UNITED REPUBLIC OF TANZANIA

Ministry of Livestock and Fisheries
Ministry of Blue Economy and Fisheries
Deep Sea Fishing Authority

TANZANIA SCALING-UP SUSTAINABLE MARINE FISHERIES AND AQUACULTURE MANAGEMENT PROJECT (TASFAM)

Environmental and Social Management Framework (ESMF)

May, 2025

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF ACRONYMS AND ABBREVIATIONS

APFMP	Artisanal Pelagic Fishery Management Plan
BMU	Beach Management Unit
CBFM	Community-Based Forest Management
CBOs	Community-Based Organization
CFMA	Collaborative Fishing Management Areas
CHABAMCA	Changuu – Bawe Marine Conservation Area
CHICOP	Chumbe Island Coral Park
CITES	Convention on International Trade of Endangered Species
COWOFO	Coastal Women Fisheries Organization
DEMO	District Environmental Management Officer
DFCCs	District Fisheries Co-management Committees
DFD	Department of Fisheries Development
DC	District Council
DFO	District Fisheries Officer
DMC	Department of Marine Conservation Areas
DSFA	Deep Sea Fishing Authority
EAC	East African Community
EEZ	Exclusive Economic Zone
ESIA	Environmental and Social Impact Assessment
EIS	Environmental Impact Statement
EMA	Environmental Management Act
EMP	Environmental Management Plan
EPAs	Economic Partnership Agreements
ESA	Environmental and Social Assessment
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
EU	European Union
ESSs	Environmental and Social Standards
ESS 1	Environmental and Social Standard 1
ESS 2	Environmental and Social Standard 2
ESS 3	Environmental and Social Standard 3
ESS 4	Environmental and Social Standard 4
ESS 5	Environmental and Social Standard 5
ESS 6	Environmental and Social Standard 6
ESS 8	Environmental and Social Standard 8
ESS 10	Environmental and Social Standard 10
FETA	Fisheries Education and Training Agency
FAO	Food and Agriculture Organization
FSDP	Fisheries Sector Development Program
FYDP	Five Years Development Plan
GEF	Global Environment Facility

GHGs	Green House Gases
GNI	Gross National Income
GDP	Gross Domestic Product
GRM	Grievance Redress Mechanism
IUCN	International Union for Conservation of Nature
IORA	Indian Ocean Rim Association
IUU	Illegal, Unreported, and Unregulated Fishing
LGAs	Local Government Authorities
MMAs	Marine Management Areas
MACEMP	Marine and Coastal Environment Management Project
MBEF	Ministry of Blue Economy and Fisheries (Zanzibar)
MBCA	Menai Bay Conservation Area
MCAs	Marine Conservation Areas
MCS	Monitoring Control and Surveillance
MIMCA	Mnemba Chwaka Bay
MLF	Ministry of Livestock and Fisheries (Mainland Tanzania)
M&E	Monitoring & Evaluation
MPAs	Marine Protected Areas
MPRU	Marine Parks and Reserves Unit
MKUZA	Mpango wa Kupunguza Umasikini Zanzibar
ZSGRP	Zanzibar Strategy for Gross and Reduction of Poverty
NEMC	National Environment Management Council
NMRC	National Mariculture Resource Centre
NFSP	National Fisheries Sector Policy
NGOs	Non – Governmental Organizations
OFMP	Octopus Fisheries Management Plan
PAPs	Project Affected Persons
PDO	Project Development Objective
PECCA	Pemba Channel Conservation Area
PF	Process Framework
PIU	Project Implementation Units
PFZ	Potential Fishing Zone
PSC	Project Steering Committee
PFMP	Prawn Fishery Management Plan
PVC	Polyvinyl Chloride
PRA	Participatory Rural Appraisal
RAP	Resettlement Action Plan
RPF	Resettlement Policy Framework
RUWASA	Rural Water Supply and Sanitation Agency
SEA	Strategic Environmental Assessment
SFCs	Shehia Fishermen's Committee
SDGs	Sustainable Development Goals
SMS	Subject Matter Specialist
SWIOFC	South West Indian Ocean Fisheries Commission

SWIOFish	South West Indian Ocean Fisheries Governance and Shared Growth
SWIOFP	South West Indian Ocean Fisheries Project
TAFICO	Tanzania Fisheries Cooperation
TASFAM	Tanzania Scaling Up Fisheries and Aquaculture Management
TAFIRI	Tanzanian Fisheries Research Institute
TC	Technical Committee
ToR	Terms of Reference
TAWFA	Tanzania Women Fish workers Association
TNA	Training Need Assessment
TUMCA	Tumbatu Marine Conservation Area
URT	The United Republic of Tanzania
VFCs	Village Fishermen's Committee
VSL	Village Serving Loans
WB	The World Bank
WCS	Wildlife Conservation Society
WIO	Western Indian Ocean
WWF	Worldwide Fund for Nature
ZAFICO	Zanzibar Fishing Cooperation
ZAFIRI	Zanzibar Fisheries Research Institute
ZAPONET	Zanzibar Professionals Ocean Network
ZEMA	Zanzibar Environmental Management Authority
ZPDC	Zanzibar Petroleum Development Company
ZPRA	Zanzibar Petroleum Regulatory Authority

EXECUTIVE SUMMARY

Project Background, Purpose and Objectives

The Government of the United Republic of Tanzania, through the Ministry of Livestock and Fisheries (MLF), Ministry of Blue Economy and Fisheries (MBEF), and Deep-Sea Fishing Authority (DSFA), in collaboration with the World Bank, are preparing the implementation of TASFAM project. The project focuses on countering the underlying challenges hindering the fisheries sector from achieving the development targets enshrined in the National Five-Year Development Plan III (FYDP III) and other national and international development agendas. In addition, the project intends to link existing national strategies to reducing food and income poverty and mitigate the impact of and/or increase the resilience of the coastal community to climate change. As part of the preparations for TASFAM, and in compliance with the World Bank's Environmental and Social Standards (ESS) as described in the Environmental and Social Framework (ESF) for Investment Project Financing, it is required that the Borrower identifies assesses and manages potential environmental and social risks and impacts according to the World Bank's ESF. This ESMF provides guidelines for the management, assessment and mitigation of environmental and social concerns that meet national and World Bank requirements. This ESMF sets out the principles, rules, guidelines and procedures to assess the environmental and social risks and impacts. The objective is to have in place a practical ESMF to enable early screening for potential impacts and select appropriate instruments to prevent, minimize, mitigate or compensate adverse environmental and social impacts and to enhance beneficial impacts.

Approach and Methodology for Development of the ESMF

The approach used to develop the framework document involved the following: (1) analysis of project activities which determines the likely potential environmental and social impacts caused by the project: (2) identification of impacts, mitigation measures and monitoring procedures; (3) provision of guidance to implementers (of sub-projects to be identified in the future) on how to overcome the specific and cumulative impacts arising from implementation of individual or clusters of the investments; and (4) identification of relevant stakeholder for the preparation of ESMF.

Project Objectives

The TASFAM Project is being prepared to further the achievement obtained under the Southwest Indian Ocean Fisheries Governance and Shared Growth (SWIOFish) Project. This project will be implemented by the Ministry of Livestock and Fisheries (MLF) – Fisheries Sector, Ministry of Blue Economy and Fisheries (MBEF), and Deep-Sea Fishing Authority (DSFA), and supported by the World Bank; is expected to run between 2025 and 2031. TASFAM project development objective (PDO) to enhance the management of marine fisheries and aquaculture, associated marine ecosystems, and the climate resilience of beneficiaries. The commercialization, increased technology, and innovation will help the country to move from comparative advantage to competitive advantages, stimulate industrial development, and become competitive in local, regional, and global markets. To achieve the PDO, the project is divided into four components: 1) Developing a Sustainable and Climate-resilient Blue Economy 2) Improving Management and

Sustainability of Marine Fisheries, 3) Promoting Sustainable and Climate-resilient Marine Aquaculture, and 4) Project Management and Coordination.

Project Areas

This project targets coastal and marine ecosystems of Tanzania Mainland and Zanzibar including Exclusive Economic Zone (EEZ). In Tanzania Mainland the project will be implemented in Seventeen (17) Coastal district within five coastal regions of Tanga, Pwani, Dar es Salaam, Lindi and Mtwara. In Zanzibar the project will be implemented in region of Mjini Magharibi, Kusini Unguja, Kaskazini Unguja, Kusini Pemba and Kaskazini Pemba

Environmental and Socioeconomic baseline

Tanzania has a coastline of about 1,424 kilometres long, stretching from the Northern border with Kenya to the Southern border with Mozambique, which covers a Territorial Sea of 64,000 km^2, a continental shelf of 17,500 $Km^{2,}$ and an Exclusive Economic Zone (EEZ) of about 223,000 km^2 (MLF, 2014). The country's total surface area is 945,040 km^2, with 942, 800 km2, and 2,700 km^2 areas on the Mainland and Zanzibar, respectively. Tanzania's coastal and marine environment covers the mainland coast and the three major islands of Unguja, Pemba, and Mafia, located less than 100 km offshore, and numerous small near-shore islands and islets (ASCLME, 2012). The coastal and marine environment of Mainland Tanzania and Zanzibar includes mangrove forests, estuaries, sandy beaches, cliffs, muddy tidal flats, seagrass beds, river deltas, coral reefs, and small islands, cliffs, lagoons, rocky shores, offshore habitats, and dunes (MLF, 2014). The coastal and marine environment is of significant ecological socio-economic importance and is home to fishers (ASCLME 2012). Both Mainland and Zanzibar coastal populations heavily depend on the marine environment for livelihood sustenance (MLF, 2014). In addition, these ecological habitats are essential for enhancing blue economy and fishing, ranging from fish eco-tourism to mariculture, and maritime activities such as transportation and oil and gas exploration.

Policy, legal and institutional Framework in the Tanzania Mainland

Tanzanian Environmental Legislation and Policies include the National Environment Policy (2021), the Environment Management Act No 20 (Cap. 191) of 2004 (EMA), and the Environmental Impact Assessment and Audit Regulation (2005) regulations, which govern environmental assessments of projects. Other regulations and policies that may have a bearing on activities in coastal areas include the Forest Act (2002), National Tourism Policy (1999), Land Act (1999), and Village Land Act (1999). Fisheries management in Mainland Tanzania is governed by the National Fisheries Policy of 2015, the Fisheries Act of 2003 (No. 22 of 2003), and related regulations, including those of 2009 as amended in 2020. They govern, manage, and enforce fishing and aquaculture development and conservation of fish and fish habitats. Other vital fisheries legislation includes the Marine Parks and Reserves Act of 1994 and the Tanzanian Fisheries Research Institute Act No.11 of 2016.

Policy, Legal and Institutional framework for Zanzibar

In Zanzibar, Environmental legislation and policy instruments in Zanzibar include the Environmental Management for Sustainable Development Act (1996) and Regulations, amended

in 2015. Furthermore, the National Environmental Policy for Zanzibar (1992) with its amendments in 2013, the Establishment of Zanzibar Nature Conservation Areas Management Unit Act (1999), as well as the Forest Resource Management and Conservation Act (1996), and the National Forest Policy for Zanzibar (1999). Other legislation and policy instruments that can affect activities in coastal areas include the Zanzibar Tourism Policy (2004), the Land Tenure Act (1992), and the Land Tenure (Amendment) Act (2003).

The primary instrument for Fisheries management is the Fisheries Act no 7 of 2010. However, the review of the act is underway to suit the new structural setting of the Ministry of Blue Economy and Fisheries. The review also aims at accommodating other acts relating to the management of the MCAs, including the Menai Bay Conservation Area (Establishment) Order of 1997, the Mnemba Island Marine Conservation Area Order of 2002, the Pemba Channel Conservation Area (PECCA) Order of 2005. In addition, two orders were gazetted in 2015 to establish the Tumbatu Marine Conservation Area (TUMCA) and Changuu–Bawe Marine Conservation Area (CHABAMCA). Consequently, the fisheries regulations will also be reviewed to align with the reviewed Fisheries Act. Furthermore, the Zanzibar Blue Economy of 2020 is in place to emphasize a sustainable ocean-based economy (Blue Economy).

World Bank Environmental and Social Standards

The World Bank Environmental and Social Policy for Investment Project Financing sets out the requirements that the Bank must follow regarding projects it supports through Investment Project Financing. The Environmental and Social Standards set out the requirements for Borrowers relating to the identification and assessment of environmental and social risks and impacts and mitigation measures associated with projects supported by the Bank through Investment Project Financing. The ten ESSs as per the WB ESF are: ESS 1: Assessment and Management of Environmental and Social Risks and Impacts; ESS 2: Labor and Working Conditions; ESS 3: Resource Efficiency and Pollution Prevention and Management; ESS 4: Community Health and Safety; ESS 5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement; ESS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources; ESS 7: Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities; ESS 8: Cultural Heritage; ESS 9: Financial Intermediaries; and ESS 10: Stakeholder Engagement and Information Disclosure. Given the nature of activities of this project, with the exception of ESS 9: Financial Intermediaries almost all the ESSs will be relevant. According to the WB ESF the TASFAM environmental risk rating is SUBSTANTIAL while the social risk rating is HIGH therefore the overall risk rating for TASFAM project is **HIGH** due to the likelihood of environmental and social impacts generated by the project.

Environmental risks and the associated impacts

The Environmental risks are considered Substantial. Environmental impacts and risks anticipated include removal of vegetation and cutting down trees where project sites will be located, noise and air pollution during construction, water pollution, generation of solid waste and hazardous waste. Construction of aquaculture and landing site facilities can lead to removal of mangroves, changes in landscape hydrological patterns and its activities during oepration can lead to eutrophication of effluent receiving ecosystems, salinization of soils, as well as ecological impacts. In addition to these construction-related environmental risks and hazards, the operation phase of the fish markets

would generate wastewater from fish processing and marketing activities, and would have potential health and safety risks and hazards associated with fish processing and storage facilities. Operation of fish landing site could have impacts on marine biodiversity. Occupational health and safety impacts associated with confined spaces in fish processing operations (e.g., storage areas, boat holds) are common to most industries. Other physical hazards include falls caused by slippery floors and stairs; equipment safety issues associated with filleting knives and other sharp tools; and cuts from sharp edges on process equipment. The fish processing facilities are also associated with biological hazards such as workers involved in manual gutting, skinning, and general handling of fish and shellfish may develop infections and or allergic reactions resulting from exposure to the fish itself, or bacteria on the fish. Water spraying processes may result in the formation of aerosols with bacteria that can be inhaled. Furthermore, fish processing activities may include a variety of situations in which workers can be exposed to lifting, carrying, repetitive work, and work posture injuries. Many of the manual operations in less mechanized fish processing plants include lifting heavy boxes of raw materials. Repetitive strain injuries may result from manual filleting and trimming operations. Exposure to chemicals (including gases and vapors) includes handling chemicals such as chlorine, lye, and acids that are related to cleaning operations and disinfection in process areas. Occupational health and safety impacts associated with confined spaces in fish processing operations (e.g. storage areas, boat holds) are common to most industries. Noise and vibration exposure may result from proximity to noisy machinery (e.g. compressors, automatic packing machinery, condensers, ventilation units, and pressurized air). Noise and vibration exposure may result from proximity to noisy machinery (e.g., compressors, automatic packing machinery, condensers, ventilation units, and pressurized air).

Construction of marina/jetties could have some environmental impacts such as (i) impacts on coastal morphology that could result from dredging activies, (ii) impacts on water quality. This could result from dredging operations as these heavily wil disturb the settled bottom sediments causing them to suspend in the water column and (iii)impacts on air quality due to the use of machinery and equipments. The World Bank's general Environmental Health and Safety (EHS) Guidelines as well as EHS Guidelines for Aquaculture and Fish processing will be carefully assessed and used particularly to address issues that will arise throughout project phases.

Also construction/renovation of other project facilities (office buildings, laboratoiesetc.) will be associated with different OHS and waste management issues as descirbed above. The operation of laboratories and seafood processing facilities will be associated with risks related to handing of hazardous subsatances and wastes, and also risks related to food safety if the processing is not well controlled. The increase of fishing and seafood production may lead to impacts on senstive species (vulnerable, endangered or critically endangered) and complying with the requirements of marine parks and conservation areas will be key in minimizing risks to biodiversity. The project will also involve technical assitance activities and studies, which may lead to some downstream economic activities associated with different environmental, health and safety risks. The TA, development of plans and guidelines, and updating of policy frameworks activities need to be analyzed and suitable environmental assessment instruments need to be identified to capture risks related to posible downstream economic activities.

Social risks and impacts

The social risks are assessed to be High. The project is financing equipment, operating costs and technical assistance for conducting Monitoring, Control and Surveillance (MCS) and fisheries enforcement activities, which may generate risks of unreasonable use of force and inciting violence with affected individuals/communities. In addition, there are risks related to restrictions in access to natural resources in and around Marine Protected Areas (MPAs), particularly those expected to experience increased protection and expansion.

