary Counselling and Testing (VCT), voluntary blood donors and the Prevention Mother to Child Transmission (PMTCT) services HIV+ prevalence statistics in Njombe Town Council in the period of 2018, out of 29,916 people who tested for HIV, 2,255 people (8.4 percent) were HIV+. The females with HIV+ were the majority (1,251 people, 8.5 percent) than male (1,004 people, 8.3 percent. The rapid spread of the epidemic are migration (in and out migration) the traditional practice of prolonged drinking and unsafe sexual practices, polygamy, ignorance, and prostitution done by the young girls migrating to urban centres end up being domestic workers for sometime before resorting to prostitution for survival.

Njombe TC is among of the fastest growing towns in Tanzania demographically and economically. The production of solid wastes in Njombe TC in particular has increased rapidly in terms of waste amount as well as composition. According to Njombe TC (2015), the town's annual solid waste generation is over 19,617.30 tons of solid waste per year. Overall collection coverage is only about 8,631.61 tons (44%) per year, leading to uncontrolled waste in the town and exposing residents to unsafe environment. This is likely to cause serious public health problems through possible eruption of diseases, including often fatal water-borne diseases, such as cholera, diarrhoea and dysentery. Also, wastes separations according to their types are not conducted and all wastes are mixed and dumped together leading to serious environmental pollutions and degradations.

19. Mbulu Town Council

- **Environmental Conditions**

Initially Mbulu was approached from Mbugwe in the East by climbing the escarpment, while under British rule roads through Dareda in the South and Karatu in the North were established. Colonial settlers started farming on the slopes of the neighboring Ngorongoro Crater from 1926 onwards. Up to 1995 Mbulu was one of the districts within Arusha Region, but since Arusha's split up, Karatu Division became one of Arusha's districts, while Mbulu became part of Manyara Region. At the moment Mbulu is one of the five districts within Manyara Region.

Mbulu District is surrounded by the most famous national parks of the world: Ngorongoro Crater in the North West, Serengeti in the West, Lake Manyara and Tarangire National Parks in the North-East and East respectively. Rainfall ranges from less than 400 mm in the western zone to over 1200mm in the Eastern zone. Almost half of the district receives less than 600mm of rain annually, which is generally considered as the limit for reliable agriculture. However, rainfall varies considerably between years.
The land surface was modified by sedimentation and deposition of loose materials. In the plains wide valleys were formed and later filled in by erosion products from upstream areas. These products consist mainly of cracking clays with relatively high sodium content, which are highly susceptible to erosion.

The town council has Nou forest reserve (30334 ha), Hassama hill forest reserve (5101 ha) and Marang forest (87473 ha). The forest located in the eastern part of the district at an altitude between 1600 and 2350 metres above sea level. The flora of the forests and woodlands is moderately rich with a vegetation type typical of dry mountain forest. The increasing of anthropogenic activities between 1962 and 1988 has reduce the areas of these forests from 15 to 20% (Marang forest), 10% (Nou forest reserve) and 40% (Hassama forest reserve).

The surface water and hydrology of the district council comprising Lake Thlawi, 11 perennial rivers and several streams.
Land degradation is a key issue in the town council and comprises in general various types (water erosion, wind erosion, compaction, soil depletion, salinization and soil pollution). The central zone (near Daudi, Gunyoda, Silaloda and Tlawi) of the council is more affected to severe erosion.

- **Social Conditions**

Mbulu Town Council has an area of 1891 km^2. The present population of Mbulu Town Council is 146,527 inhabitants among them 74,112 are males and 72,415 are females (Population and Housing Census, 2012 and its 2016 Projection) with growth rate of 3.8%. The Iraqw are the predominant inhabitants of the area and are understood to have settled in Iraqwa Da'aw (by Iraqw speakers) or Mama Isara (by Swahili speaker) about 300 to 400 years ago. The oral history

indicates that the Wairaqw come – through Ethiopia - as far as from the Middle East. Initial clan names are Hhay Tippe, Hhay Duwe and Hhay Masay. However, there has been a lot of intermarriage as well, and a clan like e.g. the Hhay Tsaxara originates from Irangi Hills in Kondoa. Major spoken languages besides Swahili are Iraqw, Datoga and Hadzabe.

Agriculture and Livestock are the most important economic and income generating activities in which an estimated 96% of the total population is employed. In fact, within the council there is hardly employment outside these primary sectors except for the petty trade, business and social sector, which is mainly concentrated in the centres Doudi and Mbulu Town. Major trading centres in the district include Mbulu – Town and Daudi. Periodic markets (minada) which takes place on 17th – 22nd first round, and 30th – 3rd second round of each month. Mbulu District have 7 periodic markets. The majority of the population depends on firewood / charcoal. Only a small part of the population has access to electricity which is drawn from the national grid system. Areas connected to national grid include 17 wards of the Council.

All Iraqw households are embedded in social and territorial groupings. In the *ridge community* they share resources as pasture, woodlots and water sources. Space, more than kinship, was the principle for organisation, on which basis people feel moral responsibility towards each other within the community boundaries. Until now, the *aya* which is the largest territorial and political unit in the household level and ridge neighbourhoods into one community. A council of elders made up of men from all households in the community, handled the affairs and made decision of the community.

Within Iraqw, Female Genital Mutilation (FGM) and Male circumcision co-exist. In the past circumcision of the boys was a public affair on the level of the ridge community, however nowadays it is mainly done at the hospital. Female circumcision has always been and still is a private affair.
Mbulu town has about 800 metres (tarmac) and 190 km (gravel roads). During the rainy season 60% of the district roads and 80% of the feeder roads are not be passable. The Council has 12 health facilities (1 Council hospital, 2 health centers (Daudi and Tlawi) and 8 Dispensaries. HIV/AIDS prevalence rate is 0.8% of total population by 2008. The most prevalence rate are found in Daudi, Mbulu, Bashay and Haydom, where activities (pool tables, guests) take place.

20. Mbeya City Council

- **Environmental Conditions**

Miombo woodland is predominant in Mbeya. Those areas with higher rainfall support forest, often evergreen and bamboo thickets, except at the highest elevation, where afro-alpine grasslands exist. All these basins and river courses are greatly linked to the city land area and contribute to the hydrological dynamics in the city. Mbeya City Council is also surrounded by mountains and river valleys. Ecologically important are the Poroto Mountains, south-east of Mbeya. In 2005, a completely new species of large monkey, the Kipunji, was discovered living in the southern highlands to the south-west of Mbeya.

The city council is located between latitudes $8^0$50’ and $8^0$57’ south of equator and between longitudes $33^0$30’ and $35^0$35’ east of the Greenwich Meridian and at an altitude of 1,700 meters. It through a narrow highland valley surrounded by a bowl of high mountains of the Mbeya Peak and Loleza Mountain ranges in the North West and Uporoto in South East. It has Imeta, Nzovwe, Loleza, Ivumwe Sisimba and Nsalanga perennial Rivers Valleys cutting cross and surround the City. Mbeya City has the advantage of being located in area surrounded with rivers, mountains and valleys with a rainfall of not less than 1000 mm annually. This is likely to enhance reliability of water sources. The city has one wetland (Ilolo wetland) located at Sinde ward. The city uses 9 gravity schemes taking the advantage of the physical features, 144 domestic water points, 244 water tanks and 86 water harvesting schemes.

The area covered by forest in the council accounts for 6.9 percent of the total land areas where by the forest cover in Sisimba division is 14.4 and Iyunga occupied only 1.7 percent. Natural forest reserve occupies 1,253 ha in the council while forest plantation occupied 471 ha and game controlled area has an area of 253 ha. Majority of people in the council still rely on wood and charcoal for their energy needs hence causing deforestation and environmental degradation. Deforested areas no longer provide a home for wildlife leading to biodiversity loss and become susceptible to soil erosion.

As part of environmental monitoring the city has one landfill laboratory for measuring and monitoring Ph, Luminescent Dissolved Oxygen (LDO) and NH_3.

- **Social Conditions**

Mbeya city has a total area of 214 sq. km that 0.140 km^2 (water area), 159.609 km^2 (un-surveyed) and 54.391 km^2 (surveyed). Most of the land in the Mbeya City council is for settlement, other are used for industrial development and agriculture. The city has total population of 385.279 people of which men are 182,620.00 and remaining 202,659 are the women. Nyakyusa, Safa, Ndali, Kinga, Ndali are the ethnic groups in the City.

Development of Mbeya City relies on the population characteristics and how access and equity in social and economic rights is used. This would promote positive mind set and a culture that cherishes human development through hard work, professionalism, entrepreneurship, creativity, innovativeness, ingenuity, confidence in and high respect for all people irrespective of gender. This provides a foundation towards industrialization and economic development. 98.95% of the total area available for agriculture is cultivated of which 496 hectares are under irrigation. This is an indication that the arable land is almost exhausted requiring techniques for sustaining yield and change of economic occupation. The improvement of agriculture should consider that agriculture is likely to be the main occupation for the community in Mbeya City Council thus provide the right inputs.

Livestock keeping is the second economic activity, whereby chicken broilers accounted for the highest number of livestock kept in Mbeya City (166,532 broiler chicken equivalent to 49.4 percent) followed by indigenous chicken (43.6 percent), and cattle with 2.7 percent. The council has two dips found in Iyunga and Sisimba divisions with five slaughter slabs where four of them are in Iyunga division and one slaughter slab is in Sisimba division. Other economic sectors are forest products (wood, timber, charcoal, firewood and building materials), Beekeeping, industrial, fishing and tourism (historical sites and eco-tourism) activities.

Mbeya City is within a region ranked among the highest infected region by 2017 HIV/AIDs survey reports of NBS which indicates a remarkable increase of HIV prevalence rate from 6.0 percent in 2011 to 15.6 percent in 2015 and females are more affected than males. Malnutrition cases in children stood at 0.3% indicating that most people observe nutrition contents in children diet. There are 7 hospitals, six health centres, 39 dispensaries and 47 health laboratories.

City Council road networks has a total of 559.2 kilometres, whereby Iyunga division covers the longest road network with 359.7 kilometres while Sisimba division has a total of 199.5 kilometres. Out of 559.2 total kilometres in the City Council, 44.8 percent of the road network is earth road, 39.9 is gravel and 15.3 is tarmac. Existence of longest earth road network in the council indicates limitations of passability during the rainy seasons. The city council has one crop markets (Sugarcane & Tomatoes) and 5 normal/retail markets.

The solid waste management facilities of the council consisting one landfill site and both household, industrial, institutional, construction, demolition debris, dead animals and sanitation residue are disposed of. It is approximated about 10,869 Tons of solid wastes are produced per month. Hazardous waste collection points and its disposal sites are not available in the city and are collected by individual that solid to waste dealer for recycling or reuse.

21. Lindi Municipal Council

- **Environmental Conditions**

Lindi lies at the mouth of Lukuledi River, surrounded by hills and looking out to the warm Indian Ocean. Mtwara has replaced Lindi as the most important port and market town on the south coast, but the town is still an enjoyable place to visit. Lindi Municipal Council covers an area of about 945 square kilometers which is equivalent to 14.1% of the total area of Lindi Region. Out of the said area, 833 km^2 is covered by land and 112 km^2 covered with water. The council has two rainfall seasons. The shortest rainfall season is from November to January and the wetter months are between March and May. The average annual rainfall is between 800mm and 1200mm where the dry season starts in the mid May to October with the average temperature of $24^0 – 27^0$C.

Lindi abounds natural resources including an unexploited coastline of exquisite beauty, hundreds of thousands of hectares of grasslands for agriculture and animal husbandry, mineral resources such as gypsum and the recent discovery of large reserves of natural gas which is approximated to be more than 55 trillion cubic feet. The magnificent beach line is by law zoned for touristic and aqua- recreational activities which call for mass investment in hotel

industry to accommodate the anticipated influx of people exacerbated by the abundance of natural endowments.

Natural forests are found along the coasts which cover an area of about 2,723Ha of Mangrove forest. Natural forests 359Ha and Plantation forests in 23 hectares. Also various conservation activities are being implemented in the municipality done by MJUMITA community forest project that aimed to reduce emissions of greenhouse gases from unplanned deforestation, enhance the carbon stock within the village forest reserves by allowing natural regeneration, conserve threatened and endemic species and maintain forest ecosystem services.
Dominant natural vegetation are the mangrove swamps, coastal shrubs, miombo woodlands, scattered baobab trees and man planted coconuts, cashew nuts, mangoes and pawpaw trees.

Land degradation, soil erosion and deforestation, coastal erosion is one of the major coastal problems the Municipality. This is mainly caused by sea level rise, geology, and rapid coastal population growth accompanied by rapid increase of human activities (illegal sand and stone mining) that interfere with natural processes have been linked to the coastal erosion along beaches at Rasbura ward.

- **Social Conditions**

According to 2012 Population and housing census, the Council recorded a total population of 78,841. Currently, the Municipality is estimated to have 82,606 whereby Male are 39,317 and Female are 43,289. Lindi Municipal Council is located on the Southern part of Tanzania Mainland.
In Lindi there is large endowment of Liquefied Natural Gas (LNG) as compared to any part of the World. Soon there will be construction of a special plant for processing the Gas which will be extracted in the deep sea.

Lindi Municipality is bordered with various districts in the near proximity. These districts include Ruangwa which is famous in Gold, Green Tourmaline and ruby mining, Masasi, Tandahimba and Liwale which are good at cashew nuts and simsim production. The giant Selous Game Reserve which is about 300 Kms from Lindi Municipal Central Business District (CBD) avail the tourists' access to natural reserve. This game is the largest ecological green park in Africa. Integration between various actors in these districts avails Lindi Municipality a pivotal role which in turn has had multi-faceted positive stimuli for multi -sectoral development.

The Municipality is well-endowed with rich agricultural and other natural resources hinterland, including, inter alia, cashewnut, coconut and the normal cereal crops. Salt farming and fishing are also prominent in, around and outside the town. Livestock keeping, particularly cattle, sheep, goats and poultry is an upcoming production activity. Fishing is one of the main activities for the inhabitants of Lindi Municipality. The abundance of fish includes cobia, parrotfish, milk fish, peacock fish and many others.

Lindi Municipal Council currently generates 72.6 tons of Municipal solid waste daily that makes a total of 26,417.9 tons per year. The generated wastes includes household waste (food and organic) which accounts (93%), Commercial wastes contribute 1.79 percent, wood and metals (1.34 percent each), Workshops/Garage and drain silts (1.1 percent), plastics waste (0.96 percent), sweeping & Construction debris (0.41 percent), glass (0.21 percent), and paper (each around 0.08 percent), and electronic waste (0.02 percent). The council has set 15 waste collection centres for collecting these wastes before final disposal.

Lindi Urban water and sanitation authority (LUWASA) gives water services to 6 out of 14 wards with 39% (people 31,807). The Municipal Council has functional 7 boreholes, 20 deep wells with hand pumps and 266 shallow wells for water supply services.
The council road network is composed of truck, district, feeder and urban roads. The Municipality has 319 km whereby 17.1 km are tarmac roads, 152 km are gravel roads and 150 km are earth roads thus giving easy access within and to areas outside. About 50% of Municipal roads are accessible throughout the year, 13.8% of the Municipal roads are of variable quality and have limited accessibility during the rainy season.

The Municipal Council has 22 health facilities (17public and 5 private). Despite the presence of health facility, the municipality facing the following challenges: maternal mortality, high number of under-five death, neonatal deaths, infant deaths, high rate of death due to Malaria in all ages, high case fatality rate due to T.B, high number of cases of Non-Communicable Disease (NCD), high prevalence of HIV contributed by low coverage of Care of Treatment Centre (CTC) services, and high incidence of STI.

22. Kigoma-Ujiji Municipality

- **Environmental Conditions**

Kigoma is Located on the Northern shores of Lake Tanganyika in the Western part of Tanzania, the Municipality has close proximity to the second deepest Lake in the world. A large part of the Council lies on terrain consisting of hills over 100 m above sea level. Kigoma Region lies within the Great Rift Valley. It is mainly endowed with rich and fertile volcanic soil. Vegetation cover is mainly miombo woodland, grassland and a wetland area in Kibirizi Ward which drains into Lake Tanganyika. It is reported that much of the natural vegetation has been degraded below its most productive condition, partly due to population expansion in suburbs. Natural vegetation is found on protected hill areas such as Katonga, Kibirizi, Buronge, Masanga, and Kitwe Sanctuary Forest Reserve. Within the Kigoma urban area the main forest reserves are Kitwe Forest Reserve and Buronge Forest Reserve in Kibirizi Ward. It has a high water demand that is yet to be met by the existing water sources. The main sources of water for domestic use include Lake Tanganyika, Nyakageni and Rutale water springs (Kipampa Ward).

Municipality receives moderate rainfall from November to April ranged from 800 mm to 1600 mm per year, and the temperature ranges from 25 to 30 centigrade. The peak temperatures occur during September/October prior to the onset of the rainy season; normally rains cease in May.

- **Social Conditions**

The Municipal has an area of 128 sq Km. (128,000 ha) of which 127.85 sq.km (127,850Ha) is land and 0.15 sq. Kms (147.9 Ha) is covered with water. The original inhabitants of the Municipal are Wabembe, Wabwari, Wagoma, Wahorohoro, Wamanyema and Waha. There are now quite a good number of mixed tribes from neighbouring countries of Democratic Republic of Congo (DRC) and Burundi. This is due to trade and cultural relationships in the area. Other ethnic groups include Wafipa and Watongwe. It has a total population of 215,458 (2012 Census). The average annual population growth rate between 2002 and 2012 was 2.4% for the entire Kigoma Region, a decline of 50% compared to the average growth rate from 1998 to 2002 of 4.8%. The main economic activities in the Central Business District (CBD) are trade, small scale industries and fishing. Farming is done in the outskirts. About 75% of residents earn their living from trading, especially from the informal sector trading activities

Having started from the Arabic era as one of the major slave trade collection centres, the Municipality has a strong established Islamic faith among the inhabitants. It is also the Western terminal of the Central Railway line from Dar es Salaam. The Municipality has six main markets, namely (Kigoma Central, Mwanga, Buzebazeba, Nazareth, Isanga and Ujiji.)
About 75 % of the population is accommodated in unplanned settlements which occupy only 28% of the residential areas mainly located in the urban peripheries which include Kamala, Businde, Buhanda, Gungu, Kibirizi and Kichwele. Such settlements are poorly serviced with basic infrastructure. The urban development is spatially shaped by two main roads namely Kigoma Railway Station-Ujiji Road and the Mwanga-Mwandiga Road. Urban development is characterized by both densely populated developed settlements largely in the inner locations, such as Mwanga, Bangwe, Gungu, Kitongoni and Lumumba. Buzebazeba, Kipampa and Kasimbe are sparsely populated developed settlements.

The municipality has 386.44km of the road network. Of these only 24.7 km are tarmac, 71.3 km are gravel and the rest 290.44 km are earth roads. There are 24 bridges and 138 culverts. All of these (roads, bridges and culverts) are key resource of the council but most of the roads are in poor conditions that require major repair.

The municipality has 2 hospitals (1 is public owned and the other one is privately owned), 4 health centres (2 public and 2 private owned) and 15 dispensaries (9 public and 1 private). HIV/AIDS is a killer disease in the region including Kigoma Ujiji Municipality. The available HIV/AIDS statistics from 2014 to 2016 reveals HIV/AIDS cases has been decreasing from 3.5% of all tested in 2014 to 1.9 % in 2016 whereby females were more positive than males in all three years.

Large proportion of the households in Kigoma Ujiji Municipal Council have toilets facilities. In 2016 about 14,905 Households had the toilets and only 154 households had no toilets. The most toilets are pit latrine (90,500), flashing (41,881) and very few VIP (3,374). At household level, only 9,125 have household waste dumping pits compared to 5,690 household who sharing dumping pits.

The Council has 22 Pre-primary schools (16 are public and six private owned), 48 Primary Schools (45 public schools and 3 private) and 28 Secondary Schools, out of which 19 are public schools and 9 are private Secondary schools.

Kigoma - Ujiji Municipal Council suffers a low standard of service in respect to collection and disposal of solid waste. Currently, the coverage of solid waste management service is about 30% of the total urban area in Municipality. It is estimated that more than 50% of the waste generated in the Municipality is not collected, and as such it is either buried, left to decay or burnt near the source. Implementation of TSCP project contributed to the construction of 30 solid waste collection points, installation of 40 skip buckets and provision of 2 skip master trucks and one wheel loader and landfill sanitary facility has reduced the challenges of solid waste (non-hazardous) management.

23. Mtwara-Mikindani Municipality

- **Environmental Conditions**

The municipality lies at Mikindani bay on the Indian Ocean coast covering an area of approximately 163km^2. According to the Strategic Land Use Plan, the borders of the municipality are expected to be expanded. Elevation is low ranging from sea level up to 50 meters, which contributes to frequent flooding during rainy seasons. It has typical tropical climate influenced by Monson winds of Indian Ocean influence the rainfall in the area with bi-season climate, a hot humid rainy season from November to May influenced by dominant North – East winds humid dry Season from June to October influenced by South-East Winds. Average annual precipitation is about 800mm -1000mm. The highest and lowest monthly mean air temperatures are 27ºC and 23.8ºC in December and July respectively. Relative humidity varies between 87% in March and 79% in October. The municipality faced floods in 13 January 2021 whereby 1 person died after being swept away by flash floods on 12 January.

The soils in the coastal sedimentary zone are well drained sandy soils of low fertility and low moisture holding capacity. The council has a stretch of coastal strip of 25km from Chihiko in the south to Mirumba in the north. The shoreline is covered by mangrove trees. The outskirt is dominated by grassland or bush grassland. The municipality is sub-divided into two major agro- ecological zones: coastal areas favourable for sea weed (mwani) farming and the western outskirt suitable for urban agriculture. The soil degradation in the municipality is caused by two broad categories; agriculture, fertiliser use. Evidence of some localised erosion is visible around Mikindani Hills, notably associated with erosion along routes of communications (tracks and paths) and on bare sloping ground. Heavy rains during the wet season often result in the breakup of soils from the impact of the rain.

The hydrology of the municipality consist water catchment areas that located in the upland areas, mainly at Mchuchu, Mtawanya, Rwelu, Mbawala chini/ Mkangala and Mbae. Others are Mkundi and Kisungule as well as Nabwada wetlands. Groundwater forms an important source of water supply in the municipality.
Patches of Mangrove forests near Mikindani Forest: Avicennia marina, Xylocarpus granatum and Rhizophora mucronata are the main vegetation in the municipality.
The municipality has one landfill laboratory for measuring and monitoring LDO, electrical Conductivity, Ph, and Ammonia Gas as well as government chemist laboratory for monitoring Luminescent Dissolved Oxygen (LDO) and electrical conductivity parameters.

- **Social Conditions**

The estimated population is 156,436 persons (2012 Census) and the ethnicity of the council is composed of Makonde, Yao and Makua and other smaller tribes from all over the country. The major occupation along the coastal strip is fishing with an average annual fish production of 385 metric tons. Industry, trade and commerce are the major economic activities in the CBD. A number of other trading activities are also carried out along various streets. About 33% of the population are involved in urban agriculture. The council possess a total of 9,000 hectors of arable land but only 6,757 hectors has been utilized. The main catchment areas are Mtawanya, Mbae and Mchuchu. Daily water demand is 12,500m^3 while production capacity is 8,769m^3 per day, hence creating a shortage of 3,231m^3 per day. In addition, the municipality does not have a central sewerage system.

The generated solid waste is more than 2130 tons per month and of 50% of these wastes are dumped at Mangamba landfill site. In general, the municipality suffers from inadequate equipment and facilities for managing solid waste properly. Besides formal settlements in planned areas, the housing pattern also includes informal settlements located in unplanned areas with poor service environment. Also municipal lacks infrastructure for managing produced waste water which always provide nuisance to town residents. To this end, there are about 22 hazardous and non-hazardous

waste collection points that located to each health facility that collected and incinerated via dispensary incinerator.

Mtwara regional hospital is in Mtwara-Mikindani municipality where by various services are provided, but there are other 22 health facilities run by the council (12: two health centres and 10 dispensaries) and other stakeholders/private (10: two health centres and 08 dispensaries). Most of the people are living within five kilometers to reach the health centre.
Mtwara-Mikindani has 23 primary schools, 15 Secondary Schools whereby 10 of them are owned by government and Five (5) are owned by private Sector (Religious and non-religious).

Mtwara Urban Water Supply Authority (MTUWSA) is the sole distributer of water in the municipality. Almost 83% of the population in this municipality gets water within the distance of 400m from their homes. The distribution of water in municipality is of three kinds: Domestic water collection points, clean water distributed by pipes and Bore and shallow holes.
There are five normal/retail markets, one Slaughter House and crop market in the municipality.

24. Mwanza City Council

- **Environmental conditions**

Located on the Southern shores of Lake Victoria, the city lies at an altitude of 1,140 metres above the sea level. It has two main districts, Nyagamana and Ilemela. An estimated 68% of the area occupied by the city is surrounded by water. The lake also influences the climate in Mwanza. The average annual rainfall is about 700 to 1050 mm. Under normal conditions the rainfall is distributed mainly during two periods, namely the short rains in October-December and the long rains from March to May. There is a dry spell from January to March and frequently these rains are of an erratic pattern.

The city is characterized by gently undulating granites and granodiorite physiography with isolated hill masses and rock inselbergs (between 1100-1600 metres in height). It is characterized by well-drained sandy, loamy soil generated from course grained cretaceous rock. Areas near the lake are evergreen whereas other areas in the outskirts are dry over some period of the year, especially between July and September. Lake Victoria is the main source of water for the city, serving about 90% of city dwellers and the Kisesa township population. The rest of the city is served by non -piped schemes such as shallow, medium/deep wells, rivers and traditional water sources such as rainwater and boreholes.

The vegetation of the city comprised of savannah terrain though due to anthropogenic activities and rapid urbanisation little remains in terms of undisturbed natural habitat and therefore the city is believed to have little biodiversity value.

- **Social Conditions**

According to 2012 national census population of Mwanza City was approximately 706,000 persons. The annual natural growth rate of 3.2% and the population density is 134 people/km^2, being the second largest city in the country, after Dar es Salaam. It covers an area of 1325km^2 of which 425 is dry land and 900km^2 is covered by water. Of the 425km^2 dry land area, approximately 86.8Km^2 is urbanized while the remaining areas consist of forested land, valleys, cultivated plains, grassy and undulating rocky hill areas.

Mwanza City is characterized by having modern housing estates in various areas like Capri Point, Bugando and Buswelu and unplanned squatter areas especially on the hills within the City environs. Unplanned settlements are characterised by high congestion of buildings, poor accessibility, and lack of physical infrastructure like electricity and roads, and poor sanitation.

Fishing on Lake Victoria is one of the most important economic activities. A total of 29,630 tons is sold to within the country and about 28,875 tons is consumed locally within the region and another 40,000 tons is exported to the European Union. Agriculture and livestock keeping are other activities that people engage in. Cotton trade used to be the biggest earner of foreign exchange for before fishing took over. The region is not unique in the sense that it has both rural and urban settings. However, at the heart of Mwanza, buildings and the Lake Victoria borders the railway. Of the current 50,000 housing units in the city, 60% are built in unplanned areas. Approximately 70% of the population reside in unplanned settlements characterized by high congestion of buildings and poor accessibility to services.

Economic activities generating substantial quantities of solid waste. Recently it is estimated that the rate of solid waste generation in the City is between 0.6-0.75 tons per day. Thus the amount of solid wastes from domestic, institutional and commercial activities is estimated at about 375, 000-kg/day and industrial solid wastes (500,000 kg/day) that make a total of 875,000kg produced wastes per day in the Mwanza City. The present capacity of Mwanza City council to manage solid waste is still very limited and only 30 percent of the generated solid wastes are collected and disposed of at dumping site located in the Nyakato area. The rest (70) percent) of the daily solid waste generated left uncollected and form heaps of rotting garbage.

The City has 35.5 km of trunk roads, 132 km of regional roads, and 695.5 km of district roads which makes a total of 861 km of road network. Existing tarmac roads radiating from Mwanza City are; Mwanza – Kisesa (Musoma road) – 17 km, Mwanza – Nyashishi (Shinyanga road) -19 km, Mwanza – Airport (Airport road) – 10 km. Also, there is a myriad of other tarmac roads network in the City totaling about 22 km.

Mwanza City has good health facilities such as Bugando Medical Centre, Sekou Toure Regional Referral Hospital, Hindu Union Hospital, Mwananchi Hospital and the Aga Khan Health Centre. There are government health centres / dispensaries in all wards, plus several privately-owned health facilities. The city has railway, air and water transport services.
Water and sewerage services are provided by MWAUWASA. The existing water treatment plant located at Capri Point produces between 63,000-96,000 m^3/day. The water supply coverage rate is 65%. The central sewerage system covers only the central part of the City Centre and a few neighbourhoods such as Kirumba and Pasiansi. The wastewater treatment plant located in Ilemela Municipality has a capacity of 7000 m^3/day.

25. Mbozi District Council

- **Environmental Conditions**

Mbozi district is located in the Southwestern corner of Mbeya Region, between Latitudes 8^0 and 9^0 12’ South of the Equator and Longitudes 32^0 7' 30" and 33^0 2' 0" East of Greenwich Meridian.
The district occupies a total area of 9679 Square Kms. which is about 967,900 ha, generally classified as: Arable land 766,640 ha (79.2%). Forest Reserves 93,738 ha (9.7%), Settlements and other uses 78,322 ha (8.1%), and Area covered by water 29,200 ha (3%). The District has tropical type of climate with clearly distinguished rainy and dry seasons. It receives adequate and reliable rains which ranges between 1350 mm. and 1550 mm. The rainy season usually starts in October and ends in May. Some parts of the Mbozi divisions are covered with water and natural forests. The soils are sandy and rains are unreliable. Mbozi district lies at an altitude ranging from 900-2750 metres above sea level. Despite vegetation cover has been widely removed through agricultural activities some natural vegetations (Acacia-Combretum woodland, hyparrhenia, sporobulus, and grass land) is still observed especially along the river valleys and highland areas.

The District has several catchments areas within Iyula and Vwawa division which together with other areas form the sources of major rivers of Nkana, Songwe, Mlowo, Vwawa, Ruanda, Myovizi and Malonji rivers. Most of these sources have been invaded and put under constant cultivation. This together with excessive deforestation has destructed most of water sources (catchment areas) resulting with low water levels or even affecting some of the rivers to be dry most of the seasons.

- **Social Conditions**

According to the 2012 Census, Mbozi district had a population of 446,339. The major ethnic groups in terms of their numbers are Wanyiha and Wanyamwanga. Wanyamwanga are the main ethnic group in the lowlands areas, which include Kamsamba, Msangano and Ndalambo divisions. They account for 30% of the total population. The Wanyiha is the dominant ethnic group in the highland areas, which cover Igamba, Iyula and Vwawa divisions. The Wanyiha account for 50% of the total population. It is observed that about 65 per cents or so of the district total population is concentrated in Unyiha highlands (coffee growing area). These highlands are very fertile with more arable land and reliable rainfall which is suitable for crop production. Crops grown include coffee, sunflower, maize, beans and groundnuts.