Components 1 and 2 will be implemented mainly within the existing government facilities, thereby minimizing the need for land acquisition. Activities in components one and two may generate social impacts and risks including: (i) OHS and CHS risks related to road construction/rehabilitation; (ii) labor influx and associated risks of Gender Based Violence/Sexual Exploitation and Abuse-Sexual Harassment (GBV/SEA-SH); (iii) pressure on local amenities and resources; (iv) increased incidence of transmission of communicable diseases including HIV/AIDS and COVID-19 related to interactions among project workers and between project workers and local communities; (v) potential exclusion of disadvantaged persons such as people living disabilities, women, the elderly, and other vulnerable groups, resulting from limited access to information and project benefits, and elite capture of benefits associated with the productive and livelihood improvement activities planned under Components 2 and 3; ; and (vi) potential stakeholder opposition to some activities supported by the Project, particularly those related to the enablement of policy reforms to be supported by Component 2, especially if they involve subsidies for certain commercial fishing activities and not for others, as well as opportunity costs for the local population associated with greater private sector participation.

Sexual Exploitation and Abuse/Sexual Harassment (SEA/SH) Risk Rating

SEA/SH Risk Rating is moderate for this project. The SEA/SH risk will be re-assessed throughout the project life cycle. The project used the Sexual Exploitation and Abuse/Sexual Harassment (SEA/SH) Risk Assessment Tool to assist in this initial determination. The ESMF will include an assessment of the SEA/SH risks, along with an action plan proportional to the SEA/SH risks. The project will ensure that the SEA/SH risk is adequately addressed through sensitization about GBV/SEA/SH for all project workers and members of project affected local communities. SEA/SH risks linked to labor influx are expected to be minimum, given that only small labor teams will be required on-site for the expected civil works. Further, there could be SEA/SH risks due to abuse of authority especially during issuing of credit to female beneficiaries for livelihood diversification programs. To mitigate these risks, a behavioral standard clearly stating zero-tolerance for SEA/SH with consequences will be adopted and communicated to all project actors. In addition, there will be an effective confidential channel in the project Grievance Redress Mechanism (GRM) for persons to submit GBV/SEA/SH complaints, and also provisions to ensure implementation of a Code of Conduct **(Appendix VIII)** for project workers in the project Labor Management Procedures. Through Code of Conduct and GRM, protocols will be established to address biases, harassment or violence. Vulnerable groups, especially females, will be empowered to report any cases encountered. Environmental and Social Specialists working on the project will receive trainings on addressing SEA/SH in Investment Project Financing to increase client capacity to manage project related SEA/SH risks.

Environmental and Social Screening and Review Procedures for Project Components

Environmental and social screening process helps to foresee whether the future project activities are likely to have potential adverse impacts. The process identifies impacts and proposed mitigation measures; incorporates mitigation measures into project design; and reviews and approves project components proposal. In addition, the screening process and other procedures specified in the ESMF will apply to all project components financed under TASFAM project.

Responsibilities for Environmental and Social Management of the Project

Ministry of Livestock and Fisheries, Ministry of Blue Economy and Fisheries and Deep-Sea Fishing Authority shall establish a project implementation unit (PIUs) for strategic planning and implementation of project components. Monitoring and Evaluation guidelines developed to monitor the entire project will include parameters for compliance with proposed measures to safeguard the environmental and social risks and impacts. Monitoring activities by the Implementers will be performed periodically through performance surveys/audits. Ministry of Livestock and Fisheries, Ministry of Blue Economy and Fisheries and Deep-Sea Fishing Authority have no unit of environment. Ministry of Livestock and Fisheries, Ministry of Blue Economy and Fisheries and Deep-Sea Fishing Authority shall each obtain one (1) Environmental specialist and one (1) Social Specialist with knowledge and experience in managing resettlement, Inclusive fishing activities, community engagement, Gender Based Violence or Sexual Exploitation and Abuse Risks.

Cost for Implementing Environmental and Social Management Framework

Adequate budget allocation is a critical requirement for addressing environmental and social issues. An estimated budgetary allocation of **US$ 1,390,000** will be required to comply with environmental and social standards**.** The proposed costs are only indicative, should the proposed development proceed with the suggested changes, Ministry of Livestock and Fisheries, Ministry of Blue Economy and Fisheries and Deep-Sea Fishing Authority will work out on actual costs and include them in the overall cost of the project.

Summary and Conclusion

The Tanzania Scaling-Up Sustainable Marine Fisheries and Aquaculture Management Project (TASFAM) project proposed activities are expected to comply to all the requirements of WB ESS as per the ESF. The United Republic of Tanzania and institutions have strengths and opportunities to comply with World Bank ESF. The ESMF recognizes the importance of strengthening the capacity of key staffs at the implementing institutions in order to be able to comply with the requirements of the World Bank ESF and Tanzania environmental and social policies and laws. This will enhance their capacity in future to address environmental and social issues appropriately. Training will be conducted to key staff involved in decision making, screening, reviewing, monitoring and approvals at the implementing institution. Thus, the subproject will entail minimal adverse environmental impacts if adequate mitigation measures are proposed and incorporated in the project design. In that regard, the project is expected to have enormous socio-economic benefits

in fishing sector to Tanzania. The major issues of concern are land degradation, pollution, Stormwater generation and overflows, increased pressure on Social Services and Utilities and Occupational health and safety during construction. The project implementers will ensure compliance of all requirements of the ESMF. The ESMF outlines all key processes and procedures to be followed so that the project risks and impacts are adequately and timely mitigated. Institutions will have to be committed in implementing all the recommendations given in this ESMF and further carrying out the environmental auditing and monitoring schedules.

CHAPTER ONE

INTRODUCTION

1.1 Project Background

The United Republic of Tanzania (Mainland Tanzania and Zanzibar) is located in Eastern Africa between 1.00o - '11o45' S and '9o21' - '0o25' E. The country borders the Indian Ocean to the east. It has land borders with eight countries: (anti-clockwise from the north) Kenya, Uganda, Rwanda, Burundi, the Democratic Republic of Congo (across Lake Tanganyika), Zambia, Malawi, and Mozambique. Mainland Tanzania encompasses the major islands of Mafia (518 km2) and Zanzibar consists of Unguja (1,666 km2) and Pemba (795 km2).

Mainland Tanzania and Zanzibar have rich marine and coastal resources, which provide a livelihood and primary food source for many of the estimated 13.4 million people living in the coastal areas of mainland Tanzania and the islands of Zanzibar. The fisheries sector is an economic and social mainstay that underpins the livelihoods of coastal communities in terms of poverty reduction, food security, income generation, employment, and forex earnings. The sector contributes 1.8 and 4.8 % to the Gross Domestic Product (GDP) of Tanzania mainland and Zanzibar, respectively. It also employs about 400,000 fishers from capture fisheries, 30,064 aqua farmers, and indirect employment in fisheries-related activities for over 4.5 million people. However, those resources, particularly fisheries, are still threatened by many factors, including illegal fishing, over-exploitation, and destroying fish habitats through inappropriate fishing techniques and gear. In addition, the substantial post-harvesting losses and high export rates of commercially valuable fish species are also challenges in the fishery sector. Also, resources may decline due to utilization pressures from the growing coastal population and the lack of institutional capacity to consistently manage the fishery sector with the current policies and legislation governing these resources.

The Government of the United Republic of Tanzania, through the Ministry of Livestock and Fisheries (MLF), Ministry of Blue Economy and Fisheries (MBEF), and Deep-Sea Fishing Authority (DSFA), in collaboration with the World Bank, are preparing the implementation of TASFAM project. The project focuses on countering the underlying challenges hindering the fisheries sector from achieving the development targets enshrined in the National Five-Year Development Plan III (FYDP III) and other national and international development agendas. In addition, the project intends to link existing national strategies to reducing food and income poverty and mitigate the impact of and/or increase the resilience of the coastal community to climate change.

As part of the preparations for TASFAM, and in compliance with the World Bank's Environmental and Social Standards (ESS) as described in the Environmental and Social Framework (ESF) for Investment Project Financing, it is required that the Borrower identifies assesses and manages potential environmental and social risks and impacts according to the World Bank's ESF. This ESMF provides guidelines for the management, assessment and mitigation of environmental and social concerns that meet national and World Bank requirements. The project will also prepare RPF to ensure that where land acquisition for the project activities is inevitable, resettlement and

compensation activities for lost land, livelihoods, and other properties will be conceived and executed in a sustainable manner as stipulated in this ESMF.

1.2 Project Rationale

SWIOFish project (implemented from 2015 to 2022) managed to control poor practices of dynamite fishing. As a result, there has been a reduction in the mining of live corals and the exploitation of high-valued stocks such as octopuses, sea cucumbers, and lobsters. In addition to the participatory processes, SWIOFish has also made significant achievements in fisheries conservation and management, promoting the role of women and improving environmental awareness. The significant progress and results in SWIOFish project implementation including: (i) elimination of the destructive blast fishing practices in Tanzanian waters; (ii) increased licensing of vessels (2 vessels recorded in 2019/20, 6 vessels in March 2021, 23 vessels in October 2021, and 30 vessels in February 2022) in the Exclusive Economic Zone (EEZ) following removal of the $ 0.4 per Kg royalty; (iii) significant reduction (from 8 cases in FY 2019/20, 1 case in FY 2020/21 and no case in FY 2021/22) of Illegal, Unreported, and Unregulated (IUU) fishing; (iv) growing level of compliance from flagged fishing vessels due to robust Monitoring, Control and Surveillance (MCS) including information technology tools; (v) improved control in collection and management of revenue from the electronic licensing system; (vi) increased revenue from fishing licenses (MBEF recorded $30,818 in 2021/2022 compared to $21,192 collected in 2019/20 and MLF recorded $33,803 in January 2022 compared to $24,798.6 collected in January 2021); (vii) increased number of licenses from coastal waters due to robust Monitoring, Control and Surveillance (MCS) (MBEF recorded 6,700 licenses in 2018/19; 8,983 licenses in 2019/20; 9,791 licenses in 2020/21; and 14,451 licenses in 2021/2022); (viii) accurate oceanographic satellite information and mapping which has transformed ordinary tuna fishing to precise targeting resulting in improved catch per unit effort; (ix) increased capacity of young researchers through the SWIOFish small grants facility; (x) use of revised draft fisheries legislations and management plans as important tools to direct country fisheries management at national and community levels; (xi) successful engagement of community-based fisheries Beach Management Units (BMUs) and Shehia Fishing Committees (SFCs) in fisheries management; and (xii) a significant improvement on budget utilization rates when compared to the approved amount.

Apart from substantial achievements made by the SWIOFish project in fisheries conservation and control, the United Republic of Tanzania's government seeks to scale up the SWIOFish project initiatives. The scaling up of the project through the envisaged TASFAM project to ensure replication of best available practices and sustainability to achieve national and global goals. The World Bank has been requested to support the project.

1.2.1 Lesson learned from SWIOFish

From 2015-2022, the World Bank financed the regional South West Indian Ocean Fisheries Governance and Shared Growth Project 1 (SWIOFish1, P132123), which included Tanzania, to improve the management effectiveness of priority fisheries. This was done at the national level by developing policy and legal instruments, developing and implementing fisheries management plans, promoting vessel registration and licensing, strengthening Monitoring, Control and

Surveillance (MCS) functions, and establishing central fishery databases. At the community level, the project strengthened Tanzania's co-management units and helped fishing communities implement some control measures. It also financed some fisheries management infrastructures. While the project was successful in putting in place governance systems that are key for the long-term management of the fisheries sector, management capacity at national level needs to be further strengthened and the uptake of management measures at local level reinforced to ensure the sustainability of fish stocks. In addition, there is a need to address post-harvest losses through infrastructure investments and value chain improvements which was not done at scale by the previous project.

1.3 Purpose and Objectives of the Environmental and Social Management Framework (ESMF)

This ESMF was prepared as a guiding tool to ensure the investments/sub-projects to be financed under TASFAM project will be designed and implemented in an environmentally sound and socially acceptable manner in compliance with the World Bank ESF, as earlier described as well as the United Republic of Tanzania (URT) environmental and social legislative requirements. This ESMF sets out the principles, rules, guidelines and procedures to assess the environmental and social risks and impacts. The objective is to have in place a practical ESMF to enable early screening for potential impacts and select appropriate instruments to prevent, minimize, mitigate or compensate adverse environmental and social impacts and to enhance beneficial impacts. Specific ESMF objectives are to:

- Assess the potential E&S risks and impacts of the proposed Project and propose typical or indicative mitigation measures.
- Establish clear procedures and methodologies for screening all proposed sub-projects for their potential adverse environmental and social impacts;
- Specify appropriate roles and responsibilities, and outline the necessary reporting procedures, for managing and monitoring environmental and social concerns related to project;
- Provide guideline on consultation of stakeholders for a meaningful result of project objective;
- Determine the training, capacity building and technical assistance needed to successfully implement the provisions of the ESMF;
- Establish the project funding required to implement the ESMF requirements; and
- Provide practical information resources and guidelines for managing and monitoring environmental and social concerns related to subprojects once their nature and locations are known.

1.4 Scope of the ESMF

This ESMF identifies the potential impacts and mitigation measures of the proposed activities under the project. The ESMF outlines the approach to screening subprojects; guidance for the preparation of ESIAs for subprojects once they are identified. The ESMF includes a practical set of operational guidelines and procedures that will be used by the PIUs to guide future ESIA and ESMP preparation.

This ESMF is specifically designed to guide the preparation and implementation phase of the proposed project activities and investments. This document draws from the WB Environmental and Social Framework (ESF) and the National Standards and Guidelines on Environmental, Social and Resettlement Management. Specifically, the ESMF contains subproject screening guidelines, guidelines for impacts identification, evaluation and mitigation. It also stipulates guidelines and best practices for mitigation implementation, supervision, monitoring and consultation processes. Furthermore, it describes the grievance redress mechanism of the project. As the ESMF acts as the overarching instrument for the Project it may be updated if additional information becomes available, notably the development of supporting documents including the labour management procedures, GBV Action Plan and findings of the Social Impact Assessment.

1.5 Users of the ESMF

This ESMF will aid the objectives of TASFAM project by facilitating project team and other project participants to be aware of and integrated environmental and social requirements for assessing project activities. Thus, enhancing their capacity to effectively manage environmental and social issues during the preparation (designing and planning) and implementation of the individual subprojects. The tools and guidelines are tailor-made and suited to the needs of project team and service providers, specifically:

- Project Implementing Units in the institutions responsible for developing support strategies / activities of implementation and supervision;
- Project Teams at Ministry of Livestock and Fisheries, Ministry of Blue Economy and Fisheries, Deep Sea Fishing Authority and staff in target institutions who are responsible for application/planning, review, approval, and supervision of the sub- projects;
- Consulting engineers, Contractors and service providers involved in subproject planning / design, construction and installation works;
- Environmental and social assessment consultants and development services providers who provide services to the project.
- Any other stakeholder who will in one way or another be engaged on the preparation, implementation and use stage of the project.

1.6 Approach and Methodology for Development of the ESMF

1.6.1 Overall Approach

The approach used to develop the framework document involved the following: (1) analysis of project activities which determines the likely potential environmental and social impacts caused by the project: (2) identification of impacts, mitigation measures and monitoring procedures; (3) provision of guidance to implementers (of sub-projects to be identified in the future) on how to overcome the specific and cumulative impacts arising from implementation of individual or clusters of the investments; and (4) identification of relevant stakeholder for the preparation of ESMF.

The ESMF has been prepared in accordance with World Bank Environmental and Social Standards (ESS) and Tanzania Environmental and Sector policies. Preparation of the ESMF involved the following activities:

- Literature Review;
- Stakeholder consultations - including discussions with relevant sector institutions;
- Data collation and analysis, Determination of potential impacts;
- Identification of impact mitigation measures; and
- Preparation and disclosure of the ESMF.

Identification of impacts and mitigation measures and monitoring procedures

This ESMF was prepared through documents review for the project. The documents include project appraisal document and proposed activities under TASFAM to determine prevalent conditions /trends and to establish the extent of achievement of the set targets against key result elements and performance indicators. The preparation of ESMF involved consultation with Ministries and beneficiary institutions. Other consultations will proceed throughout project cycle as stipulated in SEP. Among others, project implementing institutions, utility service providers, Districts/municipalities, wards, vulnerable groups and other interested parties will be consulted. In addition, observations at representative sites and meeting with various participants and key informants to assemble evidence/lessons on impacts encountered, measures undertaken and their roles and responsibilities etc. The results of the situation analysis were augmented by experts' knowledge of activities likely to cause impacts and mitigation measures and best alternative approaches conventionally associated with similar programs.

Provision of guidance to implementers on managing environmental and social issues emanating from sub-projects

Framework of analysis for determining guidelines required by subproject planners/implementers is based on identification of the nature of ESF assessment and management process applicable to the project followed by determination of the nature of management tool needed by various actors at each stage of subproject implementation. The tools include:

1. Subproject specific ESIAs and ESMPs
2. Sub-project screening guidelines
3. Guidelines for impact identification and evaluation; and
4. Guidelines for impact mitigation.

1.6.2 Methodology

Desk Review

Desk Review of relevant literature was undertaken to help gain a further and deeper understanding of the proposed project during preparation of the framework document. This entailed a secondary review of Tanzania's legal framework and World Bank ESS applicable to the proposed project. Information sources include documents from relevant Ministries, Departments, Agencies and

Authorities (MDAAs) of the URT (including both Mainland and Zanzibar); Participating Institutions; and Word Bank. Other sources include national and local data and information centers and web-search.