The district is among the six districts in the region which have for a long time been supported by the Danish International Development Agency (DANIDA) in the provision of drinking water, mainly by constructing piped water schemes. However, in recent years, the Government and DANIDA have put more emphasis on the provision of water

schemes by adopting simple technologies such as construction of shallow wells, rain water harvesting and protection of springs/wells. It appears ironical, that shortage of clean and safe water still persists in the district, despite the existence of the rivers and streams which flow throughout the year. Safeguarding environmental sanitation in Mbozi district has been difficult due to cultural practices which do not encourage the use of latrines.

Agriculture is the main economic activity in the district. 88% of its inhabitants depend on agriculture and livestock production that accounts for over 80% of the district earnings. Agricultural production is mainly done by small holder farmers (Peasants) of whom 50% use hand hoes, 40% use animal draught power and 10% using motorized equipment such as tractors. Other economic activities are forest products, tourism (Mbozi meteorite), small scale industries, and petty trades.

By 2015, the district has a road network of 1538.6 kms of which trunk road covers 42.9km, regional road (201.35km), district/urban road (516.63km) and feeder roads (122.01km). Out of 1538.6km of the total roads, only 947.82km are passable throughout a year.
The preventive and curative services are the major services being provided by the health sector through the existing health facilities. Until 2015 the district had 1 hospital, 6 health centres and 67 dispensaries.

26. Masasi District Council

- **Environmental Conditions**

The District has two major climatic seasons namely dry (May to November) and rainy (December to April). It receives the average annual rainfall of 900 to 1,000 mm. The average annual temperature in the District is between 25 and 32 degrees Centigrade. The altitude above sea level is 470 metres. The District has three major soil types that are categorized by zone. The eastern zone soil type, Lisekese zone soil type and Ruvuma basin zone soil type. The eastern zone soil type has two types of soil namely loamy sand and clay which are suitable for the cultivation of cash and food crops namely maize, paddy, sorghum, cashew nuts and horticulture crops. The other two zones have suitable type of soils for growing similar crops. In the previous plan of the Council the diversification strategy was adopted, which mobilized farmers to grow other types of crops such as sunflower, cassava, groundnuts and sesame.

Masasi district is endowed with many reserve forests (Mgangara, Nagaga, Chemichemi and Mpitipit) with various tree species of conservation importance including Mninga, Mbambakofi, Mipingo, Mkalati, Mgelegele, Mbalamwezi, Mipuga, Mivule and Migwina.

- **Social Conditions**

The District has an area of 4,429.9 km^2, which is 23 percent of the total regional area. Currently, the population is 260,856 as per National Population Census 2012 where by male are 125,151 and female are 135,705. The majority of the population in the District is Bantus of Makua tribe. In urban areas such as Ndanda there are Makonde, Mwera people who live alongside with the Makua people.

Majority of the health facility infrastructure are poorly structured and therefore needs major and minor rehabilitation. The construction of health facilities in Masasi district council is a great challenge because out of 166 villages, only 46 (27.7%) villages have health facilities. Indeed, the council has no government district hospital and many facilities lacks staff housing, electricity and reliable source of water supply.

The council has one oxidation pond at Ndanda area which is the final disposal of sewage from Ndanda referral hospital and its families. Majority of the solid waste in the council are managed by using pit latrines, there is 107,281 (86.45%) toilets serving 124,091 households. Out of the total, 52,917 are permanent toilets and 54, 394 temporal toilets. The disease surveillance is done to monitor the trend of an outbreak diseases occurring in the community so as to prevent from entering into a large magnitude. The frequently reported notifiable diseases are malaria followed by dysentery, measles, typhoid fever, rabid animal bite, rabies and meningitis.

The District has 124 Primary Schools and 121 Pre – Primary Schools and a total of 27 secondary schools (1 is private and 26 are government secondary schools). The enrolment rate have tremendously increased due to the free education government policies.
The Council has 4 gravity functioning water scheme, 32 boreholes, 18 shallow wells. Also there is a permanent river namely Ruvuma river which supply water to the surrounding communities.

The council in collaboration with other stake holders such as TACAIDS supports different HIV/AIDS intervention such as supporting People living with HIV/AIDS, support to Most Vulnerable Children (MVC). In supporting these groups PLHIV and MVC supported food, seed money school materials, uniform and shoes.

27. Musoma Municipal Council

- **Environmental Conditions**

Musoma originates from the word Omusoma which means, a spit or a piece of land that protrudes into the Lake, as Musoma's many spits pointing into the surrounding of Lake Victoria. It covers approximately 84.1 square kilometers (0.3%) of the total area (30,150 sq. km) of the region and is composed of plains with small scattered hills. The Municipality sits on the eastern edge of Lake Victoria, close to the International borders of Tanzania with Kenya and Uganda. The area of Musoma Municipality is a slope that slowly falls down towards Lake Victoria. The highest peak is 1,320 meters above the sea level. Scattered hills are found at most in the west and south of Musoma. The whole municipal area is a peninsula east of Lake Victoria. The coordinates of Musoma municipal are: 1°30'0.00"S, 33°48'0.00"E (Latitude-1.5000; Longitude: 33.800.

Musoma Municipal council experiences a tropical type of climate with temperature ranging from 24ºC to 32ºC. Rainfall pattern is bi-modal which ranges from 900-1200mm per annum. The short rainfall season starts from October to December while the long rains are from March to June.
The landscape of the Musoma Town is generally flat and rises gently towards Mukendo Hill which is the prominent and remarkable feature in the municipality. From Mukendo Hill the landscape gradually slopes down towards Lake Victoria. Low-lying areas are also found on the southern part of the central area of the town resulting into Kitaji pond. Within the municipal area, altitude levels range between 1140 meters and 1320 meters above the lake shore; and the gently sloping landscape is featured by small rolling hills punctuated by valleys with rivers and streams, notably the Zigi, Nzimwi and Mkurumuzi in the north, and Mgombani/Kalindu and Gombero in the south. They all drain into the lake, also there is large wetland located at Nyarusulya area.

The vegetation of the council dominated by exotic trees and crops where a dense settlement established. Musoma municipal council has both natural/reseve forest and man-made forest area. There is a total of 38 ha of natural forest reserves that found in Bweri (4 ha.) and Mukendo (5 ha.) wards, while forest plantation areas located at Bweri (25 ha.), Makoko (2 ha.), Mwisenge (one ha.) and Nyakato (4 ha.) wards. However, there is significant depletion of forest due due to increasing human activities such as cutting trees for fire wood, charcoal, timber, poles and agriculture activities.

The remarkable environmental monitoring facility in the council includes Airport Weather station (for weather forecast) Lake Victoria Basin Water laboratory for measuring and monitoring of water quality.

- **Social Conditions**

Historically Musoma district carry a big history of the Country because here is where the late father of the nation Mwl. Julius Kambarage Nyerere was born in Butiama on 13th April 1922. The major ethnic groups are Kwaya, Jita, Kurya, Kara, Zanaki and Jaluo, though there are other minority ethnic groups such as Ruli, Kiroba, Simbiti and other Asians who speak their native languages along with Swahili. The Mwisenge Primary School found in the municipality is political monument due to being the first school in a series of many that the father of the nation, Mwl Julius K Nyerere attended.

According to the 2002 and 2012 Population Censuses reports, the population of Musoma Municipality increased from 107,855 (51,607 male and 56,248 female) in 2002 and reached 134,327 (62,694 male and 71,633 female) in 2012 with a population change of 24.5 percent. Based on population growth rate of 2.1% per annum, Musoma Municipality's population is approximately to reach 149,498 (Male 69,775 and Female 79,723) by December, 2016.

The 2012 Population and Housing Census show that farming was the main occupation in Musoma Municipal Council, employing 26.0 percent of residents aged 10 years and above. It was followed by crafts and related workers (11.6 percent), service workers shop and stall sales workers (10.1 percent), elementary occupations (9.2 percent) technicians and associate professionals, clerks (7.2 percent), other not specified (6.9 percent).

The impact of HIV/AIDs pandemic disease have also replicated to the high rates of orphans experienced in 2012 population census. The Musoma Municipal council is among leading councils with highest rates of orphans in the Region as well as the country. There is a need for the Municipal Council management to conduct a survey in order to know the factors contributing to have highest rates of orphans and come up with solutions.

Water supply and sewerage network of the council comprises intakes, transmission, storage and distribution components. There are three intakes at Mwisenge, Mutex and Bweri abstracting a total of 9.7-15.3 Millions Litres per Day (MLD). Water from Mutex and Bweri intakes is directly pumped to end users while that from Mwisenge intake is pumped to end users through Mukendo tanks. The entire system is currently upgraded to replace the old leaking pipelines and expand to cover wider area of the municipality. Water supply service is mainly provided by MUWASA. Currently, there exists no sewerage network in the municipality and basic sanitation options are latrines and septic tank systems. Most of generated domestic wastewater in the municipality is disposed using latrines while hotels/restaurants/guest houses, institutions and a few households with septic tank system are served by available septic emptiers (Charge: TShs 40,000 – 60,000), which disposal the faecal sludge into the Nyamitwebiri pond in Bweri Ward. Industrial wastewater is undergoing pre-treatment before disposed into the lake or nearby rivers

The municipality generated about 2,333 tons of non-hazardous and 1500 hazardous wastes per month. The produced non-hazardous wastes are collected on weekly basis and disposed of at the dumping site. The municipal has no collection and disposal sites for hazardous wastes generated from industries, construction and markets activities. There is only 21 incinerators located at health center for disposal generated wastes from these facilities.
The council has 2 crop markets, 7 retail/normal markets and 1 slaughter house.

The available health facilities in the council are 3 hospital (1 government and 2 private), 5 health centre (2 government and 3 private), and 21 dispensaries (11 government and 10 private). Like other councils in Mara region, the council still lagging behind in the implementation of health policy under which each ward has to have a health center and a dispensary in each village/mtaa. Among of 16 wards only 2 wards have health centre. On average each of the available health centers servicing an average of 3.2 wards and each dispensaries serves about 3.4 villages at Musoma municipal council in 2015.

28. Iringa Municipal Council

- **Environmental Conditions**

Iringa Municipality Council is the smallest council in terms of land area in the Region. It has a total surface area of 331.4sq.kms. The Municipality covers about 0.92% of the total regional land area. The largest part of the Council surface area (329.37 sq.kms; 99.4 percent) is land area and only 1.7 sq.kms (1.6 percent) is covered with water. The township stretches along a hilltop overlooking the Ruaha River to the south, and spreads along ridges and valleys to the north. Since the council experiences only one season of rain (from December to May), the annual average rainfall is about 600mm and irrigation seems to be the best alternative in the growing of agricultural crops in the dry areas and during periods of inadequate rainfall. Irrigation farming is feasible due to availability of rivers such as Little Ruaha river supplying water in Isakalilo ward, Mawelewele spring in Mwangata ward, and Kitumbuka spring in Kitwiru ward. Other small rivers include Hoho and Kigonzile.

The vegetation of the council dominated by Exotic plant species (Spathodea campanulata, Juniperus procera, Euphorbia tirucalli) planted into different area of the municipality. However in some places of the council there are patches of native plant species of (Acacia sieberiana, Faidherbia albida. Iringa Municipality have a total of 8,727.94 hectares of Miombo forest reserves and riverine that located at Kihesa Kilolo, Wilolesi, Mafifi, Nduli, Itamba, Igumbilo, Ilala, Mkimbizi and Hoho) and in the little Ruaha river valley.
The geology of the area comprises of hard rock (Precambrian granodi orates), Sand soils and Alluvium Soil along little Ruaha River.

- **Social Conditions**

The Council has four main ethnic groups which are Hehe, Bena, Hanji and Kinga. The majority of Hehe occupy the largest part of the council area which covers all wards, followed by Bena occupying some parts of the Municipality wards as well as the Kinga and Hanji. In addition, the Municipal is also occupied by other small ethnic tribes including Chaga, Nyakyusa, Gogo, Ngoni and Nyamwezi. According to the 1978, 1988, 2002 and 2012 Population and Housing Censuses the population of the council increased from 57,164 in 1978 to 84,860 in 1988 before reaching 106,371 in

2002 and 151,345 in 2012. Between 2002 and 2012 the council's population grew at an average annual growth rate of 1.5 percent compared to the regional growth rate of 1.1 percent and national average growth rate of 2.7 percent.

Agriculture employed 29 percent of the municipality total population as reported during 2012 Population Census. Maize is grown in almost large area of the Municipal council at spatial production levels, during the period of 2011 to 2015 a total of 61,761 tonnes on an average of at 12,352.3 tonnes per year was produced. Sunflower as a cash crop is grown in almost large area of the Municipal council at spatial production levels, during the period of 2011 to 2015 a total of 1,294.38 tonnes on an annual average of at 258.9 tonnes per year was produced. However, cattle, goat, sheep, pigs and poultry are some of the livestock kept under zero grazing in the Municipality.

Iringa Municipality has a total of 535.54km road network whereby 75.4km (tarmac), 119.07km (gravel) and 341.07km (earth) roads. And all roads are passable throughout the year due to routine maintenance. Mode of transport within the project vicinity includes road transport and air transport. Road and air transport consist of motorized transport (Buses, Flight, Daladalas/minibus, Bajaji/, Bodaboda, and Bicycles).

Iringa Municipal council has 59 Health Facilities. Out of 59 health facilities in the municipality, there are 11 (Public), 10 (Private), 2 (Parastatal), 2 (Army) and 6 (Faith-based) health facilities. The available government health facilities are 1 referral hospital, 4 health centers, and 24 dispensaries. Services provided by these health facilities includes, Surgery, TB services, dental services care and treatment for HIV/AIDS, voluntary male circumcision, early infant male circumcision, Ultrasound, laboratory services, maternal services (reproductive and child health services), out and in-patient services. The municipality is currently facing the increased death rate of Mothers and under five Children due to problems related to pregnancies and Malaria, widespread of STI/HIV within the Community, and existence of undetected TB patients in the Community.

Statistics on HIV/AIDS through VCT in Iringa Municipal council from 2011, 2013, and 2015 shows that females recorded the highest prevalence rate at 13.4% in 2011 and decreased at 9.5% and raised up to 10.6% in 2015, while male's HIV positive rate was 9.9% but dropped at 6.2%, and increased at 7.5% in 2015 (Regional Profile, 2015). From 2016 to 2018, the municipal council had 3,196 (males) and 4,990 (females) with HIV/AIDS.
With respect to availability of sanitation services in the Iringa municipal council, the council has no sewage systems, the only available sewage system is owned by IRUWASA of which some houses are connected. The IRUWASA waste water pipes drains its wastewater at Jonbosco adjacent Mkwawa University where wastewater dams are located. There is also one dumpsite that is located at Kiesa Kilolo, whereby all solid waste from the council is collected and disposed/dumped.

Iringa Municipal has 52 primary school, 29 secondary school, three Vocational Training Centers, One Teachers' college, one Community Development Institute, one Health Institute and five Universities. Number of the enrolled pupils at primary school was 3,647 pupils in 2011 and increased to 3,730 pupils in 2015, while, at secondary level about 6,777 students were enrolled in 2011 and increased to 7353 students in 2015. Dropouts has been one of the critical aspects affecting performance of education system in municipality. Statistical of dropouts of pupils at primary school has increased from 0.02% from 2012 to 0.03% pupils in 2013 and decreased up to 0.01 in 2014 and 2015. The reason for dropouts was absenteeism (truancy), death, and pregnancy.

29. Nanyamba Town Council

- **Environmental Conditions**

The town Council weather includes 2 major seasons, dry season which starts from May to November and rain season which starts from December to April. The minimum and maximum temperature are between 23^{o}C and 32^{o}C respectively, while average annual rainfall is 800mm-900mm. Attitude of Town Council is about 280-305 meters above sea level; its soil is composed of sandy loams and clay soil in some areas. Council weather is almost tranquil and hot during day time and normally cools during the night.

The Town Council has 2 ecological zones. The Makonde plateau covers the central part of the council is the most productive zone for both food and casho crops. Ruvuma valley zone is influenced by Ruvuma river and five large wetlands and ponds located at Urongwe, Tandandya, Chipwatapwata, Chidya, and Hinju areas. The zone has very fertile soil, which is fed by river deposits. People in this zone are mainly engaged in agriculture and fishing.

- **Social Conditions**

The council is dominated mostly with Makonde tribe though there are other tribes from other Towns which are dominant in Nanyamba Town Council like makua, yao and mwera. Majority of Nanyamba dwellers are small scale farmers and livestock keepers while few of them have engaged in entrepreneurship activities. According to 2012 population census, Nanyamba Town Council had a population size of 107,060. Due to an increase in size of administrative areas, Currently the area projected to be covered with a population of 113,182 basing on Annual Growth Rate of 1.4 (Nanyamba Town development plan).

Nanyamba Town Council has a total land area of 1438 km^2 (143,800 ha). The main economic activity is agriculture which consist 70.04% of the council land and practiced in both Makonde and Ruvuma valley. Since there is neither river nor lake in Makonde valley fishing is not experienced, crops grown in order of their importance are cassava, sorghum, maize, upland paddy and legumes. Cash crops include cashew nut, coconut, simsim and groundnuts. Agriculture is the main occupation in Nanyamba Town Council. As said earlier it employs about 92% of the residents in the Council. The area under cultivation is estimated to be 107,850 for food and cash crops. Apart from agriculture that practiced in both zones, Fishing is also practiced in Ruvuma valleyand Indian Ocean. The council depend on the 21 retail markets whereby agriculture and fish resources are sold.

The current water supply network demands is a total Projected Population 113,182 where by water supply serves only 47,996 of the population which is equal to 42%, but the rest 59,064 equal to 58% do not access clean and safe water. But according to National Census made on 2012 total population were 107,060.

The town council has a total of 29 health facilities of which 1 hospital (government), 4 health centres (3 government and 1 private owned), and 24 dispensaries under government ownership. The demand of health facilities is very high because out of 87 villages and 9 hamlets only 24 villages have dispensaries out of 87 villages, while 3 wards have health centers out of 17 wards. The prevalence of HIV/AIDS in the district is 2.1% and women are the most vulnerable group in 2016. Most of the affected populations in the town council are aged between 18 to 45 years.

The solid waste management facilities of the council consisting 1 dumpsite located at Mitangani –Ginyecha ward and both household, institutional, construction, demolition debris, dead animals and sanitation residue are disposed of and it approximated about 340 Tons of waste are generated for a month. Generated medical wastes (0.65 tones/month) from health centres are incinerated in the facility incinerator.

The total length of Nanyamba Town road network is 341.55 km. The Council roads consist 292.70 km and community roads is 48.85 km. Access of mobile phone coverage is good though in some area is difficult to access, but in large area within Nanyamba Town Council Internet services and mobile phone are accessible.

30. Nzega Town Council

- **Environmental Conditions**

The council is located north east of Tabora region, bordered by Igunga district in the East and Nzega district council in the South, West and North. The headquarters is located at Nzega town at a junction of Dar es Salaam – Shinyanga - Mwanza road and Tabora – Shinyanga - Mwanza road. The council lies between Latitude $3^0$45’ - $5^0$00 South of Equator and $32^0$30’ - $33^0$30’ Longitude East of Greenwich.
Nzega Town Council has one rainfall season starting from early November and ends up on June. It receives rainfalls between 650mm and 1,200mm annually. Rainfall is critical for agricultural production, which is the mainstay of the Nzega Town Council’s (NTCs) economy and livelihood. The climatic condition of has influenced the Council to have two distinctive agro - ecological zones based on the levels of rainfalls, namely, the High Rainfall Zone and the Low Rainfall Zone.

Nzega Town Council is endowed with abundant natural resources which offer a wide range of investment opportunities including arable land for commercial agriculture as mentioned earlier. Other ventures can be thought include shopping malls markets, real estate’s etc. Nzega is thus a suitable town for foreign direct investments. Nzega town council has a total of 690.579 sq.km most of which is plain land with very few small hills, valleys and escarpments. The arable land available for agricultural production is 520 sq.km, equivalent to 72.2 percent of the total area of Nzega town council. Out of the arable land in the council, only 170 sq. km. (34.4 percent) is actually cultivated annually, living the remaining 690 sq. kms either lying idle due to some reasons such as soil leaching infestation,

covered by forest reserves, human settlements or being edges and river beds. In principal, there is enough land for cultivation of crops and livestock keeping.
The main water bodies of Nzega Town Council consists two dams (Uchama and Kilimi)

- **Social Conditions**

Major ethnic group is the Wanyamwezi who constitute at least 80 percent of the entire council population. Their main activity is farming followed by small livestock keeping. The Wasukuma is the second major ethnic tribe who migrated into the district from neighboring Kahama and Shinyanga districts in search of green pastures in land for farming and grazing areas for their livestock. According to 2002 population and housing Census, Council population by then Nyasa division had a total of 66,827 persons and reached 87,860 persons in 2012, an increase of 31.5 percent of 2002 population. Though there is an increase of population between 2002 and 2012, the council still has a minimum growth rate of 2.5 annually compared to 3.6 of Tabora Region but slightly higher to national average growth rate of 2.4.

Nzega Town, like other rural districts in Tanzania, the implementation of 'Kilimo Kwanza' has led to the increase in availability of agricultural inputs especially inorganic fertilizers and improved seeds among small scale farmers. However, scientific research is needed to investigate the impact of "Kilimo Kwanza" on crops productivity. The main cash crop grown in Nzega Town Council is cotton. Food crops grown are paddy, maize, groundnuts, sunflowers, tomatoes and onions.

As started earlier, Nzega Town has 2 dams (Uchama and Kilimi) which supplies water throughout town. Nzega has a total area of 1250 hectors which is favorable for irrigation which is found in Ijanija, Nzega Ndogo, Itilo, Mwanzoli and Miguwa wards. Out of 1250 hectors favorable for irrigation only 150 equivalents to 12 percent has been utilized and the rest 1100 hectors are unutilized which is equivalent to 88 percent of the total irrigation area in the Town.

Until 2015, NTC has managed to establish 3 health Centres and 5 dispensaries with an average of 3 wards per health centre and each dispensary serviced at most 12 Villages/Mitaa. NTC has managed to reduce pressure on health facility from the average coverage of 22,276 people per facility in 2002 to 7,987 people per facility in 2012. However, NTC is still lagging behind in the implementation of health policy under which each ward and village has to have a health cente and dispensary respectively.

Water service is still provided by both the urban water supply and rural water supply. Until 2015, only 42.8 percent of the households in Nzega Town Council had an access to safe and clean water leaving 57.2 percent of households used unsafe and clean water for drinking. Mainly Dams and Boreholes were the main source of safe and clean drinking water in the Council.

31. Makambako Town Council

- **Environmental conditions**

Makambako Town Council is the smallest council in terms of land area in Njombe region and located with topography from 1000m to 2000m above sea level. It has a total surface area of 884sq.kms, equivalent to 4.2 percent of the total regional land. Most of the total land area, 51,600 ha, (59.8 percent) is arable land used for crop cultivation, and the remaining 34,650 ha, (40.2 percent) comprises of either area covered by forest (0.7 percent), human settlements, and other uses (39.5 percent). Moreover, area covered by forest in Makambako Town Council includes all area covered by forest reserves, plantation forests, village forests and private forests.

With exception of very few small hills, the council is relatively homogeneous with gently undulating plains intersected by seasonally flooded valley bottom soil. The soils of the council vary between clay loams and reddish coloured soils red lateritic earth and grey sand to silt hardpan and iron crust "mbuga" and sandy loams. A large proportion of these soils has high nutrient contents and are considered suitable for a wide range of both food and cash crops cultivations. The Council experiences two distinct seasons; dry season extending between May and October and one rainy season. The rainy season is between October and November and ends in March and April. The annual rainfall ranges from 600 mm to 1,000 mm, while the temperature ranged between 15 to 20 degrees centigrade.

The town council has three main streams with several tributaries, which form a number of alluvial flood plains in the council. The Fukulwa, Mrucha and Usefule streams are the main water resources in the council that supply water services to both industrial and domestic purposes.

- **Social Conditions**

Most of the total land area, 51,600 ha, (59.8 percent) is arable land used for crop cultivation, and the remaining 34,650 ha, (40.2 percent) comprises of either area covered by forest (0.7 percent), human settlements and other uses (39.5 percent). Moreover, area covered by forest in Makambako Town Council includes all area covered by forest reserves, plantation forests, village forests and private forests.

Agriculture is the main economic activity in the Town council. 78% of its inhabitants depend on agriculture and livestock production. Agricultural production is mainly done by small holder farmers (Peasants) of whom 80% use hand hoes, 19% use animal draught power and 1% using motorized equipment such as tractors. The major food crops produced in the Town council are maize, potatoes, sweet potatoes, beans, paeans, finger millet. The main cash crops be sunflower and Tomato. According to the 2012 National census, Makambako Town Council had a total population of 93,837 of which Males are 44,031 and 49,796 are Females with 3% growth rate per year. The Makambako Town is characterized as an urban area with different zones such as industrial, low, medium and high density residential areas, the central business district, sub- urban, peri- urban and informal settlements. Makambako Town council it has observed that 11.5% of the population is engaging in business this equivalent to 40.5% of the total population as per 2008 estimate at a rate of increase 2.1%.

Makambako Town Council is one of the council in Tanzania where HIV and AIDS prevalence rate is very high. Based on the TACAIDS data, HIV/AIDS prevalence in Makambako Town is at 15.7%. Numerous factors are believed to be responsible for the spread of HIV/AIDS. These include poverty, increase in alcohol abuse, profession that tends to encourage risky behaviour such long distance truck drivers and rapid urbanization. Measures have been taken to establishment of voluntary counselling and testing centres and home based services through mobile clinics.
Makambako being Town Council is developing very fast and therefore, effective solid waste management system is needed which involves waste collection, transportation and disposal. About 76.0 percent of the solid waste and 81.0 percent of the liquid wastes are generated per day while the urban capacity to handle these waste is 51%. The council continue rising awareness among households on waste management and until 2017 about (27.9 percent) of the households had dust bins for solid waste collection. In terms of sewage and sanitation, by 2013 the Council had 6,188 estimated households with only 38 percent of them had toilet facilities and the remaining 62 percent of the households did not have toilet facilities.

The council has a total road network of 522 kms (13 kms or 2.5% - tarmac; 24 kms or 4.6 percent - gravel, while 486 kms or 93.1 percent was earth surfaced). Mjimwema Ward has the longest road network of 142 kms (27.1 percent) followed by Mlowa Ward with 83 kms (15.9 percent) and Ubena Ward 65 kms (12.4 percent). Utengule Ward has the shortest road network in the council with 30 kms (5.7 percent). The road connectivity in and outside of the council facilitating easy transportation of people and goods within and outside Makambako Town Council. About 14.6 percent or 76 kms of the total road network in Makambako TC is passable a great part of the year, while the remaining 53.4 percent of 279 kms is not passable most of the year.

Makambako Town Council (MTC) still improving the health sector by constructing new facilities, from 2 public health facilities in 2010 to 4 facilities (one health facility and 4 dispensaries) in 2013. However, currently the council has more private health facilities (one hospital and 7 dispensaries) that are operating efficiently. Looking at ward level, out of 8 wards only 3 wards (Ubena, Mwembetogwa and Mahongole wards) have health facilities.

Educational wise, by 2013 the MTC had a total of 39 pre and primary school (38 government and 1 private), and 13 secondary schools of which 8 are public and 5 is private owned. Number of the enrolled pupils at primary school was 3,376 pupils in 2012 and increased to 3,690 pupils in 2013, while, at secondary level about 4,479 students were enrolled in 2012 and decreased to 4455 students in 2013. Dropouts has been one of the critical aspects affecting performance of education system in town council. Statistical of dropouts of pupils at primary school has increased from 2% from 2012 to 6% pupils in 2013. The reason for dropouts was absenteeism (truancy), death, and sickness.

32. Tunduma Town Council

- **Environmental Conditions**

The town lies at Longitudes 32^0 38’ and 32^0 54’East and Latitude 9^0 03’ and 9^0 23’South and is the smallest council in terms of land area in Songwe Region. It has a total surface area of 419 sq. km (1.5 percent of the Songwe Region surface area). The council is located in a flat land with rolling hills in the northeast. There are two specific ecological

zones, namely; the Highland zone, and the Lowland zone. The soils vary between red lateritic earth and grey sand to silt hardpan and iron crust "Mbuga". Moreover, there are sandy clay loams and reddish coloured soils on inter flute slopes that are saturated with water within 100 cm of the surface during the growing season. However, a large proportion of these soils has high nutrient contents and is considered suitable for a wide range of both food and cash crops which have the potential for profitable cultivation. Therefore, Tunduma Town Council soils can best be described as moderately fertile. The Council experiences two distinct seasons; dry season extending between May and October/November and one rainy season. The rainy season is between October and November and sometime in March and April. The annual rainfall ranges from 1,350 mm to 1,550 mm.

Natural forest reserve covers 6,708.7 ha which is equivalent to 16.0 percent of the Councils' total land area of 41,900.0 ha. Area under natural forest in Chiwezi Ward (3,749.5 ha, or 55.9 percent) is the greatest compared to those areas in other wards. In terms of planted forest, 1.0 percent of the total land area of 41,900 ha of Tunduma Town Council is under planted forest.

There are six streams with several tributaries, which form a number of alluvial flood plains in the Council during the rainy season. The Chikazya, Mpemba, Kaloleni, Sanzo, Nanyigili and Nandinda streams. These water streams are seasonal and not used for irrigation.

As the urbanization process continues to take place in Tunduma Town Council, natural vegetation (woodland) cover is also depreciating so fast. To curb the ever growing deforestation, council initiated tree planting campaign and between 2011 - 2015, a total of 50,003.6 were planted in Town Council.

- **Social Conditions**

The name "Tunduma" originated from a centre in the Tunduma Ward where people feared so much as to call it "Patunduma" in Nyamwanga language meaning a fearful place. The town has experienced a rapid economic development as a result of which it acquired the status of a Town Council in 2015.It is located in a strategic area such that all transport facilities including commercial, passenger and private vehicles travel from Dar es Salaam to Zambia, South Africa, Botswana, as well as Rukwa and Katavi regions.

The Council has four main ethnic groups namely: Nyamwanga, Ndali, Nyiha, and Safwa. However, there are a few minority ethnic groups namely: Kinga and Nyakyusa. The Council's growth of the population during the 2002 to 2012 census periods was 6.3 percent. According to the 2002 and 2012 Population and Housing Censuses the population of the Council increased from 51,792 (estimated population) in 2002 before reaching 125,641 in 2012. This resulted in a significant increase of 73,849 people (142.6 percent) from 2002 to 2012.