The documents that were reviewed included but not limited to:

- Project Concept Note,
- Tanzania Fisheries Policy
- Tanzanian Fisheries Act
- Zanzibar Fisheries Act
- Tanzania Environmental Management Act, 2004,
- Environmental Management Act (EMA) 2004
- Occupational Health and Safety Act (2003),
- Relevant Tanzania Mainland and Zanzibar Acts and Regulations,
- Relevant Tanzania Mainland and Zanzibar Policies
- The World Bank Environmental and Social Framework (ESF).

Stakeholder Engagement

Relevant stakeholders were consulted during preparation of this ESMF for TASFAM Project. The stakeholder consultation is significant in the preparation of ESMF since it formed the basis for determination of potential project impacts and viable mitigation measures. ESMF preparation involved consultations with relevant government Ministries, Departments, Agencies and Authorities (MDAAs) and project implementing institutions. As part of the engagement representatives of vulnerable groups and vulnerable individuals were invited to participate in the meetings being held. In addition, stakeholders were also given the opportunity to provide feedback to Ministry of Livestock and Fisheries, Ministry of Blue Economy and Fisheries, Deep Sea Fishing Authority if they were unable to attend. It is however considered that the public involvement initiated by the ESMF will be built upon at the various project levels. Activities involved during consultation include gathering available documents (i.e. environmental/economic/social data); conducting interviews/discussions with Focal Persons and staff directly responsible or involved in TASFAM project implementation and implementers, persons in-charge and beneficiaries, community leaders and representatives at subproject level.

Different project activities have been subject to consultation at different times because of different development timelines. Ministry of Livestock and Fisheries, Ministry of Blue Economy and Fisheries, Deep Sea Fishing Authority has been engaging with various project stakeholders as the initial phase of the project preparation with its documentations. Two phases of stakeholder engagement activities have taken place to date as described below.

(i) **Field Visits**

The team of experts carried out visits to some potential project sites, namely Mtwara region (Mtwara rural and urban districts); Lindi region (Mtama, Lindi urban, and Kilwa district); Pwani region (Kibiti, Mkuranga, and Bagamoyo districts); Dar es Salaam region (Kinondoni and Ilala districts); and Tanga region (Tanga city, and Pangani districts) to be familiar with the issues on the ground and appreciate the possible environmental and social issues of concern. Similar field visits in Unguja and Pemba regions with project sites were conducted.

(ii) Public consultations

The process of public consultation to identify the key issues and impacts of the proposed TASFAM project was undertaken from 21st April 2022 to 4th May 2022 and reviewed from 19th to 30th August 2024. Views from the stakeholders who in one way or another would be affected or rather interested in the proposed project were sought through the administering of questionnaires, interviews with key informants, and through focus group discussions. Information was also collected through direct observation.

The objective of consulting stakeholders was to provide clear and accurate information about the TASFAM project and promote understanding through the active engagement of individuals, groups, and organizations, who have a stake in the project. Moreover, the consultation aimed to obtain stakeholders' views, concerns, and opinions regarding the project, as well as the potential environmental and social issues associated with the implementation of the TASFAM project.

The stakeholder consultations exercise was conducted by a Six Team of Experts from the Ministry of Livestock and Fisheries (MLF), Ministry of Blue Economy and Fisheries (MBEF), and Deep-Sea Fishing Authority (DSFA). Different stakeholders were consulted including Government Ministries, Departments, and agencies; the Coastal Regional Administrative Secretariat (RAS) responsible for fisheries, Planning, Environment, and Social Development; Coastal District Executive Directors and their team of experts; Coastal Local communities (Village Chairperson, Village Executive Officer, Ward Executive Officer, and members of Beach Management Units - BMU's and Shehia Fisheries Committees (SFCs). Representatives of BMU and SFC were Males and Females who are members. The representatives participated in the Meetings, Workshops, and face-to-face individual interviews, names of participants who participated in consultations are listed in Appendix VI. Other stakeholders include Non-Governmental Organizations – NGOs (WWF, Sea Sense, MWAMBAO, and Swiss Aid, WCS, ZACCA, WIOMSA, ZAPONET, and BLUEVENTURE); Community-Based Organizations – CBOs (COWOFO/TAWFA, UWAWABIMAU, and WAMABA); Faith Based Organization (FBOs); and Private Sector (M & P Gas Exploration and Production, and ALPHAKRUST). In addition, the relevant key implementing partner institutions of TASFAM including, among others, the Tanzania Fisheries Research Institute (TAFIRI); Institute of Marine Sciences (IMS), Zanzibar Fisheries Research Institute (ZAFIRI), Fisheries and Education Training Agency (FETA); Marine Park and Reserve Unit (MPRU), Marine Conservation Areas (MCAs), Zanzibar Fisheries Company (ZAFICO) and Tanzania Fisheries Cooperation (TAFICO).

(iii) Key Issues from the Discussions

After each presentation, stakeholders were given opportunity to air their views, concerns, comments and provide their suggestions. The main issues discussed and not limited to:- Main livelihood activities, incidences of illegal fishing, access to microfinance/micro-credit, threats to sustainable fisheries management, the status of loss of biodiversity, the status of loss of ecosystem services, identification of capacity gaps, environmental and social risks and impacts to the community and proposed mitigation measures. These issues have been incorporated into project document and in this ESMF.

CHAPTER TWO

PROJECT DESCRIPTION

2.1 Project Objectives

The TASFAM Project is being prepared to further the achievement obtained under the Southwest Indian Ocean Fisheries Governance and Shared Growth (SWIOFish) Project. This project will be implemented by the Ministry of Livestock and Fisheries (MLF) – Fisheries Sector, Ministry of Blue Economy and Fisheries (MBEF), and Deep-Sea Fishing Authority (DSFA), and supported by the World Bank; is expected to run between 2025 and 2031. TASFAM project development objective (PDO) to ***enhance the management of marine fisheries, mariculture, and associated coastal and marine ecosystems, and improve income generation in Tanzania's coastal area*s.** The commercialization, increased technology, and innovation will help the country to move from comparative advantage to competitive advantages, stimulate industrial development, and become competitive in local, regional, and global markets. To achieve the PDO, the project is divided into four components: 1) Developing a Sustainable and Climate-resilient Blue Economy 2) Improving Management and Sustainability of Marine Fisheries, 3) Promoting Sustainable and Climate-resilient Marine Aquaculture, and 4) Project Management and Coordination.

2.2 Project Areas

This project targets coastal and marine ecosystems of Tanzania Mainland and Zanzibar including Exclusive Economic Zone (EEZ). In Tanzania Mainland the project will be implemented in Seventeen (17) Coastal district within five coastal regions of Tanga, Pwani, Dar es Salaam, Lindi and Mtwara. In Zanzibar the project will be implemented in region of Mjini Magharibi, Kusini Unguja, Kaskazini Unguja, Kusini Pemba and Kaskazini Pemba (**Figure 2.1**).

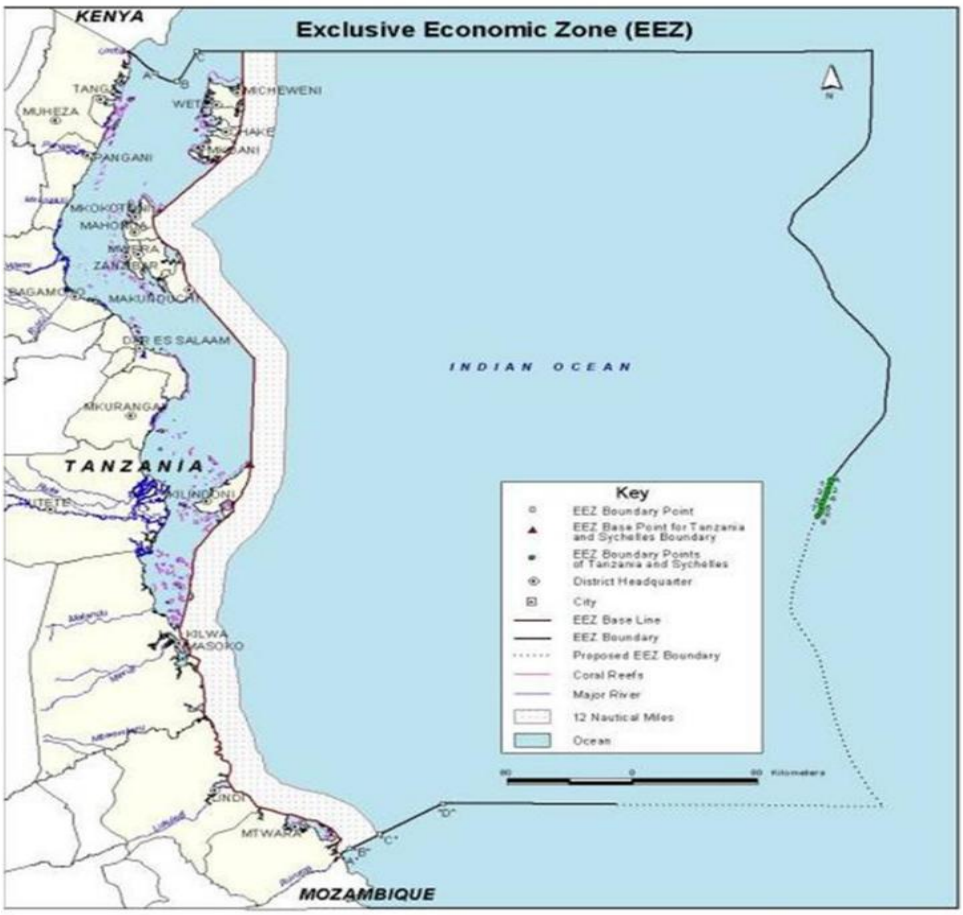


Figure 2.1: Map showing project area (Offshore and Onshore) differentiating between Internal waters, Territorial waters and the EEZ

The project focuses on inclusive conservation of coastal and marine ecosystems, capacity building for all actors in the project area, gender equity promotion, and improving the livelihoods of coastal communities, especially those who depend on fisheries and fisheries-related activities for their livelihoods and survival.

Innovations focus on transforming the level of artisanal fishers to exploit fisheries resources from the EEZ and beyond. The United Republic of Tanzania's ambition is to increase the number of local fishing vessels and onshore businesses to generate more significant employment, income, and food security. Consequently, the establishment of reformed fisheries management and conservation systems will increase social and economic benefits from fisheries. It also focuses on providing alternative means of livelihood to artisanal fishers to create resilience in fishers' communities and their environment.

2.3 Project Components

Component 1. Developing a Sustainable and Climate-resilient Blue Economy

The project will provide technical and financial support across coastal and marine sectors and economic activities to improve policy and institutional frameworks, strengthen institutional and human capacity, and improve management and governance to advance the sustainable development of the United Republic of Tanzania's blue economy. Activities under this component include advanced marine spatial planning, blue carbon development, marine ecosystem conservation and biodiversity, and marine fisheries management.

The project will catalyze the development of blue economy activities by advancing marine spatial planning to identify key investment opportunities, developing a blue carbon market to allow the United Republic of Tanzania, and its coastal communities to benefit directly from ecosystem protection and restoration activities while ensuring contributions to its Nationally Determined Contributions (NDCs), and advancing opportunities for ecotourism that can contribute to both conservation and economic development. The project will also strengthen the conservation of marine ecosystems and species by (i) improving management plans and capacities for Marine Parks and Reserves, (ii) expanding Marine Parks and Reserves, (iii) undertaking ecosystem restoration activities (mangroves, seagrass, coral reefs), and (iv) improving and constructing new infrastructure for protected area management and access.

Component 2. Improving Management and Sustainability of Marine Fisheries

Subcomponent 2.1 Improving Fisheries Data and Management Capacity at National Level

To support the United Republic of Tanzania's objectives of its National Plan of Action, this subcomponent will (i) support comprehensive, quality data collection and technical studies to identify opportunities for improving fisheries health and productivity, (ii) update and improve fisheries management policy frameworks, decision-making processes and databases (statistics, registration, licensing); (iii) strengthen capacities for Monitoring, Control and Surveillance (MCS) of illegal fishing activities, including investigation, field operations, enforcement and prosecution, and (iv) strengthen the effectiveness of institutions responsible for fisheries management through both capacity development, operational equipment and infrastructure improvement.

Subcomponent 2.2 Strengthening Management of Artisanal Fisheries in Territorial Waters

To improve the sustainability and productivity of artisanal fisheries, the project will support community-centered management approaches, building on the success of SWIOFish initiatives. This includes: (i) strengthening local co-management units, including through capacity building, ICT equipment, and infrastructure improvement; and (ii) implementing stock-specific fisheries management measures, plans, and practices.

Subcomponent 2.3: Improving fisheries value chain for reduced post-harvest losses and enhanced quality and value.

Through a value chain approach, the project will support improved fishing, handling, processing, value addition, and marketing through: (i) the provision of inputs and equipment, (ii) infrastructure works (fish landing sites, fish markets, small-scale fish processing plants), and (iii) training and capacity building of beneficiaries. The project will also support a range of measures to add value to seafood products by improving seafood processing standards and capacities and improving quality control measures.

Subcomponent 2.4 Strengthening management of fisheries in the Exclusive Economic Zone (EEZ)

The project will support the improved productivity, management, and sustainability of fisheries in Tanzania's EEZ through actions including:

Promoting responsible fisheries. To reduce illegal, Unreported, and Unregulated (IUU) fishing and improve long-term sustainability, the project will support surveillance of illegal fishing activities; training on the investigation, field operations, and prosecution conducting investigation on illegal fishing hotspots; enforcement operations on illegal fishing practices; support establishment of platforms of district councils and religious leaders to deter IUU; updating the MCS Standard Operational Procedures (SoPs) and Vessel Monitoring System (VMS) Operational Manuals; and enhance the security and performance of fish licensing and transport permit systems. Additionally, the project will enable DSFA participation in regional and international fora such as the Indian Ocean Tuna Commission, Indian Ocean Commission, Indian Ocean Rim Association, and the International Maritime Organization, and support DFSA to conduct high-level seminars for decision-makers on ABNJ fisheries.

Expected results include: (i) improved deep-sea fishing regulations that address sustainability, (iii) increased engagement of national entrepreneurs, private sector, and fishers in deep-sea fisheries – i.e., gear, vessels, port facilities exploring and supporting means, (iii) improved community and private sector access to credit for the private sector for deep sea fisheries investment, (iv) reduced IUU fishing as a result of improved monitoring and coordination at the national and regional level. The sub-component will also strengthen the institutional capacity of the DSFA, through capacity building, operational equipment, and construction improvement.

Component 3. Promoting Sustainable and Climate Resilient Marine Aquaculture

Marine aquaculture is a fast -growing sector for the United Republic of Tanzania's blue economy and presents significant opportunities for women's employment. The project will support the advancement of best management practices and investments for economically viable and environmentally sound marine aquaculture while ensuring contributions to social sustainability and development through extension services. Project activities will include (i) value chain improvements for seaweed farming; (ii) further development of sea cucumber and mud crab farming; (iii) demonstration of fish cage culture farms (silver pompano, ornamental fish, and rabbit fish); (iv) expansion of marine aquaculture through training, outreach, equipment, and infrastructure; and (iv) improved environmental management and extension services.

Subcomponent 3.1: Scaling-up Sustainable Marine Aquaculture

This subcomponent will finalize the construction of the National Mariculture Resource Centre (NMRC) in Kunduchi and operationalize it through the provision of research equipment, processing facilities, and production facilities at NMRC and Ruvula Mariculture Development Centre. The project will follow a value chain approach to developing seed production, feed production, grow out, post-harvest handling, value addition, and marketing for the selected commodities. In addition to studies and technical work to improve aquaculture value chains, this subcomponent will develop and implement farming management and training plans and develop standard operating procedures for multiple species including seaweed and, sea cucumbers. Cage mariculture for selecting finfish will be piloted by these centers.

Subcomponent 3.2 Developing extension services and marine aquaculture associations.

Activities in this subcomponent will support efforts to enhance extension services for aquaculture. Beginning with a comprehensive needs assessment for aquaculture and fisheries communities across mainland Tanzania and Zanzibar, the subcomponent will support the implementation of the assessment's findings.

Component 4. Project Management and Coordination

Component 4 will focus on effective project management, planning, coordination, monitoring and evaluation, application of the environmental and social framework, procurement, and financial management and auditing to ensure that the project successfully achieves its target goals within the given period. It also includes management and oversight of fiduciary functions, and environmental and social risks associated with project-specific activities.

This component will further support training and capacity-building activities for multiple topics. Specific training will include improved environmental management, training, and certification of extension officers on Environmental Impacts Assessments (ESIA) and Strategic Environmental Assessment (SEA), trainings for coastal Local Government Authorities (LGAs) environmental inspectors, and support for monitoring and assessment of activities to ensure compliance with environmental management guidelines and regulations.

This component will also update and implement the existing (developed under SWIOFish) Project Communication and Awareness Strategy (CARS). Activities to be supported include: (i) KAP survey (Knowledge, Attitudes, and Practices) (baseline, mid-term review, and end of project); (ii) Project Implementing Unit (PIU) communication with the public, and (iii) project engagement with beneficiary communities, including print and social media on project outcomes, (iv) community awareness campaigns on sustainable resource use and pollution reduction, and (v) communication of project results to the public and decision-makers.

Expected results would be: (i) a network coordination and management system established, (ii) information flow improved among all stakeholders, (iii) access to key resources improved, (iv) improved management systems successfully introduced where needed, (v) appropriate training,

(vi) robust management of fiduciary, environmental and social functions, and (v) M&E system for effective project management, (vi) strengthened institutional capacity for coastal zone planning, and (vii) analysis, advancement of Blue Economy development and expansion.

Project Implementation arrangements

Since fisheries is a non-Union matter, Project coordination and implementation will be undertaken jointly by the Ministry of Livestock and Fisheries (MLF) Mainland Tanzania, the Ministry of Blue Economy, and Fisheries (MBEF) Zanzibar, and the Deep-Sea Fishing Authority (DSFA) with each agency having a dedicated Project Implementation Unit (PIU). MLF will be responsible for coordinating and implementing project activities in Mainland Tazania, while MBEF will coordinate and implement the Zanzibar interventions. The DSFA will implement project activities related to the management of EEZ and ABNJ fisheries. Each agency's PIU will ensure implementation of OHS measures in accordance with national standards and ESS2 requirements, monitoring compliance, and coordinating OHS training and reporting within their respective jurisdictions.

Project Steering Committee (PSC): there will be a PSC composed of the Permanent Secretaries of the Ministries relevant to the objectives of the project from both sides of the Union. The role of the PSC will be to guide policy, institutional and regulatory reform as well as project implementation. In addition, the PSC will approve major funding and resource allocation, resolve conflicting issues during project implementation, and facilitate coordination and linkages between various ministries and institutions to ensure consistency with sector policies and adherence to established norms and standards.

Project Technical Committees (PTC): there will be PTCs composed of Directors of key Ministries and institutions involved in the implementation of project activities. The PTC will monitor and guide project operations, advise on research needs, review project deliverables, and review annual work plans and budgets as well as annual progress and performance reports before submission to the PSC.

Project Implementation Unit (PIUs): the PIUs will consist of a cross-functional group to ensure alignment and consistency among the technical, managerial, and financial facets of the project. The PIU will be responsible for managing the Designated Account (DA), recruiting service providers, ensuring monitoring and supervision, and reporting on the project performance to the

Project Technical Committee (PTC) and the World Bank. Established at the central level, the PIUs will rely on decentralized teams at a district level to ensure the link between central management and local stakeholders, and to contribute to the implementation of the PIU's responsibilities locally, including project supervision and monitoring. Each PIU will be responsible for enforcing site-specific OHS protocols, conducting regular OHS audits, providing OHS training to staff and contractors, and reporting OHS metrics and incidents. Each PIU shall be adequately staffed to ensure effective and timely execution of project activities. Key positions include: (i) Project Coordinator; (ii) FM specialists; (iii) procurement specialists; and (iv) M&E specialists. In addition, given the nature of their activities, Mainland and Zanzibar will have: (v) safeguards specialists; and (vi) communications specialists. The Project Coordinator will function

as a controller and adviser with formal supervisory authority over PIU staff, oversee and coordinate the implementation of the project activities, including ensuring that OHS protocols are consistently applied across all project sites.

Coordination among the three PIUs: adequate coordination among the three PIUs is important for project implementation. The PIUs already have experience working together under the SWIOFish and MACEMP projects. The preparation of the proposed Project has also been participatory and effectively coordinated with the three PIUs and the respective government agencies. This same dynamic will be continued during project implementation, including through joint meetings and missions. OHS coordination between PIUs will include regular meetings to share lessons learned, ensure consistency in OHS practices, and address emerging OHS challenges. PIUs at each implementing partner agency will be maintained with qualified staff and resources to support the management of ESHS risks and impacts of the Project including 1 environmental and 1 social specialist for each PIU. Roles and responsibilities of Contractors and consultants and other stakeholders are described in implementation arrangements for environmental and social issues in **Chapter 7**.

CHAPTER THREE

ENVIRONMENTAL AND SOCIO-ECONOMIC BASELINE

3.1 Introduction

This chapter provides the baseline data on the relevant environmental and socio-economic condition of the project region/area that will make a reference frame to mark out the potential environmental and social impacts that might arise after implementing the proposed project. The affected environment includes the biophysical, social and economic environment that could be affected by or could affect the development. The baseline information in some cases refers to data and information on project regions as well as broad description of the country. However, biophysically, some of the project areas are located within areas, which are disturbed and are devoid of species of ecologically significant.

3.2 Coastal and Marine Environment

Tanzania has a coastline of about 1,424 kilometres long, stretching from the Northern border with Kenya to the Southern border with Mozambique, which covers a Territorial Sea of 64,000 km^2, a continental shelf of 17,500 $Km^{2,}$ and an Exclusive Economic Zone (EEZ) of about 223,000 km^2 (MLF, 2014) (**Figure 3.1**). The country's total surface area is 945,040 km^2, with 942, 800 km2, and 2,700 km^2 areas on the Mainland and Zanzibar, respectively. Tanzania's coastal and marine environment covers the mainland coast and the three major islands of Unguja, Pemba, and Mafia, located less than 100 km offshore, and numerous small near-shore islands and islets (ASCLME, 2012). The coastal and marine environment of Mainland Tanzania and Zanzibar includes mangrove forests, estuaries, sandy beaches, cliffs, muddy tidal flats, seagrass beds, river deltas, coral reefs, and small islands, cliffs, lagoons, rocky shores, offshore habitats, and dunes (MLF, 2014). The coastal and marine environment is of significant ecological socio-economic importance and is home to fishers (ASCLME 2012). Both Mainland and Zanzibar coastal populations heavily depend on the marine environment for livelihood sustenance (MLF, 2014). In addition, these ecological habitats are essential for enhancing blue economy and fishing, ranging from fish eco-tourism to mariculture, and maritime activities such as transportation and oil and gas exploration.

The climate of the coastal region of Tanzania is humid tropical conditions with high temperatures ranging from 25^{o} C to $>30^{o}$ C, high humidity, and low wind speed (Francis *et al.*, 2 1). The monsoon winds, the East African Coastal Current, the South Equatorial Current, and the tidal regime influence the coastal water circulation. (ASCLME 2012). Two major monsoon wind seasons occur in succession. They consist of the east (NE) monsoon from November to March and the southeast-east monsoon from April to October.

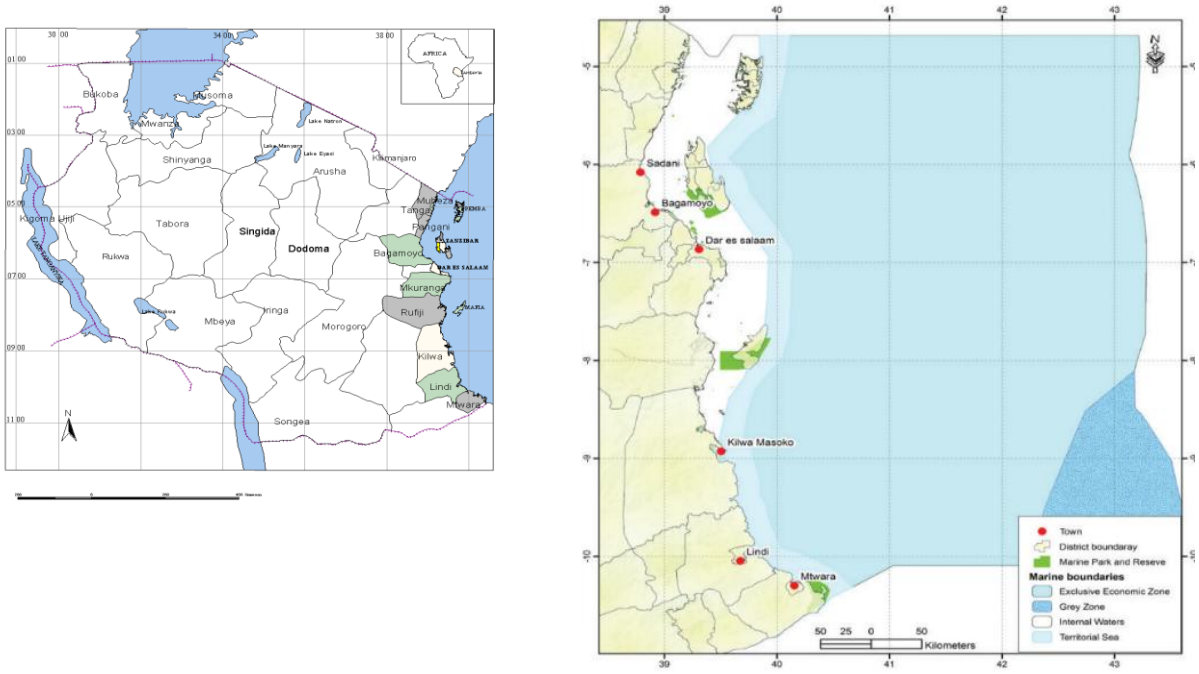


Figure 3.1: Maps showing Tanzania and Zanzibar Coastlines

3.3 Important Species

The coastal fisheries of Tanzania are rich in nutrient-desirable habitats for numerous marine species. Such species are marine fishes, crustaceans, molluscs, a variety of seabirds and other birds, and important animal species, including dolphins, humpback whales, and sea turtles found in the Western Indian Ocean. The area also contains Africa's most endangered mammal —the dugong, and the rare and threatened coelacanth and coconut crab.

The marine fishery includes artisanal and commercial fishing. The latter is dominated by distance fishing vessels, mainly fishing in the EEZ, while the former uses traditional fishing crafts. The fishery is multi-species, including mackerel, kingfish, scavengers, parrot fish, sardines, rabbit fish, rays, sharks, and crustaceans. The main commercial species are Prawns, Octopus, Lobster, Crabs, and tuna and tuna-like species, providing local consumption and trade to the external market.

In the stock assessment survey carried out in the early 1970s, the fisheries resource potential in the territorial marine was approximately 100,000 metric tons (National Fisheries Policy, 2015). However, there has never been a stock assessment carried out in the area of the Economic Exclusive Zone. Therefore, the estimated stock (100,000 tons) does not represent the actual status of the present available marine fisheries resources in Tanzania. This project will conduct stock assessment before commencement of its activities as a baseline data which will be used to assess the impact of the project at later stages.

The marine fisher functions mainly by small-scale fishers who primarily operate in the internal waters within 12 nautical miles because of traditional fishing crafts and traditional fishing methods

(FAO, 2009). The situation makes most fishers make short fishing trips around the shore ending with an unpredictable and unprofitable catch. Fishing is a multi-gear combination in nature that usually targets various fish species.

The country has potential areas for mariculture development. It is a growing activity in the coastal regions with numerous coastal deltas, estuaries, and mangrove swamps that have potential for mariculture, especially prawns, seaweed, and sea cucumber farming. Several other Non-Government Organizations have supported mariculture initiatives in Tanga (WCS and Mwambao Projects) and RUMAKI Seascapes (WWF), including milkfish and mullet production, tilapia, prawns, crab fattening, sea cucumber, and lobsters fattening. These activities have played a role as the source of alternative livelihoods in time capture fisheries are not performing the best. However, technical assistance, readily available fingerlings, and other aqua inputs remain paramount to successful mariculture interventions.

3.4 Biodiversity and Endangered Species in Tanzania mainland and Zanzibar: Habitat, trend and production

Marine endangered species of Tanzania, habitat and production trend

Tanzania is endowed with a high diversity of coastal and marine ecosystems, including sandy beaches, cliffs, major estuaries, mangrove forests, coral reefs, seagrass beds and muddy tidal flats. Some of Tanzania's marine animals are counted among most endangered mammals, such as the dugong, eight species of dolphins, humpback whales, all five species of sea turtles found in the Western Indian Ocean, hundreds of species of reef fish, the rare and threatened coelacanth, the threatened coconut crab, and a wide variety of birds and seabirds. The birds of Tanzania include a total of 1,108 species, of which 23 are endemic, 4 have been introduced by humans, and 43 are rare or accidental. The Tanzanian coastline has well developed coral and barrier reefs which vary in species diversity, including an estimated 150 species of corals in 13 families. A wide range of important and valued species are found along the coast namely 8,000 species of invertebrates; 1,000 species of fish; 5 species of marine turtles, and many seabirds. Over 500 species of commercially important fish and other invertebrates are commonly found in coral reefs.

Seagrass beds are highly productive and serve many ecological functions. The most extensive seagrass bed is found in the Tanga coast, delta Ruvu, Wami and Rufiji rivers, Mafia and Songo songo archipelago and around Kilwa. Altogether, there are 12 species of seagrass off the coast of Tanzania. Rivers, including the Pangani, Wami, Ruvu, Rufiji, Matandu, Mbemkuru, Lukuledi and Ruvuma all flow to the Indian Ocean and influence the coastal environment through the creation of productive brackish water environments in estuaries; maintenance of deltas, tidal flats and shorelines; and nourishment of mangroves and seagrass beds.

Tanzania is characterized by multi-species fish stocks. According to global species database FishBase, Tanzania has some of the world's richest fishing grounds, with more than 1,700 species recorded in its waters. Of these, 47 are commercially important, 69 are found only in deep water and 171 are threatened. 25 per cent of the country's population depend on coastal resources for their livelihoods. Over 180,000 people are employed in the fisheries sector, with a further 19,223 people involved in fish farming. Key coastal and marine fisheries include tuna, swordfish,

prawns, demersal fish (grouper and snapper), octopus, and mariculture (shrimp farms, seaweed, shellfish culture).

In 2015, fish production was estimated around 376,000 metric tons a year, with around 97 per cent of fish sourced from small-scale fisheries. Aquaculture produces about 10,317 tonnes including seaweed (450 tonnes). Despite the huge estimated potential of this sector, it is considered largely untapped. There are presently 21,300 fishponds used for aquaculture. Despite the country's low consumption of fish, at 5.6 kg/person/year, fish makes up 19.7% of the country's animal protein intake. The main groups of fish that dominate marine catches in Tanzania are demersal fish species such as bream, grouper, parrot fish, snapper, rabbit fish, emperor, sharks and rays. Coral reefs also support over 70 per cent of the artisanal fish production in Tanzania. It is estimated that a sustainable yield of 15 tonnes of fish can be obtained per km^2 in depth of less than 30m in some coral reefs. Seaweed is cultured in shallow subtidal areas in Zanzibar and Pemba Islands (Tanzania), mostly by women. Dried seaweed is sold to middlemen, exported and used for medicine, toothpaste and agar[1].

Biodiversity and endangered species in Tanzania mainland

Tanzania is very rich country in biodiversity which together with protected areas are an important contributor (ecotourism) to the country economy and its GDP. TASFAM will avoid adverse impacts on biodiversity, habitats and ecosystem services. When avoidance of adverse impacts is not possible, TASFAM will implement measures to minimize adverse impacts and restore biodiversity in accordance with the mitigation hierarchy provided in ESS1 and with the requirements of the ESS6. According to the biodiversity country profile prepared by the International Biodiversity Assessment Tool (IBAT) [2] there are more than 5000 registered species of flora and fauna (taking into account vertebrate and some invertebrate groups) and about 1116 critical endangered, endangered and vulnerable species (**Figure 3.2**). Among some of the endangered species found are lions, giraffes, hippopotamus, hyenas, cheetahs, several species of monkeys and crocodiles. The country is rich in endemic species, having 121 endemic species which includes amphibians, reptiles, birds, trees, orchids, mammals and insects.

Biodiversity and endangered species in Zanzibar

The Pemba Channel in Tanzania is home to key sea turtle nesting sites, numerous endangered species including sea turtles, dolphins, and sharks, and some of East Africa's most diverse coral reefs. It's home to IUCN red-listed species, including four species of sea turtles, Indian Ocean humpback dolphins, humphead wrasse, bumphead parrotfish, and blacktip reef sharks. This area holds immense cultural and economic importance for thousands who depend on healthy fisheries and coastal tourism for survival, including 400,000 people living on Pemba Island and 18,000

[1] This information is obtained from the Nairobi Conversion website. They are used directly to avoid distortion of any information which might mislead the leaders. Information can be found in https://www.nairobiconvention.org/tanzania-country-profile/tanzania-ocean-economy-2/

[2] This IBAT Country Profile delivers nationally relevant data that are disaggregated from global datasets, to support conservation planning and reporting. It presents information on *species* from The IUCN Red List of Threatened Species™, Protected Areas from the World Database of *Protected Areas* (WDPA) and on Key Biodiversity Areas (KBAs) from the World Database on *Key Biodiversity Areas*.

fishers that depend on fishing as their livelihood. Unfortunately, rampant illegal fishing seriously threatens the health of fish populations and other endangered marine species.

Table 1. Species occurring in your country with extinction risk assessments published on The IUCN Red List (Version 2016-2). Red List Categories: **EX** = Extinct; **EW** = Extinct in the Wild; **CR** = Critically Endangered; **EN** = Endangered; **VU** = Vulnerable; **NT** = Near Threatened; **LC** = Least Concern; **DD** = Data Deficient.