Farming is not the main economic activity in Town Council due to limited agriculture land and socio- economic setup of the urban population limits crops production in large scale and subsistence farming is so dominant. About 13.1 percent of the population in Tunduma Town Council is engaging in agriculture. The remaining population (86.9 percent) engages in non-farm activities. The households engaging in agriculture, small scale farming is dominant and uses outdated farming implements such as hand hoe. Maize is the staple food while horticulture is the cash crop in the Council. Other economic activities include livestock keeping, forest products, and small scale industries.

According to the Population and Housing Census 2012, the literacy rate in Tunduma Town Council is 87.2 percent. The impact of HIV/AIDS pandemic has also resulted to the high rates of orphans as shown in 2012 population census. Tunduma Town Council is among the councils in Songwe Region with average rates of orphans of 8.3 percent. There is a need for the Council management to conduct a survey in order to know the current status of orphan hood and factors contributing to orphan hood and come up with solutions.

Council roads are tertiary routes providing a linkage between council headquarters to ward centers; important centers within the council. The Council has a total road network of 162 km with 39 km or 24.1 percent of the tarmac, 41.9 km or 25.9 percent of the gravel and 80.9 km or 50 percent (earth surfaced). This implies that about half of road network in the Council is impassable during the rainy season because are being destructed by heavy rains.

The main source of the energy include electricity, paraffin, firewood, charcoal, gas and solar. However, the majority of the people in sub-peripheral areas uses kerosene for both lantern and wick lamps for lighting. Some institutions and few individuals in the urban areas use solar energy and electricity for lighting and cooking but the majority use charcoal as the main source of energy for cooking and electricity as the main source of energy for lighting.

The available data shows that the Council has managed to increase only two health facilities from 2 (a health center and dispensary each) in 2002 to 4 facilities (one health centre and 3 dispensaries) in 2010. By 2015 the council had no hospital, 3 health centres (1 public and 2 privet), and 5 dispensaries (4 public and 1 private owned). The little efforts was done because in the period of 5 years (2010-2015) the council reached into 5 facilities (4 health center and 4 dispensaries) in 2015. The available health centers provides service to an average of 5 wards and each of a dispensary provides services to about 9 streets in 2015. The presence of few health facilities have contributed to inadequate provision of health services to the communities and by 2015 it was reported that pneumonia contributed to high mortality, malaria, poison, typhoid and asthma.

Council had managed to increase the number of pre-primary schools from 18 in 2011 to 20 in 2013 and reached 27 in 2015 and 17 primary schools in 2011, increased to 21 in 2013 and reached 25 in 2015. Also, until the end of 2015 the Council had only 5 public secondary schools and one private secondary school. The introduction of the free education to all has increased enrolment of students both to primary and secondary school and the ratio of pupils per teacher and classrooms (at primary school) are 52:1 and 182:1 respectively by 2015. The sector is facing various challenges like inadequate textbooks where by the ratio is 1:4 instead of 1:1 which is normal for national standards, Inadequate provision of equipment, tools and facilities including desks, Pupils engage in business activities thus compromising studies, inadequate classrooms, shortage of qualified and inadequate provision of sanitation facilities.

33. Shinyanga District Council

- **Environmental conditions**

The Council lies between the latitude $30^0$20' and $30^0$95' South of the equator and between longitudes $32^0$30' and $33^0$30' east of Greenwich Meridian, south of Lake Victoria. Shinyanga District Council covers an area of 4,212 square kilometers of which about 1.7% of the total area (72.9 kms2) is covered by forest reserves. An area of about 1,713.7 kms^2 (40.6%) is used for agricultural activities, 2,096.8 kms^2 (49.7%) for cattle herding and 210.6 kms^2 (5%) for people's settlement. The remaining area of 118 kms^2 (2.8%) of land is of little economic use as it is composed of gulley and rocks. The dominant climate is tropical type of climate with clearly rainy and dry seasons. The mean rainfall ranges from 450 – 990 mm. per annum and normally rains starts between mid-October and ends in May.

The Council is characterized by a flat and gently undulating plains covered with low and sparse vegetation. Ecologically, the District is divided into three agro-ecological zones featured by light loam soils (Nindo and Itwangi division/zone), light loam red soils (Samuye division/zone) and Sandy soils and heavy soils (Itwangi and Nindo divisions/zone).

- **Social Conditions**

According to 2012 Population and Housing Census, the District has a total population of 334,417; of which 162,956 are men and 171,461 women but according to population projection based on 2012 Population and Housing Census, for the year 2016 the total population was projected as 355,931 of which 173,439 are men and 182,491 women. As for households and housing for the year 2012, there are 53,082 households with an average household size of 6.3 persons per household and the only ethnic group is Sukuma. The population density is 79 people per square kilometer.

The main activities in this District include agriculture, forestry, small scale mining, trade and commerce, public administration and education sectors. Out of total labour force, 92.1% of the population are employed in agriculture and livestock keeping. Mostly agriculture is done at subsistence level that depend on rain fed. Main cash crops are cotton and tobacco, while the main food crops are maize, sorghum, paddy, sweet potatoes, millet and cassava. Modern dairy farming and poultry are also taking place in the district. Apart from agriculture, mining, and industrial activities play an important role in the district economy. Also 2.8 percent of the council population have elementary occupations, 2.6 percent engaged in business operations, 1 percent in office work and 1.4 percent in the rest categories.

Currently, Shinyanga district receives water from four sources, namely, Ning'hwa, dam, boreholes near Kizumbi, shallow wells and Nhumbu dam near Mwadui. It is estimated that only 56% of its population have access to clean and safe water. The demand of water, which was estimated, to 14,689 m3 per day is expected to reach 17,000 m3 per day by the year 2010. Most of the pressure is from mining activities that demand more water. The proposed project will only compound the already strained water supply system but buy additional demand especially during construction.

Energy source utilized for both industrial and domestic activities are hydro- and thermal electricity, firewood, diesel,

petrol and Kerosene. The dominant source of energy for domestic consumption is fuel wood. In urban, fuel wood normally takes the form of charcoal, while in rural areas, firewood is preferred. Even where electricity is available to households, only few people can afford it.

High infant and maternal mortality characterize the health situation in Shinyanga District. The high rates of water borne diseases as well as severe malnutrition are also experienced in some parts of the district. Inadequate health facilities, poor equipment, inadequate hospital supplies and delivery services have compounded the health problems in Sinyanga District. Some of the common diseases in the district include malaria, anaemia and pneumonia. For instance, there were 23,327 cases of malaria in 2005, followed by 368 cases of anaemia and 148 cases of pneumonia. HIV/AIDS is also a problem in Shinyanga district. The number of cases is increasing much more and faster than in other districts. Increased human interaction, relatively more money in circulation from mining, livestock sector and farming as well as poverty are factors that prompt this increase in HIV/AIDS cases.

The District has 46 public and 6 pre-primary schools with 4,078 pupils and 33 public and 4 private primary schools with 30,396 pupils. In addition, there were 18 public and 4 secondary schools with 10,139 students in 2006. Education service is facing problems such as shortage of primary schools, poor enrolment rates, shortage of teachers and equipment.

34. Sumbawanga Municipal Council

- **Environmental Conditions**

The Municipal of Sumbawanga covers an area of 1,329 km^2, found in South-West Tanzania, in South Highlands of Ufipa Plateau. It lies between latitude $07^0$48' to $08^0$31' south of equator and longitude $30^0$29' to $31^0$49' east. It is the headquarters of Rukwa region and it's the economic core of the region. It is bordered by Sumbawanga District Council to the North –East, Kalambo District and Sumbawanga District Council to the South and Nkasi District Council to the Western part.
It is always a dry sub-humid climate for the most part of the year. The average temperature is 27^0C, a dry cool temperature starts from May-October and the coolest season is June – July with a temperature falling to 16^0C and even 5^0C. Rains start in November and end in April. On the average Sumbawanga Municipality gets moderate rainfall between 900mm-1000mm per year. The rains are usually accompanied with frequent lightings. Sumbawanga Municipal is located at an average altitude of 1700 m above sea level; however, the highest altitude of 2461m above sea level is attained at Malonje, 25 km southeast of Sumbawanga Municipality.

Generally, the municipal soils, are covered with deep, reddened earth (lateritic) types. It has also a clay-rich awith poor drainage properties. Also, alluvium soil is also found in several location of the municipality.
Main vegetation cover municipality, is characterized by grass, bushes with woodlands located on slopping areas and hilltops of the municipality. The municipal vegetation has been evened out by constant mowing, and anthropogenic activities such as settlement, heading, cultivation and harvesting of forest products.

- **Social Conditions**

According to 2012 Population and Housing Census, Sumbawanga Municipality has a population of 209,793 people of which 100,734 are Males and 109,059 are females. This population has increased by 62,951 (43%) from 146,842 recorded in 2002 population and housing census.
The major languages spoken in Sumbawanga Municipality include Swahili, Fipa, Mambwe, Lungu, Nyamwanga, Nyakyusa, Kinga, Safwa and English is also spoken by limited number of people. In relation to urban agriculture, 65% of municipal working age group (18-60 years) was engaged in agriculture as their main economic activity in 2012. Therefore, urban agriculture forms significant land use in Sumbawanga municipality. Crop production and livestock keeping are among the main activities in the municipality. Farming land for crop cultivation is approximately 60,904 ha. Although fishing activities take place in Lakes Rukwa and Tanganyika, yet people own small fish dams in the fringes of the municipal. In addition, fish storage, processing, and marketing activities are predominantly done within the urban areas.

The Aids (HIV) epidemic is having a serious adverse impact practically in all regions and Councils in the country. The first six victims in Sumbawanga Municipal Council were diagnosed in 1987. Ever since the number of victims has been increasing by 28% in 2008/2009, while in 2014/2015 number of people identified with HIV/AIDS decreased by 4.8%, by 4.2% in 2015/2016 and 2016/2017 by 4.2% of the total population tested due to initiatives introduces by

Government through Municipal Council in collaboration with other NGO's enhancing HIV/AIDS prevention activities. Health facilities in Sumbawanga Municipal Council are provided by the Government, NGO's and a growing number of private health units and pharmacies. There are about 42 health facilities, which includes; 2 Hospitals, 3 health centres and 37 dispensaries. Among these health facilities, Government operates 24 Health Facilities, 5 are operated by Voluntary Agencies while 9 are private facilities and 3 operated by Government institutions. The council also has development programmes, such as the Child Protection Development and Survival programme supporting health services at village level.

Sumbawanga Municipality has 42 pre-primary schools, 58 primary schools, 17 secondary schools and 3 teachers ' college, 3 VETA Colleges, Open University and Adult Institute of Education. The number of pupils in 58 primary schools in the Council from 2014/2015 up to 2016/2017 has been increasing from 48,064 to 57,719 pupils due to free education policy and Council initiatives of promoting education services among the community.

The Municipal serves 402 km of road network of which 16.7km are tarmac, 78 km are gravel roads and the rest 307.3.5 km are earth roads. Road transport is the predominant access mode of transport in the Municipality as it shares almost 99% of traffic movement to the Municipality. Also, Sumbawanga Municipality is saved by a small airstrip located at Sumbawanga Asilia where light charter aircrafts access it.

Water supply in Sumbawanga Municipality is estimated at 30 percent to 40 percent of the actual demand. During the dry season in urban settlements, water supply is 1,500m^3 per day, while during rainfall 3000 m^3 are needed while the actual water requirement is 8,000 m^3/day. Mbizi catchment is the main source of water of municipality. Other sources are Ndua and Chanji. In terms of connectivity, the water distribution pipe network serves about 63% or 100,545 of the municipal residents in the urban areas. Sumbawanga Urban Water Supply and Sewerage Authority (SUWASA) oversees the distribution of water in the urban area.

35. Chato District Council

- **Environmental conditions**

The District is located between 2^0 15' – 3^0 15' South of Equator and 31^o – 32^o East of "Standard Meridian". It is within the altitude ranging between 1135 – 1410 m. above sea level and borders Muleba District to the North, Bukombe to the South, Biharamulo to the West and Geita to the East. The District cover an area of 3,572 Km^2 of which 3,472Km^2 is dry and 100 Km^2 covered by Lake Vitoria. The District has a moderate Temperature of between 26.6^{o}C to 30.5^{o}C. The District gets an average of 850 of rainfall per annum, which normally falls from 700mm to 1000mm. In terms of wind speed the areas along the shore of lake Victoria higher wind speed than other area in the district due the forest clearing.

- **Social Conditions**

According to the Census (August, 2012), Chato district council had a total population of 365,127 people of which 181,368 were males and 183,759 were females. The average growth rate was 4.1%. The District's population is growing very fast and the average household size was 6 people (2014) per household, with a total of 60,855 private households by then (2014). The rapid population increase is influenced by both natural causes and immigration (birth rates and net immigration rates respectively). Chato has different ethnic groups and the dominant ones are Wasukuma and Wajita. Other tribes include Wahaya, Wasumbwe, and Waha.

Agricultural sector contributes more than 73% of the District GDP and more than 77% of the district Labor force depends on Agriculture for their earning. It should not be forgotten that out of 48% of Poverty result from lack of basic needs, 31% results from lack of food. According to the population census of 2002, out of the total labor force, for the population aged 5 years and above,78.7% were engaged in Agricultural sector,7.4% in forestry, fishing and related industries,4.1% in trade and Commerce,2.2% in mining and quarrying,2.1% in Public administration and Education sectors and 5.5% in the remaining categories.

The district does depend on oil fuel and solar as a source of energy. There are no gas, coal, wind or hydro power stations established. The electricity in Chato is generated in the neighbouring District of Biharamulo from crude oil and supplied in Chato, Muungano, Nyamirembe, kigongo,Muganza Wards. Some solar panels have been stationed in Five Secondary Schools which are Iparamasa, Mnekezi, Makurugusi, Bwina and Maguli High School. Fishing is one of the most promising industries for economic development in the district. Fishing is undertaken in Lake Victoria.

A total of 20,000 people are estimated to depend (partially) on fishing and or trading in fishing products. Fish and fish products are mostly sold within the district and to fish processors in Mwanza. Little amounts are sold in the neighbouring districts of Ngara, Bukombe and Kahama. This industry however, faces big problems including lack of fishing gears, storage facilities, modern fishing techniques and poor marketing systems.

Essentially the improved health in the district is vital for people to fully participate in production of goods and services otherwise economic and social development will be stagnant. This improvement depends on factors like number of health facilities, quality of services (number and qualified personnel and availability of medicines, infrastructure, etc.), motivation, etc. Until 2014 the District had 1 hospital. 9 health centre, and 54 dispensaries. The top ten diseases in the district is Malaria, followed by ARI, Diarrhoea, Intestinal worms, Pneumonia, and Skin Diseases, Eye condition, Genital Discharge and Clinical AIDS.

Up to 2014, the District had 2 water piped scheme of Nyamirembe and one gravity scheme in Kasenga. Currently, there are (3) piped schemes of water in the district including the gravity scheme(s). The majority of people in different locations depend on water obtained from different types of wells. Road infrastructure in the District is developed in such a way that economic and Social service activities are favourably influenced. 90% of road network in the District are passable throughout the year. There are about 533.84km of the road network, whereby 124.21 km (23.26%) is tarmac, 174.08km (32.60%) gravel and 235.55km (44.12%) covered by earth roads.