Taxonomic Group	Total assessed species	Total known threatened species (CR, EN & VU)	EX & EW	CR	EN	VU	NT	LR/cd *	LC	DD
VERTEBRATES										
Amphibians	196	61	1	21	29	11	2	0	116	16
Birds	1075	49	0	5	18	26	37	0	988	1
Fishes	1623	176	1	56	23	97	28	0	1299	119
Mammals	372	40	0	4	16	20	18	0	286	28
Reptiles	145	34	0	5	17	12	6	4	78	23
Subtotal (Vertebrates)	3411	360	2	91	103	166	91	4	2767	187
INVERTEBRATES										
Arachnids	5	0	0	0	0	0	0	0	5	0
Corals	280	43	0	0	0	43	88	0	140	9
Crustaceans	72	11	0	0	1	10	2	0	56	3
Horseshoe Crabs	0	0	0	0	0	0	0	0	0	0
Insects	417	51	0	18	14	19	4	0	331	30
Molluscs	272	11	0	2	4	5	10	0	175	76
Velvet Worms	0	0	0	0	0	0	0	0	0	0
Others	48	9	0	0	4	5	0	0	21	18
Subtotal (Invertebrates)	1094	125	0	20	23	82	104	0	728	136
PLANTS										
Ferns & Allies	42	18	0	3	12	3	1	0	23	0
Flowering Plants	1286	605	0	53	250	302	39	9	587	32
Green Algae	0	0	0	0	0	0	0	0	0	0
Gymnosperms	13	6	0	2	4	0	3	0	4	0
Mosses	2	2	0	0	2	0	0	0	0	0
Red Algae	0	0	0	0	0	0	0	0	0	0
Subtotal (Plants)	1343	631	0	58	268	305	43	9	614	32

Figure 3.2: List of Endangered Species in Tanzania

3.5 Marine Protected Areas

The Marine Protected Areas (MPAs), commonly known as Marine Parks and Reserves in Mainland Tanzania and Marine Conservation Areas in Zanzibar, have the potential for the protection of essential habitats and conservation of a representative sample of marine life and can assist in the restoration of productivity of oceans and avoid further degradation (Malleret, 2004). In Mainland Tanzania and Zanzibar, there are several MPAs shown in **Tables 3.1 and 3.2 and Figures 3.3 and 3.4**.

Table 3.1: Mainland Tanzania Marine Parks and Marine Reserves

SN	Marine Protected Areas	Year Gazette	Total Area (Km^2)	General Management Plan
	Marine Parks of Mainland Tanzania			
1.	Mafia Island Marine Park (MIMP)	1995	882	Developed in 2011
2.	Mnazi Bay-Ruvuma Estuary Marine Park (MBREMP)	2000	650	Developed in 2011
3.	Tanga Coelacanth Marine Park (TACMP)	2009	552	Developed in 2011
	Marine Reserves of Mainland Tanzania			
1.	Fungu Yasini Marine Reserve	1975		Not done
2.	Bongoyo Island Marine Reserve	1975	7.53	
3.	Pangavini Island Marine Reserve	1975	1.72	
4.	Mbudya Island Marine Reserve	1975	11.72	
5.	Inner and Outer Makatube	2007	4.38	
6.	Inner and Outer Sinda Marine	2007	6.41	
7.	Kendwa Island Marine Reserve	2007	1.49	
8.	Kirui Island Marine Reserve	2010	36	
9.	Mwewe Island Marine Reserve	2010	0.4	
10.	Ulenge Island Marine Reserve	2010	3.16	
11.	Kwale Island Marine Reserve	2010	12.13	
12.	Maziwe Island Marine Reserve	1975	4.5	
13.	Shungimbili Island Marine Reserve	2007	4.2	
14.	Nyororo Island Marine Reserve	2007	13	
15.	Mbarakuni Island Marine	2007	3.8	
16.	Maziwe Island Marine Reserve	1981	2.6	
17.	Dar Es Salaam Marine Reserves	1975	26	Developed in 2005

Sources: MACEMP ESA, SWIOFish ESA, Tanzania Marine Parks and Reserves Website (www.marineparks.go.tz)

Table 3.2: Zanzibar Marine Conservation Areas

Marine Protected Areas	Establishment	Total Area (km^2)	Status	Management plan
Menai Bay Conservation Area (MBCA)	1997	717.5	Public	2010
Pemba Channel Conservation Area (PECCA)	2005	825.8	Public	2010
Tumbatu Marine Conservation Area (TUMCA)	2015	162.9	Public	2020
Changuu-Bawe Islands Marine Conservation Area (CHABAMCA)	2015	118.2	Public	2020
Mnemba-Chwaka Bay (MIMCA)	2002	337.3	Private	2005
Chumbe Island Coral Park Sanctuary (CHICOP)	1994	0.55	Private	2017
TOTAL		Apx.2100		

Sources: MACEMP ESA, SWIOfish ESA, Tanzania Marine Parks and Reserves Website (www.marineparks.go.tz), Shalli and Anderson Co-Management Zanzibar Report and (IUCN 2020)

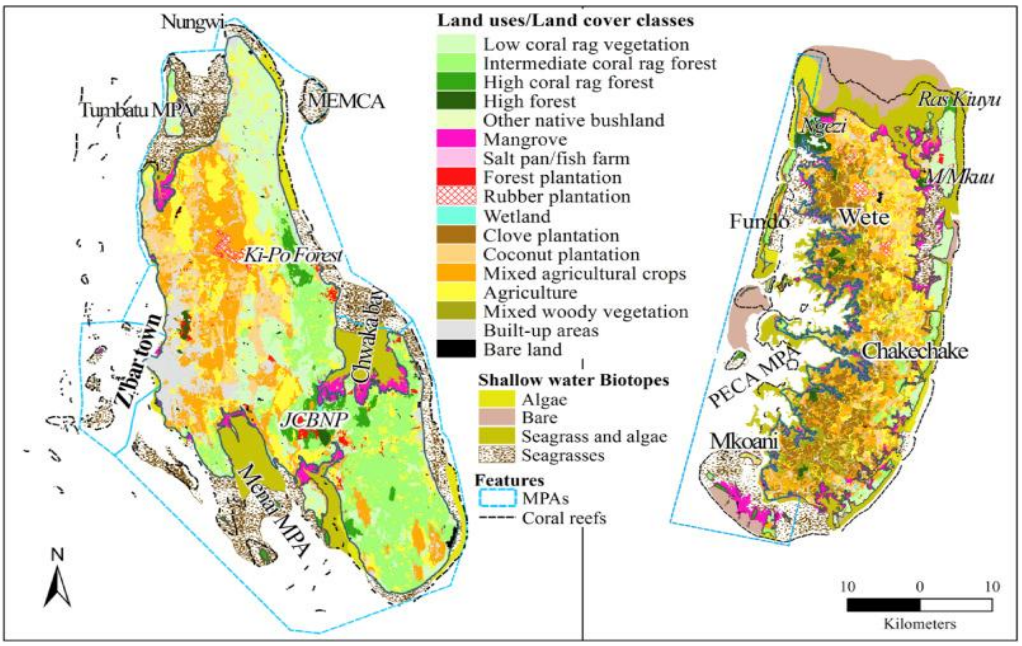


Figure 3.3: The map showing the main islands of Zanzibar with marine conservation areas.

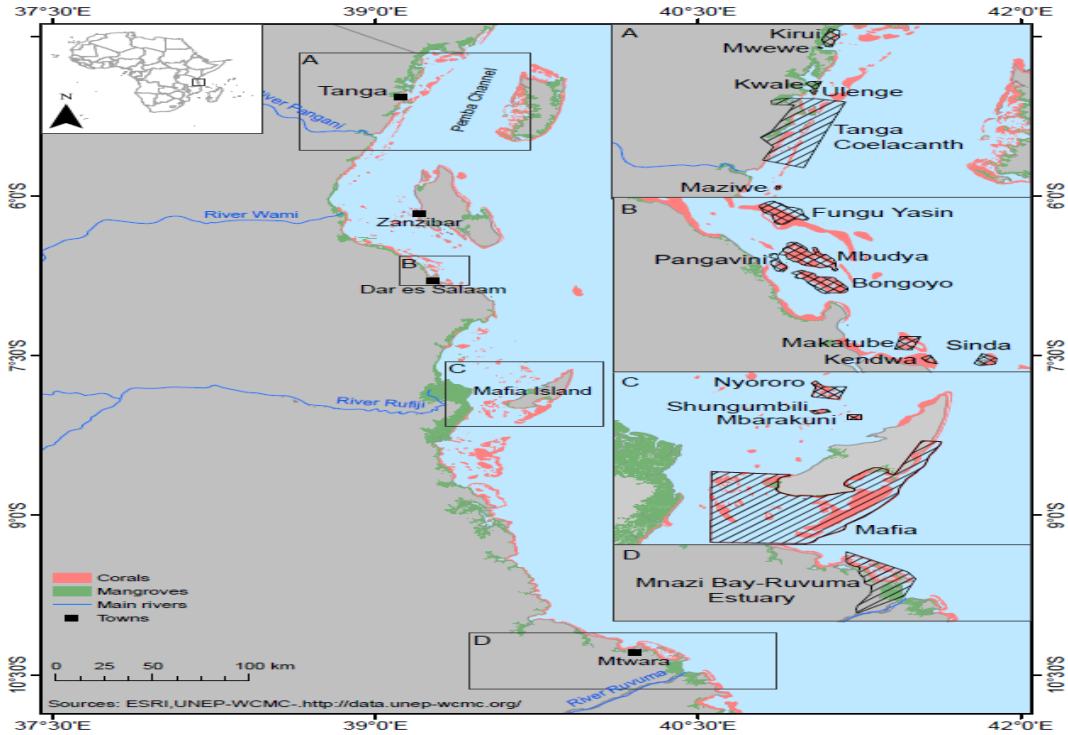


Figure 3.4: Map of Tanzania mainland showing marine protected areas

3.6 Economic and Social Context: Overview

According to the National Bureau of Statistics, Tanzania's annual Gross Domestic Production (GDP) has been growing at an average rate of 6.5 % from 2016 to 2020, and GDP at a market price increased from 100,828 (TZS Billion) in 2016 to 148,522 (TZS Billion) in 2020. Also, the gross per capita expanded from 2,225 TZS (1,006 US$) in 2016 to 1,157 TZS (1,157 US$) in 2020, and an estimated 28 % of Tanzanians live below the poverty line (NBS, 2020). Although mining and agriculture are the economy's mainstays, agriculture remains the primary source of employment, accounting for about half of the employed workforce and a quarter of GDP. Other socio-economic sectors include manufacturing, mining, fisheries, tourism and forestry, water, marine and coastal resources, energy, construction, and communications/transportation. In addition, Tanzania's population has grown by more than four times since 1967, from 12.3 million in 1967 to 57.6 million in 2020 (NBS, 2020).

In these coastal settlements, subsistence food production and extraction of natural resources, including fishing, make up the predominant form of livelihood. However, growing population densities, which increase pressure on coastal ecosystems, and problems linked to overfishing create long-term sustainability challenges for these coastal communities. SWIOFish project has supported different initiatives in seaweed farming which included building capacity for local farmers for sustainable farming practices. The project supported the construction of the National Mariculture Resource Centre (NMRC) in Dar es Salaam to cater to fingerlings requirements for the northern coast.

3.7 Mainland Tanzania

3.7.1 Geographical Features

Tanzania has physical features extends from a narrow coastal belt with sandy beaches to an extensive plateau covered by savanna and bush vegetation and mountain belts with altitude ranging from 1000 to 2000 m. The plateau is fringed by narrow belts of forests highlands, including Mt. Meru and Mt. Kilimanjaro (5,895m), the highest mountain in Africa. Except for the coastal strip and lower parts of the main rivers, the rest of the country lies above 300masl of altitude. The coastal plain is relatively narrow, less than 20 km at Kenya boarder, and gradually to 150 km around Dar es Salaam. Tanzania mainland has several fresh water bodies, including Lake Victoria, the largest in Africa, located on Kenya-Uganda-Tanzania boarder; Lake Tanganyika, the longest and deepest in Africa and second deepest in the world after lake Baikal in Siberia, located on the boarder of Tanzania, Burundi, Zambia and Democratic Republic of Congo; and Lake Nyasa located on the boarder of Tanzania, Malawi and Mozambique. The transboundary natural resources have necessitated Tanzania and its neighbors to put in place protocols, agreements and mechanisms for the management, conservation, sustainable use and equitable sharing of benefits of these resources.

Temperature

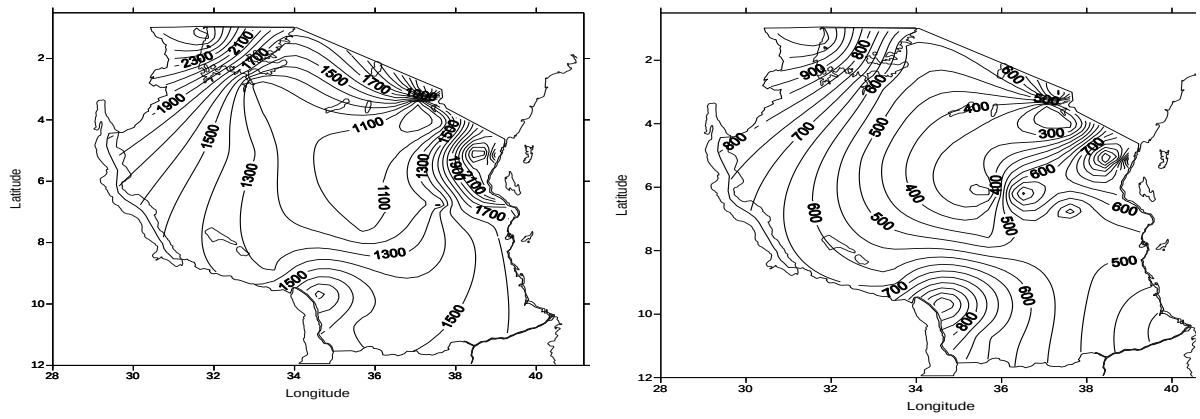
Temperature in Tanzania varies according to the geographical location, relief and altitude. In the Coastal Regions and the off-shore Islands the average temperatures range between 27 °C and 29

°C, while in the Central, Northern and Western parts temperatures range between 20 °C and 30 °C and higher between the months of December and March. In the Northeast and Southwest where there are mountainous areas and Makonde Plateau, the temperature occasionally drops below 15 °C at night during the months of June and July. In some parts (Southern Highlands) temperature can reach as low as 0 °C - 6 °C. This temperature variation has significant impact on the agro-ecological zones and the adaptation strategies in the agriculture sector.

Rainfall

The mean annual rainfall varies from 500 millimeters to 2,500 millimeters and above. The average duration of the dry season is 5 to 6 months. Tanzania's rainfall follows two regimes namely unimodal and bimodal patterns, i.e. Northern coast and Zanzibar, North Eastern highlands and Lake Victoria basin have two rainy seasons with long rains between March and May and short rains between October and December. In addition, the southern, central and western parts of the country have a single rainfall season between November and April. However, recently, rainfall pattern has become much unpredictable with some areas/zones receiving extremely minimum and maximum rainfall per year. **Figures 3.5** show the map of Tanzania indicating average maximum and minimum rainfall from 1921 to 2005.

Extreme Maximum Rainfall **Extreme Minimum Rainfall**



Figures 3.5: Rainfall in Tanzania showing areas of Maximum and Minimum rainfall (Source: Tanzania Meteorological Agency, 2005).

Natural Disasters

Tanzania's main natural disaster hazards are drought, floods, earthquakes, landslides and epidemics. Between 1980 and 2008, Tanzania suffered around 65 natural disasters of which 26 were epidemics, 24 were floods and 6 were droughts. However, no other single natural disaster has affected more people than droughts. Coastal areas suh as Dar es Salaam, Coast and Mtwara regions have largely being affected by floods while areas such as Singida and Dodoma regions have in the past being affected by drought. Drought, floods, landslides and earth quakes are

responsible for over 90% of all people affected by natural disasters in the past twenty years. In 2006, a severe and prolonged drought caused food shortages and a decline in water levels that led to power rationing. In 2008, the rain period was shorter than average and in 2009 the short rains failed to come[3].

Earth quakes has impacted the country in several cases the most severe being the Kagera earthquake which occurred in 2016 and claimed lives of people as well as loss of properties. Landslides have also affected some northern parts as well as southern highlands of the country claiming lives.

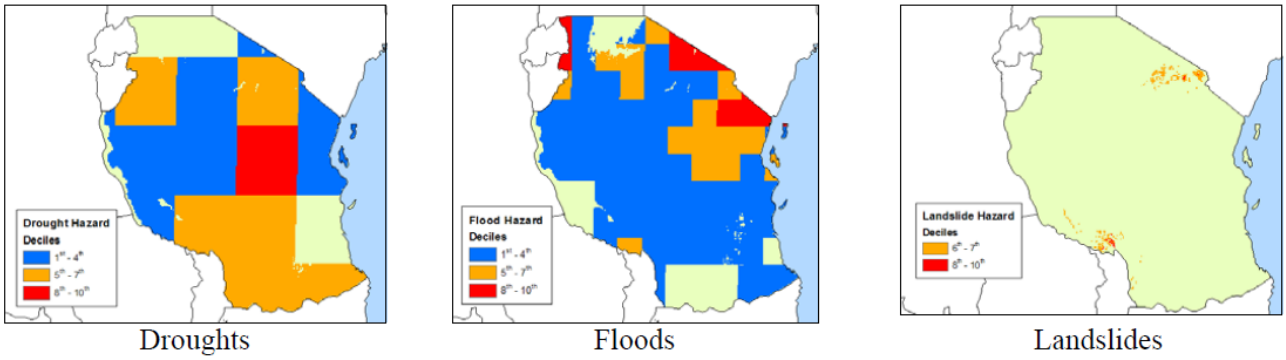


Figure 3.6: Natural disasters risk hotspots in Tanzania (Source: The Earth Institute, University of Columbia)

3.7.2 Coastal Regions and Communities

Tanzania's Mainland coastal include Tanga, Pwani, Dar es Salaam, Lindi, and Mtwara. These five regions are further divided into 17 districts, as shown in **Table 3.3**.

Table 3.3: Mainland Tanzania Coastal Regions and Districts

Region	Districts
Tanga	Mkinga, Tanga City, Muheza, and Pangani
Pwani	Bagamoyo, Mkuranga, Mafia, and Kibiti
Dar es Salaam	Kinondoni, Ilala, and Kigamboni
Lindi	Lindi (M), Mtama, and Kilwa
Mtwara	Mtwara (Rural), Mtwara (Urban) and Mikindani

Dar es Salaam, the country's largest and most densely populated city and the country's economic center, is located on the coast, as are smaller urban cities and municipalities, including Tanga City, Pangani, Bagamoyo, Lindi, and Mtwara. Between these urban areas are smaller peri-urban areas, including Kilwa, Kivinje, and Kilindoni, and numerous small rural coastal villages with limited infrastructure, including roads, electricity, and communications services. However, cell phone

[3] This Case Study was written by Cecilia Costella (HDNSP) and Erasto Machume (TASAF) with input from Ida Manjolo (AFTSP). The case study is part of the Toolkit "Building Resilient Communities: Risk Management and Response to Natural Disasters through Social Funds and CDD operations" (World Bank, 2009).

service is available along much of the Mainland coastal communities. The insufficient infrastructure and rural nature of many coastal communities have limited their opportunities for economic growth and links to larger markets outside their local settlements.

The coastal area is of critical importance to the development of the country. The five mainland coastal regions contribute about one-third of the national Gross Domestic Product (GDP). About 75 %[4] of the country's industries are in urban coastal areas. Newly initiated activities in the coastal region, including coastal tourism, agriculture development, and natural gas exploitation, are becoming increasingly important in the future, and natural gas exploitation is becoming increasingly important. Natural gas exploitation is becoming increasingly important in promoting national economic development. There is also substantial but untapped potential for agriculture, offshore fisheries, shipping, urban development, small-scale mining, and manufacturing.

Most rural coastal communities are poor; hence, addressing the issues associated with the small-scale, sustainable use of coastal resources is critical to poverty eradication and slowing rural-to-urban migration. The economy of the coastal communities depends mainly on smallholder farming, subsistence forestry, artisanal fishing, lime and salt production, seaweed farming, livestock husbandry, and small-scale trade handicrafts. Most families must be involved in more than one economic activity so that if one income for the household–fishing, for instance–fails, the family still has other sources of food and income.

3.7.3 Mainland Tanzania Coastal Population

The five coastal regions of Mainland Tanzania encompass about 15 % of the country's land area and are home to approximately 25 % of the country's population. Population growth along the coast, among other factors, has been influenced by urbanization. In many cases, this urbanization has overrun traditional coastal fishing settlements. But there are still more people in or on the fringes of the coastal urban and peri-urban areas who earn a significant part of their livelihood from fishing or fishing-related activities (**Table 3.4**).

Table 3.4: Population Data for Coastal Mainland Tanzania

Region	Population 2012	Population 2020	Annual growth rate (%)	Population density 2012 (per km2)	Population density 2020 (per km2)
Tanga	2,045,205	2,449,235	2.4	77	93
Pwani	1,098,668	1,325,852	2.4	34	41
Dar es Salaam	4,364,541	5,401,814	2.4	3,133	4,473
Mtwara	1,270,854	1,478,874	1.9	76	84
Lindi	864,652	1,025,800	2.1	13	14
Tanzania Mainland	**9,643,920**	**11,681,575**	**3.1**	**49**	**60**
URT	**44,928,923**	**57,637,628**	**3.1**	**50.4**	**61.7**

[4] National Intergrated Coastal Environment Management Strategy, 2003

3.7.4 Mainland Tanzania Coastal Households

Mainland Tanzania has around 9.1 million[5] households. Many coastal villages, especially on the mainland, have high fertility rates, countered by a high population migration to larger urban centers. While urban coastal communities, particularly Dar es Salaam generally have good access to infrastructure and services, many rural coastal settlements are relatively isolated with poor access to services and infrastructure, including roads, electricity, and water supplies. See **Table 3.5** for information on access to essential services.

Table 3.5: Household Wellbeing Indicators in Mainland Coastal Regions (2017-18).

Household Data	Tanga	Pwani	Dsm		Lindi	Mtwara	**Mainland**
% of households headed by women	31.3	27.0	28.5		32.7	32.3	**28.2**
% of households headed by men	68.7	73.0	71.5		67.3	67.7	**71.8**
% of households using toilets	94.7	94.7	99.6		97.3	94.1	**94.2**
% households connected to the electricity grid	28.7	32.1	79.9		12.7 12.7	21.9	**29.1**
Education							
% of adults without education	31	39	8		44	28	**25**
% of women without education	38	52	11		52	36	**32**
Primary education net enrolment	60.2	63.5	47.0		62.3	65.3	**59.4**
Mean distance to Primary School (km)	2.3	1.7	0.8		1.2	1.1	**1.8**
Mean distance to Secondary School (km)	18.8	13.1	2.5		25.1	16.6	**12.6**
Health							
% of households within 6 km of a dispensary or health center	62	74	98		67	87	**75**
Water							
% of households with piped or protected	46	35	94		19	52	**55**
% of households within 1km of drinking water (dry season)	41	56	84		47	41	**55**
Economy							
% of children (2-14) employed	80	57	28		40	46	**62**
Consumption and poverty							
Expenditure	9.3	10.5	21.9		9.5	12.4	**10.1**
Basic needs poverty	18.6	30.6	39.2		40.5	55.6	**39.2**

3.7.5 Mainland Tanzania Coastal Infrastructure

***Roads*:** Investments to expand and improve the national road network have been among the Government's top priorities. The road network condition has been enhanced, with the proportion of paved national roads increasing from 8% (2011) to 27% (2020). The proportion of trunk and regional roads in fair condition has increased from 46% to 50% over the same period. Therefore, increased public investment in the infrastructure sector has, increased public investment in the

[5] 2020 Tanzania in figures: National Bureau of Statistics 2021

infrastructure sector has enabled Tanzania to undertake major road construction projects, including bridges and flyovers.

There is a recommendation that, in the long-term, the current plans to improve road infrastructure in the coastal areas be continued, particularly the coastal roads from Dar es Salaam - Bagamoyo – Saadani – Pangani - Tanga and Dar es Salaam – Kilwa – Lindi, and Mtwara. Also, there should be a consideration of constructing bridges over the Pangani River and Wami River.

***Water supply*:** The Government carries water supply in coastal areas through urban water authorities in the urban areas and the Rural Water Supply and Sanitation Agency (RUWASA) in the rural areas. However, due to inadequate Government capacity to supply water in the whole coastal areas, NGOs, religious institutions, Development Partners, and the private sector have been increasing Government efforts by providing water to communities and sometimes for their use. However, in some areas where there are no services, people fetch water from any nearest natural water source or sometimes dig or drill shallow or deep-water wells to cater to their water needs. This impacts their health and eventually their income as they are to spend for seeking medical treatment or affected and hence fail to participate in their productive activities.

Energy: The coastal areas are endowed with diverse energy resources, including biomass, natural gas, hydropower, solar, and wind, much of which is not adequately tapped. Wood fuel accounts for up to 90% of total energy consumption, with about 2% from electricity and 8% from petroleum products. Most coastal people use biomass as a source of energy for cooking and lighting.

3.7.6 Mainland Coastal Economy Overview

***Coastal Livelihood Activities*:** Like other African countries, Tanzania has scarce formal employment, forcing many communities to rely on natural resources heavily, particularly most rural communities. Hence, coastal households rely on various means to meet their livelihood needs, including food supplies and subsistence income. The subsistence of food production and extraction of natural resources, including fishing, make up the predominant forms of livelihood. Small-scale subsistence and commercial activities include artisanal fisheries, animal husbandry, agriculture, mariculture, salt, and lime production, stone quarrying and sand mining, beekeeping, mangrove-related activities, and small-scale trade and crafts. In some areas, coastal residents can participate in eco-tourism and other activities such as petty trade. Many coastal residents need to pursue multiple livelihoods to ensure a reliable food supply and subsistence income for their households.

***Importance of Fisheries to the Coastal Communities*:** The fisheries sector's contribution to the country's GDP has remained relatively low; in 2021, the sector's GDP contribution was about 1.8% (MLF, 2022). Though contribution to the national economy has remained relatively low, many coastal communities benefit indirectly through different fisheries-related activities such as boat building, vessel maintenance, gear owners, etc.

According to the 2018 Fisheries Frame Survey (MLF, 2018), a total of 19,482 people are directly involved in fisheries-related activities such as fish carriers, fish processors, traders, net repairing, boat building, and fish transporters. The survey noted that over 9,178 (47%) were involved in the

fish trade, 5,232 (27%) fish processors and 2,678 (14%) fish transporters, 1,215 (6.23%) boat net repair, 669 (3.4%) and 509 (2,61%) fish carrier.

Additionally, the frame survey recorded 53,035 fishers, out of this about 11,436 (21.56%) and 33,040 (62.30%) were craft owners and crews, respectively. Among craft owners, male were 11,180 (97.7%) and 256 (2.24%) were female whereas 1,212 (2.3%) and 7,045 (13.3%) were foot and immigrant fishers respectively. Tanga region had the highest number of fishers 14,077 (26.7%) followed by Coast 13,052 (24.7%) and Lindi region 10,742 (20.4%) while, Dar es Salaam and Mtwara regions had the least number of fishers 8,792 (16.7%) and 5,620 (10.6%) respectively (MLF, 2018).

The small-scale or artisanal fishery sector remains the most important one. It provides an economic base for most coastal communities, contributing significantly to poverty reduction, economic growth, food security, employment, local incomes, and some foreign exchange.

Marine and coastal resources are vital to URT's economy and society, especially those living along the coast or on the islands. Tens of thousands of families who live in impoverished coastal communities depend on the sea for their livelihoods, as it provides both food and income. Although at a point, dynamite fishing has been controlled near zero through the SWIOFish project, it is expected that maintaining the status quo may give room for the resource to regenerate and hence coastal areas to be supportive of coastal communities' livelihoods to level once enjoyed. This may require strong commitment and plans to upscale SWIOFish-supported initiatives.

3.7.7 Other Livelihood Activities

***Agriculture and Livestock*:** Most Tanzanians are farmers practicing substance farming and livestock husbandry. However, in most of the coastal villages, farming activities are very low, with most inhabitants depending on fishing for their livelihoods, and where its land accommodates agricultural activities, there are only tiny home-based farms. Generally, most of the land in the coastal area is of low agricultural potential, with an over-reliance on rain-fed agriculture, and few crops are well suited to coastal belt conditions. Farming and livestock-keeping potential are also limited by a lack of appropriate technologies, reliable, low-cost implements, extension services, and supply of inputs, including fertilizers, fuel, and seeds. As a result, most coastal agriculture involves smallholders with poor access to infrastructure, credit, technology, or inputs.

***Tourism*:** Tanzania is endowed with vast tourist attraction sites, from historical cities to several National Parks. The entire coastline is full of tourist attractions. However, much has not yet been done to promote these attractions; as a result, communities have not yet benefited from the potential of these attractions. Capacity building is deemed necessary for these communities to be able to tap tourism benefits.

***Coastal Forest Products*:** Mangrove is the closest and most readily available resource to coastal communities than other resources such as fish, coral reefs, and minerals. Coast communities earn a portion of their livelihood directly from coastal mangrove forests. Much of this activity involves producing fuelwood and charcoal, accelerating deforestation. Wood is also used for timber production for boat building. But there is also a myriad of other products that can be harvested less

destructively from the coastal forests, including herbal medicines, edible fruits, mushrooms, plant-derived oils, leaves and beverages, bamboo, gums, fodder, fiber, honey, candles, dyes, ornamental plants, household utensils, and handicrafts. Current initiatives have been geared towards supporting non-consumptive benefits such as beekeeping, crab fattening, and carbon trade.

***Oil and Gas Industry*:** Oil and gas subsectors are associated with a range of opportunities; however, most coastal communities cannot access skilled labor. Oil and gas are related to intensive labor at construction involving many people with a range of technicalities from the use of masculinity to high experience. Direct employment drops sharply to few masculine and highly skilled labor in the operational phase. The current status shows that several locals have benefited through direct service jobs such as drivers, security guards, office staff, and other personnel for the two gas processing plants operating in Tanzania (Mnazi Bay and Songo Songo), and power generation plants at Kinondoni, Ubungo, Kilwa, and Mtwara, and casual labor needed for the maintenance and security of gas pipeline from Mtwara to Dar es Salaam. Downstream operations, mainly storage, distribution, and sale of hydrocarbon products, working at petrol stations and depots in the coastal districts of Mainland Tanzania could generate a range of employment opportunities for local people. The main concern is how far people have been prepared to tap oil and gas potential; therefore, there is a need for deliberate efforts to prepare locals to tap more oil and gas opportunities.

***Coastal Sand and Rock Mining*:** The most common mining activity in coastal areas supporting local communities' livelihoods is sandy mining and coral reef for construction in some places. Most mining activities along the coast are done in the informal sector. Although data on this activity is scant, beach and river sand mining are thought to engage several thousand casual workers, including women and children. It includes sand, rock, and aggregate mining. However, these practices are often unsustainable and can lead to shoreline erosion of rivers and beaches, and the destruction of coral reefs that provide habitats for fish.

***Salt Production*:** Salt production in the coastline of Tanzania is divided into two types; small-scale and industrial production systems. The small scale is practiced with individuals or small groups of local people in different villages. At the same time, big companies dominate industrial production, providing big companies dominate industrial production which offers employment opportunities to nearby villagers. In recent years salt pans have been sites for milkfish farming in several villages, especially on the northern coast. Farmed milkfish are stored in a salt pan during refilling and are normally harvested sometimes before salt accumulation during rainy seasons.

Salt production and affordable, locally produced salt are probably more beneficial to coastal communities for their nutritional value (providing iodine in local diets) than economic income. An estimated 3,500 to 5,000 people, mainly women, may be involved in this activity in coastal Mainland Tanzania, in either commercial or small-scale production (UNICEF 2007). In addition, small-scale salt production can lead to localized degradation of mangrove forests where trees are cut for firewood to boil and evaporate the salt water.

***Fishing ponds*:** There is an emerging fish farming in ponds and seaweed farming in the ocean. Fish farming in coastal Tanzania is generally in its infancy, mainly due to the absence of knowledge in aquaculture, along with various economic, technical, and institutional constraints, which have so far inhibited major progress in the country. Seaweed farming is intense in certain

areas. Attempts to introduce and establish other fish farming practices in coastal Tanzania, such as farming of fish, crabs, bivalves, and sponges, often on a small-scale basis, have been initiated.

Village-based seaweed farming industry that makes important contributions to the village economy is in progress. Continued growth and diversification of the seaweed industry and other small-scale mariculture activities are expected at the village level. Fish farming provides an alternative source of employment, income, and protein.

***Small-scale fishermen*:** Generally, the marine fishery in Tanzania is dominated by Small-scale fishermen who use traditional fishing crafts with a variety of fishing gears and methods and mainly operate in the internal waters within 12 nautical miles of Territorial water. Traditional or small fishing crafts dominate around the coast due to lack of capital and low technology hence making short fishing trips close to shore. The Small-scale fishermen support the majority of the coastal communities either as part-time or fully engaged fishers who use artisanal fishing crafts usually ranging from 3 to 9 meters and contribute more than 96 percent of the nation's total marine fish landings. The fishery is multispecies, which includes but is not limited to mackerels, kingfish, scavengers, parrot fish, sardines, rabbit fish, rays, sharks, and crustaceans. The main commercial species are Prawns, Octopus, Lobster, Crabs, Tuna, and tuna-like species, providing for local consumption and trade to external markets.

***Ferry Fish Market vendors*:** At the Ferry Fish Market some vendors do informal businesses such as selling fish, carrying bags, fruits, snacks, coffee, etc. The potential of the Ferry fish market rests on the fact that more than 5,000 people mainly buyers and vendors visit the market from Dar es Salaam and nearby landlocked regions every day. This makes the market an important part of the employment of many people within and outside Dares Salaam.

***Hotels services*:** The majority of accommodation facilities along the coast are located in and around the larger urban areas, particularly Dar es Salaam, Zanzibar, Tanga, Bagamoyo, and Mtwara. In addition to these clusters of hotels and guesthouses in urban areas, several smaller hotels and guesthouses are scattered along the coast, primarily in and around Pangani, Kilwa, and Mafia Island.