Until 2014, Chato had a total number of 122 Pre-Primary Schools out of which 119 are Government owned and 3 schools are privately owned, 131 Primary schools (128 are Government schools and 3 schools are privately owned) and 24 secondary school as compared to 17 Schools in 2007 out of which 24 are Government schools. It was found that up to 2014, there were 1,495 of which 993 are male and 502 are female teachers. The total deficit was 944 teachers, while the ratio was by then 1:52 for secondary schools. Apart from deficit of teachers, Chato education sector is facing other challenges whereby students fail to complete their studies due to truancy, pregnancy for girls and death or chronic diseases.

36. Songea Municipal Council

- **Environmental Conditions**

The Municipal lies between Longitudes $35^0$30‘and $35^0$45‘East of Greenwich and Latitude 10^0 30’ to 10^0 35’ South of Equator. It experiences one long rain season starting in November to May, The hot season is from October to November while it is relatively cool between April and September. The average annual rainfall is about 1264 mm and most of the rain occurs between December and March. The land is covered with three types of soils; sandy soils, clay loamy and red soils. The sandy soil has low water retention capacity, and this type of soil is suitable for the cultivation of cassava and sweet potatoes. While other types of soils are suitable for cultivation of maize, beans, tobacco and coffee. The topography of the Municipality is characterized by hills with altitudes ranging between 980 – 1100 meters above sea level. The undulating nature is predominant around the Matogoro Mountains while other parts are gently sloping especially Mletele, Subira, Ruhuwiko and Mshangano Wards. Streams flowing from the hills and terminating into several rivers including Ruvuma, Luwawasi and Ruhila rivers run through valleys which have well drained land for growing vegetables. The council has Subira, Luhira, Mahiro and Lilambo wetlands.

- **Social Conditions**

Municipal Council makes significant contribution to the Regional GDP and per capita GDP. The 2008 Regional GDP Survey Report shows that the Council share of the Regional GDP was 16.1 percent equivalent to TShs. 101,707 million. The Per capita income of the Council residents was estimated at Tshs. 738,022. The inhabitants in Songea Municipal Council are Ngoni a Subgroup of the Zulu in South Africa. The Songea growth population according to the 2002 and 2012 Population and Housing Censuses the population of the Council increased from 131,336 in 2002 to 203,309 in 2012 before reaching 218,942 in 2015 out of which, females are 115,468(52%) and male 103,474(48%). Therefore, the annual average population growth rate is 2.5%. The rapid population increase is influenced by both natural causes and immigration (birth rates and net immigration rates respectively). Supply of safe and clean water is necessary in addressing poverty and health problems. In 2016 an average 46.9 percent of peripherals area of Songea Municipal Council was estimated to be served with clean water.

ln Songea Municipality there is 1 Regional Government Hospital, 4 Health Centre out of this, 1 3 owned by Government and 1 owned by voluntary agency and 35 dispensaries out of this, 21 are government owned, 14 owned

by Institutions, 2 owned by Religious Organizations and 6 private individuals. Dispensary/patient ratio is 1:9382 compared to National goal of 1:10,000. The health curative services of the council involves both outpatient and Inpatient services, reproductive child health , HIV/AIDS services, nutrition, social welfare services, laboratory services, pharmaceutical services as well as dental services. It approximated a total of 15tones of hazardous waste are generated from health facilities. The facilities have incinerators for disposing the generated wastes.

The Municipal Council has 35 pre-primary schools, 62 primary schools and 31 Secondary schools whereby 20 are Government owned and 11 are privately owned. There are 4 High schools, 1 Open University of Tanzania, 1 Teacher Training center, 2 Vocational Training centers and 1 Teachers Training College. The major issues affecting education sector, mainly primary education are the increased number of pupils enrolled in pre-primary and standard 1 in 2016, the deficit of 425 Classrooms in 76 schools, low pass rate of standard seven pupils below 85 national targets, low of education awareness, Shortage of teachers, in adequate of school infrastructures and furniture's, shortage of teacher's houses, and lack of support for teachers living with HIV/AIDS.

Songea Urban Water Supply Authority (SOUWASA) is a Commercial water supply and sewerage division with the obligations of formulation,co-ordination and regulation of urban water supply and sewerage system. Water supply coverage is 84% of the Songea population (where water supply connection distribution system reach), Water demand is 8,389,000 per day and water supply from SOUWASA to communities is 4,374,633 per day. The main type of source of water is from spring water found at Ruhila, Msamala and Matogoro.
Songea District obtains its power from the National grid. However, firewood, kerosene and charcoal stoves continued to be the main energy sources for cooking.

The Municipality is interconnected through a good road network of 425 Km whereby 344.55 km are Municipal roads and 64.7 km are Trunk roads and 3 km are Regional roads. Within 357.3 km Municipal roads 14.9 km are tarmac roads, 118.6 km are gravel roads and 223.4 km are earth roads thus giving easy access within and to areas outside. About 86.2% of Municipal roads are accessible throughout the year, 13.8% of the Municipal roads are of variable quality and have limited accessibility during the rainy season.

37. Ilemela Municipal Council

- **Environmental Conditions**

The Ilemela municipal council has a total surface area of 1080.55 sq. kms out of which 828.45 sq.kms (77%) is covered by water body (Lake Victoria) and 252.10 (23%) sq. kms are land area. The council is the second smallest council in Mwanza region, occupying about 2.1 percent of the region's land of about 11,796.0 sq. kms. The Council lies on the southern shores of Lake Victoria within Mwanza Region between Latitude $2^0$15' and $2^0$31' South of the Equator and Longitude $32^0$45' and - $33^0$2' East of Greenwich approximately 1,140 meters above sea level. It boarders with the Magu Municipal in the East and Mwanza city council in the South while to the North and West, there is Lake Victoria.

The Municipality has a typical tropical climate influenced by wind patterns from Lake Victoria. The area receives approximately 700mm and 1000mm of rainfall per annum occurring in two rainy seasons. The soil types vary from yellow, red, gritty, sandy and loam soils which are delivered from course-grained cetaceans' rock. The soils are usually associated with the rocky Island of between 1100 – 1600 meters in height. The Council is grouped into 4 agro-economic zones which are lake shore, valleys, Plateaus, and hill masses and rock Island zones.
The natural vegetation of the Municipality consists of isolated tall trees scattered on grassy hills. This vegetation is mainly composed of Miombo woodland. Due to the urbanisation there are few and isolated protected natural forest patches occurring in some hilly areas of Bugogwa, Ilemela, Sangabuye and Kitangiri wards.

Groundwater in Municipality is generally found at a varying level beneath the surface, depending on local topography and time of the year (dry/wet season). The water table is generally between 1.5-2.5m. The main water body of the municipality is the Lake Victoria. The lake is the most important for fishing activities that undertaking by the people of Ilemela municipality especially those living along or close to the lakeshore.

- **Social Conditions**

The National Population Census statistics of 2002 and 2012 indicate that, the population in Ilemela council has increased from 264,873 in 2002 to 343,001 in 2012, equivalent to 29.5 percent change with an annual growth rate of 2.6 percent. On population density, in 2012, council had an average population density of 1,361persons per sq. km

and it was the second most populated council in Mwanza region after the Mwanza City Council. Sukuma is the main ethnic group residing in the council that constitutes 90% of the entire population. Other tribes such as Kerewe, Kurya, Jita, Haya and Zinza constitute 10%.

The municipal has very large area of about 840 sq. km covered with water, which make the communities very dependent on fishing. The main species caught in Lake Victoria are Nile Perch, Tilapia, Haplochromines and Dagaa. At present, most the fishery is dominated by artisanal fishers who use traditional or locally made vessels in fishing such as dugout canoes (Mtumbwi) and small boats of between 7 to 11 meters long mainly motorized by outboard engines. In addition, the catches are processed locally by smoking or sun drying. However, a significant part of fish is sold when it is still fresh. The importance of Agriculture in Ilemela Municipality is that it provides livelihood to about 25,000 people, and provide income to those producing surplus for sale. Irrigation need to be promoted so as to avoid dependence on rainfall by increasing irrigated areas through involving private sector in investing in irrigation infrastructures especially in dry areas.

Gender gaps exist in the council, among one fundamental category, employment opportunity. Despite the municipal council initiatives to fill the gender gaps between males and females buy supporting females through the establishment of women economic groups, participation in SACCOs, CBOs and other cooperative activities, but the gaps still exist especially in employment opportunities whereby the majority of employed person are males compared to the females.

Currently, the municipality has 1 hospital, 11 health centres and 31 dispensaries. Out of 43 health facilities, 28 are owned by private individuals/organizations. In terms of diseases prevalence rate, the main leading diseases in the project environment include Malaria, Diarrhoea, Hypertension, Acute Respiration Infection (ARI), Gout, Urinary tract infection, pneumonia, Peptic ulcer, intestinal worms, and Pneumonia. In terms of disease prevalence, Malaria is still the top ten diseases.

Statistics on HIV/AIDS infections in the Ilemela municipal council show a high incidence increasing of the prevalence rate of persons living with HIV positive from 5.2 percent in 2016/2017 to 7.2 percent in 2019/2020. Through Voluntary Counselling and Testing (VCT) youths with age between 19-24years recorded the highest prevalence rate compared to the 5 years back of which the majority of the affected groups were aged between 25 – 45 years, while females are more affected than males. The reasons for the changes are the absence of peer and screening education for the youths aged between 19-24 years and being a business centre (Ilemela Municipal) in the east and central Africa has attaracted businesmen from Uganda, DRC, Rwanda, Burundi, South Sudan and Kenya, which makes it easy for them to engage in sexual relationships with females aged between 19-24 years.

About 45.4 percent of the entire population in the District is served with clean and safe water. The main sources of water for the rural population in the Ilemela district are the shallow well (69 percent) followed by spring (19.2 percent), piped scheme (8.4 percent), lake (1.5 percent), rain water (0.99 percent), and boreholes (0.99 percent). However, Shallow wells and Boreholes are the most common sources of water for the largest population of the district. Ilemela town the water is supplied by the Mwanza Urban Water supply and Sanitation Authority (MWAUWASA). The core responsibility of MWAUWASA is to supply safe and clean water abstracted from Lake Victoria mainly at the Capri-point intake station.

Ilemela Municipal does not have a good waste disposal system; therefore, there are no proper ways of disposing of solid and wastewater. Very few households have septic tanks and the most common way of disposing of human waste is through pit latrines. Moreover, with the lack of a cesspool emptier and inadequate solid waste dump trucks, over flooding sewage and uncollected garbage pollute the environment of the municipality. However, the 2012 Population and Housing Census Report shows a slight decrease in households with no toilet facility from 12.2 % in 2002 to eight (8.3%) in 2012. Statistics on sanitation facilities of 2015 in the Ilemela Municipality show that 71,559 out of 76,297 households had toilet facilities, equivalent to 93.8 percent of the total households in the council and 6.2 percent were households without toilets.

There are about 514.3km road networks in the Ilemela Municipal council of which 24.54km (tarmac), 63.15km (gravel) and 453.61km (earth) roads. Mode of transport within the project vicinity includes marine transport (boats, canoes and mv Sangara), road transport, and air transport (Mwanza Airport). Road transport consists of motorized transport (Daladalas/minibus, Bajaj, Bodaboda, and Bicycles.

38. Kahama Municipal Council

- **Environmental Conditions**

Kahama Municipal Council is located between latitude 3^0 15" and 4^0 30" South of the Equator and Longitudes $31^0$30' and $33^0$00' East of Greenwich. It is dominated by extensive plains, gently undulating plain and flat plains which covers almost 82% of the surface. 13 % of the surface is valleys (mbuga) and Hills occupy 5% of the total surface. It receives rains in the duration of approximately 5 months, starting from late October to early May. Temperatures is relatively constant throughout the year, with mean daily temperature ranging from 21^0 C to 26^0C.

The Council is located on the inter-rift plateau at altitudes ranging from 1,050 to1, 500 m. above sea level. The land surface can best be described as an almost flat to undulating plains. Residual hills of low relief are common; the highest hills are not much higher than 300m above their surrounding plains. Kahama Municipal Council is a landlocked and has no perennial streams, all streams have very low gradients and over 80% of their annual flows, which can be expected to occur in the period of December to May. The only available water resource is the Nyihogo Daman wetland which is potential for paddy farming during the rainfall.

In terms of forest resources, 5.7% of the municipality is covered by woodlots and forestry reserve. Due to the urbanisation and population growth the natural forests of the municipality has been removed to support settlement, industrial, commercial, institutional, infrastructural, and other socioeconomic development conducted in the council.

- **Social Conditions**

According to 2012 census, the population of Kahama Town was 242,208 out of which 117,498 were Males and 124,710 were Females. The population density was at 442 Persons per sq. Km and the growth rate was about 3.7%. The high growth rate is attributed to immigration rather than to human multiplication. Presence of Buzwagi Gold Mine and the town being a business centre contribute to the increasing population. Kahama Municipality had 49,436 number of households with the average family size is 5 persons and the life expectancy is set at an average of 45 years. The Predominant ethnic groups in Kahama Town are Sukuma, Sumbwa and Nyamwezi as well as Waha and Hangaza.

Kahama has an estimated area of 1520.2 Km^2 (152,016.1 ha) and the occupational characteristics, are reflected in the land uses in Kahama Municipal Council, with most land being for agricultural (55.5%), livestock (23.8%), (15%) used for residential, industrial, commercial, mining areas and recreational. 5.7% is used for woodlots and forestry reserve. Hence, Kahama Town Council is mindful of the sectorial diversity and changes, in the economy and has earmarked specific areas in its current and future land use planning to support industrial, commercial, institutional, infrastructural, and other socioeconomic development and conservation activities

The prevalence of HIV at Kahama Town Council is 4.8% and large burden of PLHIV 25,871 and among them 11,326 (43.8) are on ART (HMIS data 2017). Various efforts have been in place to combat HIV by government; which include increasing HIV testing sites, to expand Care and Treatment clinics and PMTCT sites to reach many people in need of the services, HIV Viral Load testing and test and treat program so that once your diagnosed and started on ARTs however support from other stakeholders is also necessary.

The solid waste management facilities of the council consisting one dumping site (11.4ha) and both household, industrial, institutional, construction, demolition debris, dead animals and sanitation residue (non-hazardous) are disposed of. It is approximated about 10,320 Tons of solid wastes (non-hazardous) and 3810 (hazardous) are produced per month. Until 2017 the council had 5 waste collection points. Due to population increase and solid waste production is very high, for instance in 2016/2017, about 52,920 tons of solid wastes were produced and only 49,744.8 tons were collected and transported whereby 3,175.2 tons remained at the collection point.

Kahama MC has a total number of 114 health facilities, including 2 hospitals, 5 health centers and 48 dispensaries, 2 clinics and health laboratories 57. The available health services centers are under ownership of government, FBO, private and parastatals. The major epidemics include ARI, Malaria, Other Diagnosis, PID, Pneumonia, Skin disease, Diarrheal, Intestinal worms, and cardiovascular disorders.
Until 2017, the number of education facilities in the council consist of 95 whereby 72 government primary schools and 23 private schools, and 28 secondary schools.

39. Bariadi Town Council

- **Environmental Conditions**

The topography of Bariadi is characterized by flat, gently undulating plains covered with low sparse vegetation. The dominant soils are heavy black clay soils with areas of red loam and sandy soil. It is observed that most of the Council is dry flat lowland. The council has a tropical type of climate with clearly distinguished rainy and dry seasons. According to meteorological statistics the average temperature for Bariadi is about 28^0 C with an experience of a rainfall of 600mm as minimum and 900 mm as maximum per year. The area has two seasons a year. The rainy season usually starts between mid- October and December and ends in the second week of May. The soils are hard to cultivate, pastures become very poor, and availability of water for domestic use and livestock become acute problem. The total natural forest area covers 8 ha, area of 69.08 ha forest plantations and 254.3 ha under public/village lands. Forest reserves of 176.3 ha in the town including RC Bariadi (8 ha) and Hasi-Isanga (33.8ha) forest reserves.