***Beach activities*:** Attractive beaches can be found all along the coast and serve as one of the primary resources for multisectoral activities including fisheries, coastal tourism attractions, ports, etc. Several beaches have already attracted tourism investment, such as Ushongo in Pangani District, Bagamoyo, Kunduchi in Kinondoni Municipality (DSM), Ras Kimbiji in Temeke Municipality (DSM), Jimbiza in Kilwa District, Mikindani in Mtwara District and selected beaches on Zanzibar, (Unguja and Pemba Islands) and Mafia Island. These beaches are home to numerous human activities, including tourism, fishing, mariculture, etc.

***Vendors along beaches*:** Small-scale trade handicrafts and petty businesses are taking along the beaches of Tanzania's coastline. Most families in the coastal regions must be involved in more than one economic activity so that if one income to the household fails, the family still has other sources of food and income. The daily struggle for food and household income keeps people from improving their situation.

***Port and Harbor*:** Tanzania is bordered by the Indian Ocean on its eastern coastline which is dotted with the four major seaports of the country namely Dar Es Salaam, Tanga, Zanzibar, and the port of Mtwara which handle all the international maritime trade of the country.

Dar es Salaam is Tanzania's principal port with an intrinsic capacity of 10.1m t per year. The port handles over 92% of the total maritime ports' throughput. The port serves the land-locked countries of Malawi, Zambia, the Democratic Republic of Congo, Rwanda, Burundi, and Uganda. These countries are connected to the port through two railway systems, a road network as well and the TAZAMA oil pipeline to Zambia.

3.8 Zanzibar

3.8.1 Introduction

Zanzibar is an archipelagic state within the United Republic of Tanzania (URT), consisting of the two main islands of Unguja and Pemba and 53 islets occupying 2,700 km^2. Due to this geographical nature, the livelihoods of Zanzibar residents are mainly dependent on coastal and marine resources that support fisheries, tourism, and other sources of income termed as blue activities. Furthermore, about 98% of Zanzibar's international trade by volume is in seaborne. These blue activities contribute to about 29% of the Zanzibar Gross Domestic Product (GDP) and employ about one-third of the population (Zanzibar Blue Economy Policy, 2020).

3.8.2 Zanzibar Regions and Communities

There are five regions in Zanzibar: Mjini Magharibi, Kusini Unguja, Kaskazini Unguja, Kusini Pemba, and Kaskazini Pemba, all of which have coastlines. The largest urban area in Zanzibar is Stone Town on Unguja Island, the site of most administrative buildings and the commercial center. The districts are Wete, Micheweni, Mkoani, and Chakechake in Pemba, and Mjini Magharibi A, Magharibi B, Kati, Kusini, Kaskazini A, and Kaskazini B in Unguja Island (**Figure 3.4**).

Figure 3.4: The map showing the main islands of Zanzibar with districts

3.8.3 Population

The projected population for 2020 is 1,671,598, out of which male is 814,159 and female is 857,439. The composition is 51% females and 49% males, and 36% are youths aged 15-35 (National Bureau of Statistics 2021 report). Roughly half the population lives in urban areas, while the rest live primarily in smaller villages and settlements on or near the coast, in slightly over 250,000 households. Women outnumber men by about 42,000. Zanzibar per annum population growth from 2012 to 2020 ranged from 1.3 to 4.0, 1.1 to 4.1, 3.2 to 4.1, 2.0 to 2.3, 4.2 to 1.7% for Kusini Pemba, Kaskazini Pemba, Kaskazini Unguja, Kusini Unguja, and Mjini Magharibi respectively. The average size of a household is 5.1 (NBS 2021).

The relatively high population growth rates pose challenges for the islands of Zanzibar, particularly along the coast of Unguja Island, where population growth rates are higher than on Pemba (**Table 3.6)**. As with any island ecosystem, increasing population growth and density threaten to overrun finite water supplies, while household and commercial waste disposal directly into the islands' watershed and seas can affect near-shore fisheries and onshore seaweed cultivation.

Table 3.6: Projected Population data for Zanzibar Regions based on the 2012 Population and Housing Census

Region	2012	2020	Average Annual Growth Rate (%)	2020Population density (persons/km^2
Kaskazini Unguja	187,455	232,480	2.3	495
Kusini Unguja	115,588	138,589	1.7	162
Mjini Magharibi	593,678	733,914	2.3	3,190
Kaskazini Pemba	211,732	294,267	4.1	513
Kusini Pemba	195,116	272,348	4.0	820
Total for Zanzibar	1,303,569	1,671,598	2.8	680

Source: National Bureau of Statistics; Population and Housing Censuses 2002 and 2012
Source: National population and household census, URT 2013, in DHI and Samaki, 2014b.

3.8.4 Physical environment

Climate

Zanzibar is an archipelago formed by two main islands, Unguja (also called Zanzibar) and Pemba, plus several smaller islands. It is a semi-autonomous region of Tanzania. The climate of Zanzibar is equatorial and humid.

Rainfall

Zanzibar has two rainy seasons: one more intense, known as the "long rains" season, from March to May, with the peak in April, and the other less intense, known as the "short rains" season, between mid-October and December. Total annual **rainfall** is about 1,600 millimetres in Unguja and 1,900 mm in Pemba. April and May are the wettest months when downpours can be really strong and cause floods. However, some short thunderstorms can occur throughout the year. Rainfall is reliable and well-distributed in comparison with most of East Africa. Table 3.7 shows the average precipitation in Zanzibar.

Table 3.7: Monthly rainfall total of Zanzibar

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Rainfall mm)	58	66	150	320	290	53	28	30	41	66	170	140	1410
Days	10	7	13	18	15	7	8	8	8	9	11	13	127

Temperature

Temperatures are high throughout the year. The warmest period is from October to March, during which the maximum temperature hovers around 31/33 ^{0}C and the humidity is high, although the breeze tempers a little the heat. In the worst moments, the temperature can reach 36/38 °C. The period from May to August, when the southeast trade winds predominate, is cooler, with highs around 29 °C. Table 3.8 shows the monthly average temperature in Zanzibar.

Table 3.8: Average temperature in Zanzibar

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Min (°C)	24	24	25	25	24	23	22	22	22	23	24	24	24

Max (°C)	32	33	33	30	29	28	28	28	29	30	32	31	31

Topography and Terrain

Unguja island is 85 kilometres long (north-south) and 30 kilometres wide (east-west) at its widest, with an overall area of about 1,666 square kilometres. It is characterized by small ridges along its central north-south axis, formed as the result of sediment deposition by the south-north flowing deltaic streams (before break up), producing several corridors, predominantly the north-south ridges. These corridors still form conspicuous land patterns as evidenced at some locations in Unguja at Kiwani Bay, Bumbwi and Bambi. The present remnants of these corridors are found as broken corridors due to block faulting and differential uplift, which resulted in the formation of Unguja and Pemba Islands. The highest ridge in Unguja is located at Masingini, about 120m above the sea level. The topographic survey should be done to determine changes in elevation and planning land use at a project-specific site.

Geology and Soils

Zanzibar is underlain mainly with Lower Miocene rocks consisting of deltaic sandstones associated with marls and minor reef limestones. A veneer of different soils lies on top of the solid rocks. These soils have developed initially through the weathering and erosion of the rocks following the emergence of the land due to falling seas. The characteristic of these soils partly dictates whether the ground will be easily replenished or not. The soils of Zanzibar were initially grouped into three namely loamy soils, sandy soils and clayey soils. The sandy group is derived from non-calcareous sediments; mostly the Miocene sands, marls, and clays, hence have different textures and drainage characteristics that cannot be lumped together. The geotechnical study must be done to determine the suitability of the soils for the number of the storey to be constructed.

Hydrology

Zanzibar has small/seasonal streams flowing from highlands/ridges to the sea or ending in the coral areas. Most of the steams occur within the sandy soils which have variable infiltration rates and runoff potential. There are spatial and temporal variations in the distribution of recharge because of the variations in soil, land use and rainfall. Temporally, the highest recharge occurs from April to June and November to January. The recharge is also contributed by sinking streams. The spatial distribution of recharge shows that most land cover over clayey soils with slowly permeable layers has marked low recharge compared to other land covers. The soils of significant recharge are the loamy soil products of the coralline limestone. Northern and Southern areas have heavy high water-table, unlike the areas to the east and west are situated on the higher and dry coral ground (Finnie, 2003). The design of buildings should ensure the presence of stormwater drainage systems.

3.8.5 Gender Based Violence and Discrimination

Gender-based violence

According to the social-cultural relationship in Unguja, this project will be associated with the risk of gender-based violence. There is deeply rooted gender inequality, and it continues to be one of the most notable human rights violations within all Unguja societies. Gender-based violence is violence directed against a person because of their gender. Both women and men experience gender-based violence but the majority of violence is inflicted on women and girls, by men. Many

forms of violence against women in Unguja are rooted in power inequalities between women and men. There are also two other categories of violence: domestic violence and (sexual) harassment. Violence is a daily reality for significant numbers of women and children in Zanzibar. 14 per cent of women in Zanzibar experience physical violence and almost one in ten women experience sexual violence. One in ten males and one in twenty females report experiencing sexual violence in childhood. More than two out of three children experience physical violence before the age of eighteen years. About 109 cases of gender-based violence were registered by the regional courts of the islands of Zanzibar and Pemba from January 2015 to December 2016, with the northern part of the region being affected in particular. These figures were published by Zainabu Omar Mohammad, the regional government's minister for community, youth, women and children affairs.

Gender discrimination

In the education sector, the population aged 15 years and more, 88.3 per cent of men and 79.4 per cent of women were literate. The gap in literacy is decreasing over time between men and women however the proportion of illiterate remains higher among women. Literacy is generally higher in urban compared to rural areas. On the working-age population, the Integrated Labor Force Survey suggests that unemployment was high among women as compared to men; among unemployed persons, 78% were women. The rate of unemployment rate for women was not only high but increasing over time both in rural and urban areas. Formal Sector Employment and Earning Survey indicated that more males (56%) were employed in formal institutions such as Government, Public and Registered Private institutions (OCGS, 2016). The reported cases of violence against children increased by more than 50%. Girls were more victims than boys-one in every nine reported violence cases was against girls (OCGS) 2018. From these statistics, gender inequality in Zanzibar was still a challenge. Gender inequality is a result of gender discrimination/unequal treatment of men and women in various social economic activities. This project will ensure that there is the involvement of women in project activities.

3.8.6 Zanzibar Infrastructure and Services

The United Nations has ranked Zanzibar as one of the most rapidly urbanizing countries in the region, with the proportion of people living in urban areas increasing from less than 10% in 1975 to 40% in 2012, (UN-HABITAT 2009). While a worrisome trend from a population-crowding standpoint, a more significant proportion of Zanzibar citizens have access to infrastructure, including power, water, sanitation, education, health, and ICT services, because the population is largely grouped in urban areas.

Energy: All main towns on both islands are connected to the national grid, although many rural areas still have no electricity, especially in Pemba, and overall reliability is not strong. Zanzibar's rural communities are about 60% of the total Zanzibar population living in rural areas. Most of these households do not have access to electricity, equivalent to 42% of the total population. Firewood is the primary energy source for cooking in Zanzibar, with 75% of households using it.

Roads: Zanzibar has 120 km of paved roads which reach most parts of both islands, including major urban areas.

Water supply: Around two-thirds of Zanzibar households (65%) have access to clean water, including piped water or well water. In addition, some harvesting of rainwater is practiced.

Health Services: According to the 2019 Household Budget Survey, more than 75% of households in rural areas are within 1km of a health center.

Education: The literacy rate in Zanzibar was 84.2% among the adult population. However, the illiteracy rates may be rising among children and adults, prompting the Department of Adult Education to conduct adult education classes targeting women income-generating groups, fishermen, and farmers.

3.8.7 The Zanzibar Economy

Zanzibar is a multi-sectorial economy that mainly depends on agriculture and fishing. The diversification of the economic sector determined by available natural resources primarily relied on coastal resources for income generation.

Livelihood activities**:** Most households engaged primarily in natural resource-based activities such as crop farming, fishing, seaweed farming, and animal husbandry. Crop farming is a source of food for most households, assisted by off-farm activities, particularly fishing, to ensure that food is consistently available and supply is stable. (Makame et.al, 2018).

Importance of Fisheries to Zanzibar: Fisheries are the most diverged livelihood activity in different villages of Zanzibar. A 39 % majority of households engaged in fishing as a livelihood activity (Jayaweera, 2010). It carries the highest significant number of households performing fishing. It has a positive coefficient of financial capital, human capital, and social and natural capital on the household income of fishers (Hamad, A. and Islam, N. 2022).

Fishing is a key sector and is mainly practiced by household heads and provides both food and cash income. However, these resources are increasingly being depleted through growing population pressure and greater numbers of artisanal fishers and fishing boats. This has resulted in a general decline in fish catch and revenue per fisherman (Makame et.al, 2018).

Seaweed Farming**:** This is the second livelihood activity a household engages in. It plays a vital role in the coastal communities in Zanzibar. Seaweed farming has emerged as an alternative source of income on both islands. (Makame et.al, 2018). It employed around 24,000 farmers, where 80% were women. It contributes to about 7.6% of Zanzibar's GDP. Despite its important role play has declined substantially over the last six years due to increasing temperatures and longer hot seasons, thus highly becoming season-dependent (FAO, 2018).

Mariculture**:** Seaweed was the famous aquaculture commercial activity in Zanzibar. Nowadays, finfish, crab, pearl, sea cucumber, sponge, and coral are under the development or trial stage. However, Mariculture farmers cannot improve their farming techniques and infrastructure due to severe economic limitations resulting in small and irregular production (Charisiaou, et.al; 2022). FAO funded the mariculture sector in Zanzibar for technical support under the Korea International Cooperation Agencies in 2012, owing to the growing demand for marine products. However, large

community groups failed to develop profitable operations and there was no farm development of any mariculture species (FAO. 2020).

3.8.8 Other Non-fisheries Livelihoods Activities in Zanzibar

Tourism*:* Zanzibar is a unique and suitable destination for heritage, biodiversity, beaches, and other forms of tourism. The sector contributes about 27% of Zanzibar's growing fast economy. In 2018 the number of tourists increased by 15% to reach 433,474 from 376,242 visitors in 2016. 99.8% of all Zanzibar tourists are on holiday (OCG, 2022). Although tourism plays a significant role in the Zanzibar economy, it has been affected by the emergency of the COVID-19 pandemic, which led to the dropping of the Zanzibar economy. It has been affected by the emergency of the COVID-19 pandemic, which led to a drop in the number of tourists in 2021. Currently, the number of tourists has declined to 145,263 visitors due to the Russia – Ukraine war. However, the completion of the Karume International Airport Terminal II and continuing investment of private sectors in the small isles of Zanzibar will continue to stimulate tourism activities in the economy.

Agriculture**:** Agriculture is the main economic activity for most people in Zanzibar. About 60% of the active labor force derives their livelihood from agriculture-related activities and the majority of farmers are women who mostly use traditional farming methods (Shoka, 2015). In Zanzibar, subsistence agriculture has been and is still the most crucial sector of the economy. Apart from its contribution of about 30.8% of the GDP (OCGS 2008), it also employs 70% (42% directly) of the population found in rural areas (ZGS, 2007). However, the average growth rate of GDP growth for the agricultural sector is smaller (2.4%) than the population growth rate of (3.1%). These numbers give a clear picture of the future development, which calls for investment in processing industries of different kinds of fruits and vegetables, necessary for expanding the agriculture development landscape in Zanzibar and the economy.

Mangroves and Coastal forests**:** Mangrove forests occupy 20,000ha along the coastline of Zanzibar, which accounts for 8.6% of total Zanzibar land cover (232,800ha), out of which 14,000ha found on Pemba and only 6,000ha located on Unguja (Mchenga and Ali, 2015). There is overexploitation of mangroves, primarily forests, by nearby communities mostly for clearing areas for salt production, fuel wood supply, charcoal, crab cage-making construction, and urban development (Nchimbi and Lyimo, 2019). Mangroves are also associated with beekeeping which is among the alternative livelihoods for many local communities. However, it is threatened by the over-harvesting of mangroves for charcoal and timber.

Salt production: Salt has been produced locally along with coastal areas of Zanzibar (mostly in Pemba). It is one of the income-generating activities for both men and women. However, the growth efforts have been hampered by a lack of modern equipment and a reliable market. In overcoming the challenges, the farmers have been asking the Government to establish a sea salt processing plant to add value to their locally produced salt and meet the regional and global market demands. The anchovie processing on Unguja Island provides a considerable demand and a promising salt market. The most denoted challenges of salt production in Zanzibar are the clearing of mangroves and salt concentration, causing a reduction of plant species in salt production areas.