- **Social Conditions**

The major ethic group is the sukuma (nyantuzu) who dominate a good number of Council residents and are mostly found in every ward of the Council with a few numbers of other ethnic groups including Wanyiramba in Malambo, Sima, Bariadi, Somanda and Isanga wards. The Bariadi town is a trading centre, running businesses with domination of agricultural and livestock activities. According to National population and housing census of 2012, the Bariadi Town Council had a population of 155,620 in which males were 73,848 and females were 81,772. The Number of households was 24315 and Household size was 6.4. The population size by the year 2020 was estimated to be 189,620 of which 89,982 males and 99,638 females. Agriculture is the major economic activity of the people in the area. The main cash crops grown in the council are cotton and sunflower while food crops include maize, sorghum, paddy, beans, and sweet potatoes.

Livestock is the second economy sector and by 2020 the council had a total of 71334 (cattle), goats 40302, sheep 23575, 306 donkey, 1326 pigs and 1,129,031 poultry. There are 715.2 ha of grazing land in the council. The TC has 9 dip tanks (8 not working), 1 livestock market, 1 hides/skin shed, 2 slaughter slabs and 1 slaughterhouse. Major Livestock diseases in the area are ECF, anaplasmosis and bebesiosis, while the major poultry diseases are Newcastle, fowl pox, coccidiosis and fowl typhoid, while cattle, goats and sheep are the leading market and about 48,231 (cattle), 21766 (goat) and 16368 (sheep) were marketed in 2019/20.

Bariadi town Council has 330.64 km of road network connected from and to the other council centers whereby 10.401km of tarmac, 136,397 (gravel), and 183.932 (earth roads). The road network are consist of Trunk road, Regional Road, District Roads, feeder Roads, and Collector Road. The mode of transport in the council are buses, taxies, motorbike, bicycle, ox cart, power tillers and lories.

In Bariadi Town Council, health services are provided by the private individuals, parastatals organization and the government. The existing health facilities include hospital, dispensaries, health centers, and medical shops. All these facilities are found/ distributed in various centers (wards) in the Council. By 2018 the most diseases were Upper Respiratory Infections, Diarrhea with no Dehydration, Urinary Tract Infections, Pneumonia, Non-Severe, Skin Infection, Non-Fungal, Malaria and Skin Infection – Fungal.
The prevalence of HIV positive at Bariad Town Council in 2018 were 1272 (who tested through VCT), 1,102 (tested through antiretroviral therapy - ART). This is 1.2% (62,803) of the community tested HIV via VCT and ARI.

40. Bukoba Municipal Council

- **Environmental Conditions**

Situated on the western shore of Lake Victoria, in the northwest of Tanzania, Bukoba Municipality Council lies only one degree south of the Equator and was Tanzania's second largest port on Lake Victoria. Bukoba lies at 1,100 m above sea level and is bordered by Lake Victoria on the east and Bukoba District Council to the south, west and north. Much of the town structures are at the basin surrounded by escarpments invariably decorated by coffee/banana plantations, trees, and rocks. Bukoba Municipal Council experiences two main rainy seasons (bi-modal rainfall) per year namely February to May and September to November. Despite these two seasons, during dry season of December to January and June to August, there is still a spell of swallowers which is the secret of Bukoba Municipal Council being evergreen all year round. Bukoba Municipal Council enjoys an average of temperature ranging between 220C and 270C and an average rainfall of 2000 mm per year. Bukoba Municipal Council is characterized by slope basin

with altitude of 1100m above sea level. At independence in December 1961, Bukoba Town was a glamorous, well planned town surrounded by homesteads under banana and coffee trees in the outskirts.

- **Social Conditions**

Bukoba Municipal Council population has increased by 59.3 percent from 80,868 people in 2002 (40,583 males and 40,285 females) to 128,796 people counted in the 2012 Population and Housing Census (62,521 males and 66,275 females) resulting in a significant increase of 47,928 people during the inter-censal period. The main inhabitants in Bukoba Municipal Council are the Haya tribe. According to the 2012 Population and Housing Census, Kagera Region, the literacy rate in Bukoba Municipal Council is 93.0 percent.

The 2012 Population and Housing Census shows that 64.8 percent of the households in Bukoba Municipal Council had access to improved drinking water sources, while 35.1 percent of households had access to unimproved water sources. These results imply that the council has high proportion of households which are depending on unimproved drinking water sources.

Despite its relatively small size of agricultural land, farms in Bukoba Municipal Council grow a significant amount of food and cash crops. A substantial area of Bukoba Municipality is fully utilized for subsistence farming to enable the inhabitants to earn their living. Coffee is the major cash crop grown in the area. Banana, maize, sweet potatoes, cassava and yams are the main food crops grown in the area.

Banana is the major staple food for Bukoba Municipal Council residents and forms an important and desirable food crop with the highest per capita consumption rate in local diet. It is possible to cultivate Banana in all areas of the municipal council although in some areas the comparative advantage may be greater than in other parts of the council depending on variation on climatic condition and soil fertility. Coffee is the only major cash crop grown in Bukoba Municipal Council. Over the season of 2011-2015, coffee was planted on an annual average land area of 276.7 ha equivalent to 46.5% of the Municipal's arable land under cultivation, it indicates that in five seasons from 2011 to 2015, the size of land area planted with coffee decreased every season from 286 ha in 2011 to 266.5 ha in 2015.

Water services are provided by urban water authority namely Bukoba Water Supply and Sanitation (BUWASA). Bukoba Municipality has plenty of water sources such as springs, river and Lake Victoria. Currently 76% of the proper urban population is served with portable water. While in greenbelt population served is 57%. Most of water pipes are concentrated in the town centre and only a few the sub-urban areas are connected to the main pipe water system.

The Municipality uses its one vehicle and four tractors to collect the garbage. Solid wastes are generated mainly from households, markets, bus stand and industrial areas. The volume of solid wastes generated per day is 70 tones and average of 50% of generated solid waste is collected per day. There are 14 garbage collection points and one dumping site. Wastewater and solid waste disposal in the municipality is currently handled by the Bukoba Municipal Council. Bukoba town does not have a waterborne sewerage system and disposal of wastewater and excreta is based on onsite sanitation methods. Extensive use is made of cesspits, soakage pits, septic tanks and pit latrines. The waste management challenges in the municipality includes inadequate working tools and safety gears, shortage of human resources, and unprotected disposal area.

Also, the town lacks an open surface drainage system for storm water. In many places, direct outlets of domestic water of from residential premises are found. Due to lack of sewerage services, rivers and Lake Victoria are polluted and hence endanger the hearth of the residents.

The council road network is composed of trunk, regional, district/urban and feeder roads. The council has a total road network of 166 km of which 43.2 km (26.0 percent) of the tarmac, 73.9 kms (44.5 percent) of gravel, while 49.0 kms (29.5 percent) is the earth surfaced. Out of total road network, Kahororo Ward had the longest road network of 18.9 km (11.4 percent) followed by Kashia Ward with 18.3 km (11.0 percent) and Kitendaguro Ward had 18 km (10.8 percent). Hamugembe Ward had the shortest road network in the council with 5.2 km (3.1 percent).

Bukoba Municipal Council had done great achievement in the construction of health facilities in order to comply with the health policy targets of combating illnesses by improving provision of preventive and curative measures to the residents. In 2011, the Municipal Council increased health facilities from 11 facilities (a hospital, health centre and 9 dispensaries) in 2011 to 16 (a hospital, 4 health centres and 11 dispensaries) in 2013 and reached 22 (a hospital, 5 health centres and 14 dispensaries) in 2015.

HIV/AIDS prevalence rate through VCT in 2011, 2013 and 2015 shows that in 2011, out of 20,972 volunteers of both sexes were screened for HIV test, 8.1 percent were found to be HIV positive with more females (11.1 percent) than males (6.0 percent). This was observed in 2013 and 2015. Out of 24,668 and 78,703 total volunteers who were screened in 2013 and 2015, 10 percent and 4.2 percent were found to be HIV positive, respectively. The impact of HIV/AIDS pandemic has also replicated to the high rates of orphans observed in the 2012 Population and Housing Census. Bukoba Municipal Council is among the councils in Kagera Region with average rates of orphans of 9.9 percent. The Municipal Council management is planning to conduct a survey in order to know the current status of orphan hood and factors contributing to have higher rates of orphans and come up with solutions.

41. Bunda Town Council

- **Environmental Conditions**

Bunda Town Council (BTC) is located at an elevation of 1,225 meters above sea level. It is located 2° 0'0'' S and 33°49'60''E in Degrees Minutes Seconds. The town is located within Bunda Ward, covering an area of approximately 86km^2 consisting of five urban areas namely Bunda Mjini, Nyasura Balili, Nyamakokoto and Majengo, and four rural villages of Bunda Stoo, Balili, Migungani, and Manyamanyama with a total of 14 sub-villages.

The temperatures in the Bunda depend on the altitude and the rainfall patterns. Bunda District Council comprises of part of western Serengeti National Park and Grummet Game reserve in its north side and Lake Victoria in the West. These areas are habitat of different wildlife and diversity tree species. Hence Bunda has characterized by frequent interaction between wildlife and human which in turn may have adverse results to both parts. Human activities that impact the environment in BDC are poor agricultural practices, tree cutting, overgrazing, illegal fishing, poaching, soil excavation to obtain gravels for road rehabilitation and other construction activities. These impacts include air pollution, water pollution, soil degradation, loss of biodiversity and erosion. Environmental impact assessment is vital tool that enables undesirable effects on the environment might arise from the implementation of the project to be identified and avoided.

It is dominated by vegetation ranging from savannah woodlands, grasslands, scattered trees, shrubs and herbs. Sound forestry base can be found in villages bordering protected areas of Serengeti National Park and Grummet Game Reserve. The council owns one forest called Kurwirwi Forest Reserve with 1,580 ha located at Nansimo and Igundu Wards. The forest reserve is a source of gravity piped water for Burendabufwe and Igundu Villages.

- **Social Conditions**

According to the population census conducted in 2012 and its projection of 2017 with population growth 2.6% the Bunda human population is estimated at 250,050 people of whom 121,773 are males and 128,277 are females 90% of Bunda people are engaged in agricultural undertakings (farming). The District Gross Domestic Product is not yet estimated and hence the Per Capita Income not yet determined while the National Per Capita Income of Tshs. 869,436/= per year has been recorded. Tourism is potential economic activity which contributes income to the people of Bunda DC. The Council headquarter is located just 15 kilometres from the Ndabaka Gate, Western Serengeti Corridor amid Serengeti National Park and Lake Victoria. Serengeti National Parks and Lake Victoria have unique characteristics nationally and internationally.

The Town Council is endowed with mineral deposits includes Iron-ore and copper at Igundu village and Kurwirwi Forest Reserve; Limestone at Bulamba village; Gold at Kiloleli, Nyaburundu, Namhura, Muranda and Bulamba villages. Currently small scale mining is done at these areas and mineral extraction through oxidation plants. The council has made considerable efforts to minimize gender imbalances and inequalities that would prevent the society from realizing its full economic, social and political development potential. Significant efforts have been made to promote women's participation in political and leadership positions. HIV/AIDS prevalence has been reduced from 5.6% in 2013 to 4% in 2016. Through District Multi-Sectoral HIV/AIDS controlling Plan, Comprehensive Council Health Plan and using council own source, the District Council has been taking various measures to address this problem.

The most vulnerable groups in the Town Council are the aged, sick, orphans; landless, unemployed, widows, abandoned wives whose husbands go to look for jobs outside the Town Council, single men and single women. These vulnerable groups are often helpless, physically constrained, and lack basic necessities.
The town Council road network has a total of 244.39 kms. The roads are passable on average of 76% during rainy

season. Also, there are 33 health facilities which comprises of 2 hospitals (1 owned by FBO and 1 public), 2 Health Centres (public) and 19 Dispensaries. Out of the 19 dispensaries, 11 are owned by the government and 8 is privately owned.

Solid Waste Disposal is done in a small area of town (Saranga) where there is organised collection of solid waste. In most cases it is burnt in the open (39.5%), buried (25%) or dumped directly into the streets or drains. It is approximated that about 1874.4 tons of solid waste produced per month. The waste management challenges of the town council includes absence of permanent dumping/landfill site, trucks for waste transportation, and there is no hazardous waste collection and disposal area.

42. Mpanda Municipal Council

- **Environmental Conditions**

Mpanda municipal council lies between 1040m and 1100m above the sea level. It boarders Kabungu Division (Mpanda District) in the North - West, Nsimbo Council (Mlele District) in the North – East. Mpanda municipal council has a forest reserve well known as Manga forest reserve of about 10,000 hectares. It is estimated that natural forest occupies a total area of 219 hectors of natural forest reserve. Natural forests are categorized into two major types' namely mountain forests and Miombo woodland. Miombo forests are found at Kamakuka, Mwamkulu and Mbugani village and Mountain forests are found at Shanwe and Ilembo ward. Forest sector in the Council is underdeveloped as 80% of its forest is natural and scattered far each other and the remaining is manmade. Mpanda Town is endowed with abundant mineral deposits of different kinds including Gold, metals, Green tourmaline, gemstones, copper, diamonds, red lead, Nickel and Galena. Some mining activities are being undertaken by local miners in areas of, Misunkumilo especially in areas near Milala, Kampuni and some parts of Kakese ward. In 1990 and 1995 a total of 612.5 tons of diamonds was extracted by local miners valued to Tshs. 20,524,354,347/=, in 1996 and 1997 a total of 46,225.8 grams of diamonds valued Tshs. 157,167,129 was extracted, in the 1998, 60 tons of Galena valued Tshs 376,000,000/= was extracted and copper 245 tones valued 21,600,000/= was extracted by small scale local miners. Mpanda experiences *some* seasonal variation in the perceived humidity.

- **Social Conditions**

Mpanda is an important centre in the rural economy, especially for the marketing and transshipment of rice and maize. The Katavi region is increasingly of interest to mineral prospectors, especially for gold. It is also a staging point for visiting the beautiful Katavi National Park, with its headquarters just 35 km to the south at Sitalike. The Park has a good cross-section of East African wildlife but is perhaps best known for its populations of hippopotamus. According to the population census conducted in 2012 Mpanda had a total of 118,150 people of which 58,116 males and 60,034 females. The main inhabitants in mpanda Municipal Council are Ha, Sukuma, Fipa, Bende and chagga tribe.

The main economic activities are agriculture, livestock and others. Lake Rukwa Valley is another zone in Mpimbwe Division; its elevation varies from 1000-1100m with north and 800-900m along Lake Rukwa'shores. Agriculture and Livestock sector is the main economy contributor in Mpanda town council. Main crops cultivated are maize, paddy and cassava at large. The council has 32,887 ha of Arable land Under Cultivation. Tobacco cultivation has been increasing in Mpanda district. Some 7,800 households are involved in small-scale farming of tobacco. As seen in the table above, the amount of tobacco being harvested annually has nearly doubled in the last three years. The produce has earned the farmers very close to TShs. 5 billion in 2005/06. The Association Tanzania Tobacco Traders (ATTT) is promoting the production of tobacco and supplies inputs to farmers including extension services for better production and quality enhancement. Price offered to farmers is agreed by stakeholders (Tobacco Council of Tanzania).

The council has a total road network of 450.81 kms (18 kms - tarmac; 81 kms - gravel, while 351.81 kms is the earth surfaced). About 109kms of the total road network in Mpanda municipal coucil is passable throughout the year, 224km passable a greater part of the year and 117.81kms is not passable most of the year.
Currently the council has 22 health facilities (one hospital, 5 health centres, and 16 dispensaries) that are operating efficiently. Looking at the ownership, out of 22 government owns 10 facilities (1 hospital, 2 health center and 7 dispensaries), while 12 are under private ownership (3 health centre and 9 dispensaries).
Educational wise, by 2016 the council had a total of 36 pre and primary school (34 government and 2 private), and 14 secondary schools of which 10 are public and 4 is private owned).

43. Bagamoyo District Council

- **Environmental Conditions**

Bagamoyo District is one of the six district councils found within Coast region with an area of 9,847 sq. km. Other Districts found in the region includes Kisarawe, Rufiji, Kibaha, Mkuranga and Mafia. It is located between 37 ^{0} and 39^0 East and between 6^0 and 7^0 South of the Equator. The district has two major rivers (Wami and Ruvu). These two rivers are the source of water for human consumption, livestock and irrigation in the district. These rivers discharge water into the Indian Ocean. In most cases rivers are wide, shallow and sandy which allows for irrigation. Woodland forms part of the major vegetation component covering coastal forest landscape of the Bagamoyo that has been severely affected by anthropogenic disturbance. Climatic conditions of the project site are typical of the coastal area of Tanzania. It is characterized by tropical coastal climate with high temperatures, low wind speed and high humidity. The climate is influenced by the south-to-south –east monsoon from April to October, and by north-east monsoon between November and March. There are two ecological zones namely the Coastal Strip which is characterized by Savannah, and bushes while the up country which is mainly covered with dense forest. The Coastal strip receives relatively more precipitation than the up-country. Rainfall ranges between 800 – 1200mm per annum. The short rain season is between July and October while the long rainy season normally starts from February to June. The temperature ranges from 13^{0}C- 30^{0}C.

Almost 60% of the soil found in Bagamoyo District is of sand soils type which supports the growth of coconuts and cashew nut trees. Loamy soil dominates 30%, and is suitable for food crops production. 10% of the soil is composed of developing soils (stony type) which essentially supports the natural forest zone covered by mangrove swamps as well as mangrove.

- **Social Conditions**

In the 2012 Population and Housing Census, Bagamoyo District had a population of 311,740 persons whereby 154,198 were males and the remaining 157,542 were females with an average household of 4.4. Bagamoyo District Council is a tourist and historical centre in Tanzania, with diversity cultural and historical buildings for preservations. Bagamoyo is known for being rich in historical, cultural and tourist sites such as the famous Kaole ruins, the exit point of the body of Dr. David Livingstone, the Old Boma, the Catholic Museum which is one of the oldest Cathedrals in Africa and the exit point of slaves and ivory. Other attractions include the beautiful and long stretch of beaches along the western coast of the Indian Ocean running from Saadani on the north east to the mouth of Zinga River in the south along which, lie beautiful and high class hotels. The exciting sites also include Saadani National Park, which is the only National Park along the Eastern African coast.

Literally, About 80% of the population is engaged in agriculture which is mainly subsistence farming. Out of the total area of 1,800 km^2 (945 km^2 main land which is equivalent to 94,500 ha and 6 855 km^2 is under water which is equivalent to 85,500 ha). Arable land covers 80,325 ha which is equivalent to 85% of the main land (land area). Currently under 10 % of the arable land is under cultivation for both cash and food crops. The cultivated cash and food crops include maize, paddy, millet, cassava, sweet, potatoes, legumes, simsim, cashew nuts, pineapples, oranges, mangoes and sunflower. Agriculture is mainly rain fed. Out of total 17,150 hectares potential land for irrigation only 760 hectares (4.4%) is currently under irrigation. Likewise, livestock keeping is another important economic activity in the district.
In the same vein, more than 90% of coastal people in Bagamoyo District depend on the fishing Industry as their major sources of daily income. The coastline of Bagamoyo extends for 100 km. It has a broad continental shelf because of its proximity to Zanzibar Island, characterized by sandy/muddy tidal flats, mangroves, coral reefs, rocky intertidal platforms, sea grass beds, lagoons and estuaries. These are important for a variety of fishery resources. The marine fisheries are still mainly artisanal.

The socio-economic relationship between men and women is homogeneous in most of Bagamoyo District Council areas. Women are largely engaged in domestic activities, agricultural production, and petty business. Men are more involved in fishing activities, livestock keeping and agricultural production and some involved in retail shops. Although women play a great role in production, yet, men dominate the role in decision making. This affects women in mostly decision making aspects at family level, and sometimes at community level.

Bagamoyo district Council has a total of 26 health facilities. Out of these 26 facilities, 16 facilities are owned by the government. 10 health facilities are owned either privately or by some governmental agencies as well as by FBOs. Of

those 16 health facilities owned by the government, one (1) is a government owned district hospital and the remained 15 are dispensaries). Those 16 health facilities serve a population of 97,660 people (As per National census Report, 2014). It is unfortunate that the district council does not have a single health centre. Because of this, Bagamoyo district hospital is congested with an influx of patients which compromises with its carrying capacity in terms of resources. The leading cause of diseases and deaths in the district is Malaria, followed by Diarrhoea and Acute respiratory disorder.

In view of sanitation facilities, the coverage for permanent latrines is only 36% which is below the national average of 47 %. Water scarcity is a problem in the district. There are 11 piped water schemes, 91 hand pumps and 63 dams. Out of the 63 dams 8 need rehabilitation. The most disadvantaged areas are in Mkange, Kiromo, Zinga, and Yombo wards. Most of the water sources in these wards are unprotected. Main water sources include the big rivers Ruvu and Wami, 67 small springs and 20 streams.
Bagamoyo district council is connected by 544.73 km of road network. This includes 412.73 km under district level and 63 km owned by TANROAD's. Out of this, 16.8 km is the grave road, and 36.10 km is an earth road which is in fair condition.

44. Handeni District Council

- **Environmental Conditions**

Handeni District Council is situated in Southern part of Tanga Region. It lies between latitudes 4º9' and 6º0' South of the Equator and between longitudes 36º.8' and 38º.5' East of Greenwich. District Council has a total land area of 63,516.5 sq. kms with little water areas of 18.1 sq.kms. The District has tropical climate annual average rainfall of 921 mm. The greatest amount of precipitation occurs in April. The temperature ranges from at 19°C to 24.2 °C. The district has a total of 920 ha of the traditional protected forest. In earlier time these forest were never abused and biodiversity of the whole forest ecosystems were protected. But in recent years about 40% of the forest are severely degraded due to rapid process of change, settlements and abuse of the traditionally protected forests. The District has the outstanding feature of the natural and artificial vegetation that dominated by bushland, palm gardens, and estates (mainly sisal) and patches of shrub thickets interrupted by swampy low-lands and river swamps.

- **Social Conditions**

The district has a total area of 63,516.5 square kilometers whereby 18.1 square kilometers is covered by water and the remaining area is dry land. 2012 Population and Housing Census show that, Handeni District Council had a total population of 276,646 (137,218 males and 139,428 females). The annual population growth rate is high and estimated to be 79,290 persons. The average household size is five persons per household. During the intercensal period in the last decade (2002 and 2012 censuses), the district has experienced a significant population increase by 28.7%. The largest increase was observed for females (38,518 persons) from 100,910 in 2002 to 139,428 in 2012, while for male (37,772) from 99,446 in 2002 to 137,428 in 2012. The district has four major indigenous ethnic groups (Zigua, Sambaa, Bondei and Digo).

It is estimated that more than of 73.7% of the entire population in the district relies on agriculture and livestock keeping activities for their subsistence and income. The agricultural sector is the largest contributor to the district's Gross Domestic Product (GDP) through the provision of employment to more than 73.7% of her people. The District has a total land area of 645,299 Hectares and 65% (419,444.4 Ha) of the total land is arable, whereas 53% (222,370.8 Ha) of the arable land is utilized. The major crops grown in the district are the maize, cassava, cowpeas, while oranges, mangoes and cotton are the main cash crops. Agriculture is predominantly peasantry, and the majority of farmers use hand hoes while very few households use tractors, Ox chain, Ox shares and/or ox-ploughs. The main source of the market for district agricultural product is Mkata market and neighbouring regions, mainly, Dar es Salaam, Kilimanjaro, Arusha, and Tanga. Agricultural sector is followed by Livestock keeping that practised by 50% of the district households. There are about 131,842 (cattle), 66,479 (sheep), 200,523 (goats), and 200,523 (chicken).

In terms of the infrastructure network, the district is served by Chalinze – Mkata – Handen road (tarmac). There is about 801km road network in the District of which 194km (tarmac), 151km (gravel) and 456km (earth) roads. Out of 801km, only 227km (28.3%) of the road network is passable throughout the year (District Profile, 2017). Mode of transport within the project vicinity is road transport. Therefore, the project is well located adjacent to important Chalinze – Mkata – Handeni – Pangani and Chalinze – Segera roads for fuel retailing services.

Currently, the district has a total of 36 health facilities (34 public and 2 private) but the council has an insufficient number of doctors, health facilities and health personnel, implementation of preventive and curative measures and availability of medicines is still low. To curb the existing situation, the district trained 37 Traditional Birth Attendants (TBAs), 182 Village Health Workers (VHWs), 119 Village Health Practitioners and 40 Traditional Medical Practitioners (TMPs) Statistics on HIV/AIDS infections in the District shows a slight increase in the prevalence rate of persons with HIV positive from 209 in 2011 to 716 in 2015. Through Voluntary Counselling and Testing (VCT) volunteers in past five years, out of 66,554 people (33,499 males and 33,055 females) were screened and only 1,892 (890 males and 1,002 females) were identified to be HIV positive. Prevalence rates records show females were more affected than males.

More than 56 percent of the entire population in the District is served with clean and safe water. The main sources of water are the boreholes (15), shallow wells (52), rainwater tanks (66), piped scheme (20), charcoal dams (21), seasonal dams (47), permanent dams (03), a permanent river (01) seasonal rivers (60) and spring (11) (District Profile, 2017). However, shallow wells and piped scheme are the most common sources of water for the largest rural population in the district.
The overall sanitation situation in the district is relatively poor. The majority of households (52.2%) in the Council have no toilets, and remaining 47.8% is using a traditional and improved pit latrine, as well flush toilets. Also, the district has no sewage system and solid waste is disposed of by the Township authority from the collection points to the solid waste dump site

The District has 147 pre-primary schools, 147 primary schools, 23 secondary schools and there is no any Vocational Training Centres (VTC). Enrolment of the students in pre-primary, primary and secondary school from 2011-2015 has reported increasing with a slight decrease from 5,061 in 2011 to 6,958 in 2014 before decreasing to 6042 in 2015 (pre-primary), primary school decreased slightly from 14,238 pupils in 2011 to 12,788 in 2013 and then increased to 13,824 in 2015 and secondary school increased from 1,044 in 2011 to 2,432 in 2015 (District Profile, 2017).

The main source of energy in the district is electricity, solar, firewood, paraffin, gas, kerosene, and charcoal. Firewood (85.8%) remains the most prevalent source of energy for cooking followed by charcoal (12.5%), Paraffin (0.8%), electricity (0.4%) and gas constitutes (0.1%) in the district. Generally, Firewood and charcoal make a total of (98.3%) of the main sources of energy for cooking in the council. Tanzania Electric Supply Company Limited (TANESCO) is the main supplier of electricity and the main source of lighting while only a few households use solar as an alternative source of light.

45. Mbinga Town Council

- **Environmental Conditions**

Mbinga town council is located about 100 kms away from the Songea Municipal and is easily accessible by all-weather roads. The town council lies at the crossings of Longitudes $34^0$24’ and $35^0$28’east of the Greenwich Meridian and Latitude $10^0$15’ and $11^0$34’south of the Equator. It has a total surface area of 1,266 sq. km, equivalent to 2% of the regional surface area. Out of the 1,266 sq. km, 1167.6 sq. km are settlement areas, 1.5 sq. km are forest reserves and 96.9 sq. km are arable land. With exception of very few slopes, the council is relatively homogeneous with gently undulating plains intersected by seasonally flooded valley bottom soil featured by red lateritic earth grey sand to black clay soils and iron crust “mbuga’ with high nutrient contents and are considered suitable for a wide range of food and cash crops such as coffee, maize, paddy, vegetables and beans. The annual mean temperature ranges from 29^0C and 31^0C (in hot season) and and 19^0C and 23^0C (in cold season) which occurs in May to July. The Council experiences unimodal rainfall patterns which starts from November to May with an average of 1,224mm per.

There are three main streams with several tributaries, which form a number of alluvial flood plains in the council which are Ruvuma, Luwaita and Lumeme. The Luwaita River (which flows into the Ruvuma River) supplements the over increasing demand of water supply for both industrial and domestic purposes in the Mbinga Town Council. Woodland forms part of the major vegetation component of the town council covering watershed of the rivers flowing south eastward that has been severely affected by anthropogenic activities.

- **Social Conditions**

According to the 2002 and 2012 Population and Housing Censuses the population of the council increased from 95,152 (estimated population) in 2002 to 117,714 in 2012. This results in a smaller increase of 22,562 people during 2002 to

2012 census period. The 2012 population census put the council's population at 117,714, out of which, females account for 51.7 percent (60,901) of the population. The Matengo are the main ethnic group occupy all wards of the council followed by the Ngoni, Bena, Kinga, Chaga, Ngoni, Yao and Nyasa.

Mbinga Town Council has vast number of economic opportunities due to availability of industries in the council. Commercial agriculture, food crops and forestry are the main source of income in the council engaged by 75.9 percent of residents, followed by trade and commerce (8.9 percent), mining and quarrying (4.4 percent), domestic services (2.8 percent), and the remaining activities had eight percent. There are 1 crop market and 2 retail markets where produced crops are sold as well as 3 slaughter houses.

The Town Council have relatively good access to health services. Until 2020 the town council had 34 health facilities with 1 hospital (public), 3 health centres (1 public and 2 private), 24 dispensaries (16 public and 8 private) and health laboratories 6 (public). HIV/AIDS pandemic is among of the diseases that have had a negative impact to the health of its residents resulting in high rate of morbidity and mortality. The impact or outcome of this disease can easily be observed through an increase of orphans and widows in the community that replicated to the high rates of orphans experienced in 2012 population census.

About 63 percent of the households in Mbinga Town Council had access to improved drinking water sources and 37 percent of households had access to unimproved water sources. These imply that the Council has high proportional of households which depending on improved drinking water sources. The improved water source used by households include piped water (36.4 percent), public tap or standpipe (16.9 percent), protected dug wells (5.3 percent) and protected springs (4.1 percent), while unimproved source of water for drinking including, unprotected springs (19.4 percent), unprotected dug well (12.4 percent), surface water (4.9 percent).

Total road network for Mbinga Town Council in 2015 was 499.13 kilometres and the greater part of the road network are earth roads 430.6 km (86.2 percent) followed by gravel road 62.2 (12.4 percent) and 6. 4 kms (1.3 percent) were tarmac roads.
It estimated that about 630 tons of the solid waste are generated per month but the town council has no designated dump/landfill site for managing these wastes. Moreover, with lack of cesspool emptier and inadequate solid waste dump trucks, over flooding and uncollected garbage pollute the environment. In most cases it is burnt in the open, buried or dumped directly into the streets or drains. Very few households especially in eight wards that located at the centre have septic tanks and in other wards the common way of disposing human waste is through pit latrines.