Sand and stone quarrying:s Sand and stone quarrying created many employments for the youth of Zanzibar. There is an increasing demand for sand and stones due to the rapid urbanization of the island. However, as one of the small island states, Zanzibar suffers from a shortage of sand due to the thin cover of topsoil. The most affected area in Zanzibar includes Donge Chechele, Pangatupu, and Kiomba mvua. These areas need a land reclamation plan and tree planting to restore the degraded areas

CHAPTER FOUR

POLICY, LEGAL AND INSTITUTIONAL REQUIREMENTS

4.1 Introduction

All sub-projects implemented under TASFAM project shall comply with relevant national environmental and social management requirements as well as the World Bank ESS applicable to the project for both Tanzania Mainland and Zanzibar. The legislations and institutions relevant to environmental, social and resettlement management are presented in order for the users of the ESMF to know the minimal legislative requirements and key actors involved in approving, enforcing, implementing or coordinating the requirements.

This being the fisheries project relevant policies and laws on fisheries will also apply parallel with the environmental, social, resettlement and health and safety legislation. The sections are divided for the Tanzania Mainland and the islands of Zanzibar.

4.2 Policy, legal and institutional Framework in the Tanzania Mainland

Tanzanian Environmental Legislation and Policies include the National Environment Policy (2021), the Environment Management Act No 20 (Cap. 191) of 2004 (EMA), and the Environmental Impact Assessment and Audit Regulation (2005) regulations, which govern environmental assessments of projects. Other regulations and policies that may have a bearing on activities in coastal areas include the Forest Act (2002), National Tourism Policy (1999), Land Act (1999), and Village Land Act (1999). Fisheries management in Mainland Tanzania is governed by the National Fisheries Policy of 2015, the Fisheries Act of 2003 (No. 22 of 2003), and related regulations, including those of 2009 as amended in 2020. They govern, manage, and enforce fishing and aquaculture development and conservation of fish and fish habitats. Other vital fisheries legislation includes the Marine Parks and Reserves Act of 1994 and the Tanzanian Fisheries Research Institute Act No.11 of 2016.

4.2.1 Policy framework in Tanzania Mainland

National Environmental Policy of 2021

The National Environmental Policy (NEP) provides the framework for incorporating and mainstreaming environmental and social considerations into the decision-making processes in Tanzania. The original NEP was issued in 1997 and led to notable achievements in environmental management, including the enactment of the main implementing legislation in 2004, the Environmental Management Act (EMA). However, the Government has recognized that despite the positive results of implementing the 1997 policy, there are still significant limitations that constrain the implementation of the policy. These include: inadequate coordination among sectors in managing environment; low public awareness and knowledge on environmental management; inadequate land use planning at various administrative levels; inadequate enforcement and compliance of legislation related to environmental management; inadequate alternative sources of energy and dependence on charcoal and firewood as the main source of energy; increased encroachment of water sources; limited capacity in terms of human and financial resources,

infrastructure, technology, and tools; and inadequate environmental research, data and information on environmental issues. Furthermore, new environmental issues that were not explicitly addressed in the 1997 policy have emerged. These are: climate change; invasive species; electrical and electronic equipment wastes (e-wastes); genetically modified organisms; management of oil and gas; and sound management of chemicals. For these reasons, NEP has been revised. This policy will be a cornerstone for implementing E&S mitigation measures for the proposed pogram activities under TASFAM.

National Gender Policy (2002)

The key objective of this policy is to provide guidelines that will ensure that gender sensitive plans and strategies are developed in all sectors and institutions. While the policy aims at establishing strategies to eradicate poverty, it is relevant to the project as 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 society. It also requires that women and men are given equal employment opportunities in the project, whenever possible.

The National Water Policy (URT, 2002)

The overall objective of this policy is to develop a comprehensive framework for the sustainable management of the water resources in the country. This framework promotes the optimal, sustainable and equitable development and use of water resources for the benefit of all Tanzanians, based on a clear set of guiding principles. The policy provides for beneficiaries' participation in water supply schemes and addresses cross-sectoral interests in water, watershed management and integrated and participatory approaches for water resources planning, development and management. The policy provides a shift of Government roles from service provider to that of coordination, policy and guidelines formulation, and regulation. Public consultations conducted for the cause of the ESIA for this project brought stakeholder participation in line with the policy objectives. Institutions under TASFAM project shall observe judicious use of water by putting in place water conservation measures. As well as to ensure that pollution of water sources is avoided or minimized during construction and operations.

National Fisheries Policy of 2015

Policy and strategy statement concerning the conservation, management, and development of fish resources. It provides and advocates for public awareness on environmentally friendly fisheries and aquaculture practices, climate change issues, and sustainable environmental conservation.

National Tourism Policy of 1999

The policy describes overall environmental, social, Economic and cultural objectives, as well as specific policy strategies, concerning tourism development in Mainland Tanzania, including coastal tourism. It defines policy objectives for eco-tourism and cultural tourism, including general principles for development concerning development planning, environmental protection, impact assessment, and community participation.

4.2.2 Legal and Regulatory Framework in Tanzania Mainland

Environmental Management Act (EMA), 2004

The Environmental Management Act No. 20 of 2004 is the principal legislation governing environmental management in the country. The Act was established to address the environmental management priorities set in the NEP (1997). The Act provides a legal framework for managing environment in the country. Furthermore, the act made possible provision of environmental management tools namely: Environmental Management (Environmental Impact Assessment and Audit) Regulations 2005 (Amendment), 2018; Environmental Management (Hazardous Waste Control and Management) Regulations (2009); and Environmental Management (Soil Quality Standards) Regulations (2007).

The EMA requires an Environmental and Social Impact Assessment (ESIA) to be carried out for the development of any project which is likely to have a significant impact on the environment. The ESIA provides the institution responsible for environment sufficient information to justify, on environmental, social and community development grounds, the acceptance, modification or rejection of the project and its implementation. Moreover, the ESIA is targeted to provide the basis for guiding subsequent actions of the project life cycle which -through management and monitoring plan - will ensure that the proposed project is carried out considering the environmental, socio-economic issues, and resettlement initiatives identified along with requirements for compliance throughout the project's life cycle.

The Act makes it mandatory for any person to comply with the environmental and social impact assessment requirement of the Project which includes environmental screening, scoping, preparation of the Environmental Impact Statement and its review before the decision on environmental clearance is made. As per the Act, there is ESIA screening, scoping and the review process, while the preparation of the EIS is carried out by the registered expert forwarded by the project proponent and only after having been approved by the National Environmental Management Council (NEMC). The TASFAM project has to conform to all requirements of environmental and social clearance which include ESIA, Auditing, Monitoring, and implementation of the environmental and social management plans for the project.

The Act is relevant to the project because it is expected to have some negative impacts to the environment during its implementation. The act requires the ESIA report to be submitted to NEMC for review and subsequently issuance of Environmental Impact Assessment Certificate.

Fisheries Act No. 22 (2003), and Regulations No. 133 (10) (2009)

Provides for protection, conservation, and regulation and control of fish, fish products, and aquatic flora and its products. Provides for government functions, marine management approaches, and Institutional arrangements that will support TASFAM activities. Compliance with regulatory standards for wastewater discharge, noise, and air emissions is required in fish habitat conservation and processing facilities during the construction and O&M phases. Focuses on management and enforcement of fishing, aquaculture development, and conservation of fish and fish habitats.

The Marine Parks and Reserves Act of 1994

The act provides for the establishment, management, and monitoring of marine park sand reserves. The consultative process was established for generating and modifying general management plans for each MPA. It also provides individual parks with powers to regulate activities within their spatial boundaries. Village Liaison Committees report to the Village Councils and serve as the main interface between a park and the local Communities. The Act also establishes a Marine Parks and Reserve Unit within the Division of Fisheries which, among others, is mandated to implement and enforce the Act and subsidiary legislation. All areas described in the Schedule are declared to be Marine Reserves. Regulations 3-9 specify prohibited or restricted activities in these areas.

The Territorial Sea and Exclusive Economic Zone Act, 1989

An Act to make provision for the implementation of the Law of the Sea Convention, to establish the territorial sea and to establish an exclusive economic zone, of the United Republic adjacent to the territorial sea, and in the exercise of the sovereign rights of the United Republic to make provisions for the exploration, exploitation and conservation and management, of the resources of the sea and for matters connected with those purposes.

The Deep-Sea Fishing Authority Act, 1998, and Regulations 2009

This Act establishes a Deep-Sea Fishing Authority to regulate deep sea fishing in the Exclusive Economic Zone and for related matters. This Authority has the power to regulate and control fishing in the Exclusive Economic Zone of mainland Tanzania and Tanzania Zanzibar.

The Surface and Marine Transport Regulatory Authority Act No. 9 of 2001

This Act establishes the Surface and Marine Transport Regulatory Authority, the Board of the Authority and a Council for the protection of interests of consumers. Furthermore, the Act defines the powers and functions of the public bodies established and provides for other matters relating to supply of services in the sector of rail transport, ports and maritime transport, public passenger road transport and commercial road transport.

National Biodiversity Strategy and Action Plan (NBSAP) 2015-2020

The NBSAP 2015-2020 highlights the value and contribution of biodiversity to human well-being; the causes and consequences of biodiversity loss; legal and institutional framework; lessons learned; national biodiversity targets; strategies and actions needed to mainstream biodiversity into development, poverty reduction and natural resource management plans. The NBSAP 2015-2020 addresses among other things, several emerging issues such as climate change and variability, invasive species, GMOs, biofuel development, mining, oil and gas exploration and the continuous anthropogenic impacts.

The Environmental Management (Environmental Impact Assessment and Audit) Regulations 2005 (Amendment), 2018

The Environmental Management (Environmental Impact Assessment and Audit) Amendment Regulations, 2018 are read as one with the ESIA and Audit regulations, 2005 are made under Environmental Management Act No. 20 of 2004. The regulations provide the basis for undertaking Environmental Impact Assessment (ESIA) and Environmental Audits for various development projects with significant environmental impacts in the country. This section gives a brief description of some provisions in the regulations that are relevant to this framework.

The First Schedule gives list of projects requiring and not requiring an ESIA and it categorizes projects into four categories:

i) Type A – Category for mandatory projects;
ii) Type B1 – Category for borderline projects; and
iii) Type B2 – Category for Non-Mandatory projects.

According to the schedule, Type B2 Projects are small scale activities and shall require registration but shall not require ESIA. Further, the project shall not require screening and scoping, rather a Project Brief shall be examined and issued with the Environmental Impacts Assessment Certificate. School projects with less than 360 students fall under this category.

Regulation 6(1), 8(1) and 10(1) provide procedures for application for ESIA certificate for B2, B1 and A categories respectively. The Regulations also, specifies issues to be covered by the proponent in the Project Brief and Scoping Report. Section 6 (2) requires a Project Brief to be prepared by an environmental expert registered as such under the environmental (Registration of Environmental Experts) Registrations.

Part IV Regulation 13(1) requires the Project Proponent to conduct ESIA in accordance with the general environmental impact assessment guidelines and in accordance with the steps outlined in the Fourth Schedule of the regulations. Regulations 16 specifies ESIA study should cover environmental, social, cultural, economic and legal issues.

Part X Regulation 49 and 50 outlines the objectives of carrying out annual self-auditing and control audit to check and verify the adequacy the environmental management plan in mitigating the negative impacts of the project.

Part XII Regulation 60(1) stipulated that "notwithstanding any license, permit or approval granted under any written law, any person who commences, proceeds with, executes or conducts any project or undertaking without approval granted under these Regulations commits an offense and on conviction shall be liable to the punishment prescribed under the Act.

Employment and Labour Relation Act, 2004

The Act prohibits forced labour and discrimination of any kind in the workplace. It provides employment standards such as contracts with employees, hours of work, remuneration, leave, unfair termination of employment and other incidents of termination. The Act makes provision for core labour rights, to establish basic employment standards, framework for collective bargaining, prevention and settlement of disputes and other related matters. The Act strictly prohibit child labour, it provides that no person shall employ a child under the age of fourteen years, it further provides that a child under eighteen years of age shall not be employed in any worksite including construction where, that being a case. The Act prohibits discrimination, being direct or indirect in any employment policy or practice on any of the following grounds; colour, nationality, tribe or place of origin, race, national extraction, social origin, political opinion nor religion, sex, gender, pregnancy, marital status, or family responsibility, disability, HIV/AIDS, age or situation of life. It is an offence for this provision to be contravened by any employer.

TASFAM project will follow this Act requirement in matters related to labour and employment, during its implementation.

Occupational Health and Safety Act (2003)

The law requires employers to provide a good working environment to workers in order to protect their health. 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 proper working gear as appropriate. This shall be adhered to during construction and operational phase of TASFAM project.

The Act has relevant to the project because it will involve construction of buildings. Therefore, project is responsible to provide to workers /constructor/ students with a safe environment during project implementation. In addition, the project construction sites are required to implement safety measures, regulations and precautions and ensure health and welfare of workers and proper handling of hazardous materials and chemicals.

Environmental Impact Assessment and Audit (Amendment) Regulations (2018)

The Environmental Management (Environmental Impact Assessment and Audit) Amendment Regulations, 2018 are read as one with the ESIA and Audit regulations, 2005 are made under Environmental Management Act No. 20 of 2004. The regulations provide the basis for undertaking Environmental Impact Assessment (ESIA) and Environmental Audits for various development projects with significant environmental impacts in the country. These regulations set procedures for conducting ESIA and environmental audit in the country. The regulations also require registration of ESIA experts.

In accordance with the Tanzania Environment Impact Assessment and Audit Regulation of 2005 and revised in 2018, project activities to be funded will be categorized according to the extent of environmental and social impacts of the sub-projects. That is whether impacts are low impact, site specific and that can be prevented and mitigated if all responsible parties apply the prevention and mitigation measures.

The First Schedule gives list of projects requiring and not requiring ESIA and it categorizes projects into four categories:

- Type A – Category for mandatory project
- Type B1 – Category for borderline project
- Type B2 – Category for Non-Mandatory and
- Special Category – project where potential risks are uncertain and requires detailed specialized study prior to ESIA

According to the schedule, Type B2 Projects are small scale activities and not enterprises and shall require registration but shall not require ESIA. Further the project shall not require screening and scoping, rather the project brief shall be examined and issued with the Environmental Impacts Assessment Certificate.

Regulation 6(1), 8(1) and 10(1) provide procedures for application for ESIA certificate for B2, B1 and A categories respectively. The Regulations also, specifies issues to be covered by the

proponent in the project brief and scoping reports. Section 6 (2) requires a project brief to be prepared by an environmental expert registered as such under the environmental (Registration of Environmental Experts) Registrations.

Part IV Regulation 13(1) requires the Project Proponent to conduct ESIA in accordance with the general environmental impact assessment guidelines and in accordance with the steps outlined in the Fourth Schedule of the regulations. Regulations 16 specifies ESIA study should cover environmental, social, cultural, economic and legal issues.

Part X Regulation 49 and 50 outlines the objectives of carrying out annual self-auditing and control audit to check and verify the adequacy the environmental management plan in mitigating the negative impacts of the project.

Part XII Regulation 60(1) stipulated that "notwithstanding any license, permit or approval granted under any written law, any person who commences, proceeds with, executes or conducts any project or undertaking without approval granted under these Regulations commits an offense and on conviction shall be liable to the punishment prescribed under the Act.

The regulation is relevance to the TASFAM project as sub- projects may falls under Type A, B1 or B2 categories and therefore project registration or ESIA study is mandatory and should be carried out in accordance with the guidelines stipulated in the Fourth Schedule to the Regulations.

Environmental Management (Air Quality Standards) Regulations, 2007

The objective of this standard is to set baseline parameters for air quality and emissions within acceptable standards. It enforces minimum air quality standards prescribed by NEMC to industrialists for the purpose of adopting environmentally friendly technologies to ensure protection of human health and environment pollution sources.

The standards prohibit emissions above the prescribed standards unless the emitter obtains permission to be exempted or obtain air pollutant emission permit. Fugitive dust emissions represent the most likely issue requiring avoidance or mitigation during the mobilisation and construction phase. The limit for dust emissions in terms of the Second Schedule to the Regulations is 250mg/Nm^3 (mean over a 24hour period). The TASFAM project will have to abide to Environmental Management (Air Quality Standards) Regulations 2007, and the current assessment is within the required standards. During project implementation the regulations will be complied with to ensure dust emissions from the project are within the acceptable limits.

Environmental Management (Soil Quality Standards) Regulations, 2007

The objective of this standard was to set limits for soil contaminants in agriculture and habitat. It enforces minimum soil quality standards prescribed by NEMC to maintain, restore and enhance the sustainable productivity of the soil.

The standards prohibit discharge onto soil any material which will interfere with its natural quality or be polluted unless the person obtains permission to be exempted or obtain soil pollutant

discharge permit. Contaminants of heavy metals in habitat and agricultural soils shall comply with parameters and upper limits specified in the standards.

Elevated levels of heavy metals may occur naturally within the soils surrounding. However, any proposed expansion projects will be designed to avoid the release of contaminants, with elevated levels of heavy metals, to the environment. TASFAM project will have to abide to this regulation by discouraging haphazard disposal of wastes on environment.

Environmental Management (Water Quality Standards) Regulations, 2007

The objective of this standard is to enforce minimum water quality standards prescribed by the NEMC. It ensures all discharges of pollutants take account the ability of the receiving waters to accommodate contaminants without detriment to the uses specified for the waters concerned, so as to protect human health and conservation of the environment.

The standards prohibit discharges above the prescribed standards unless the emitter obtains permission to be exempted or obtain water pollutant emission permit. The regulation recognizes the requirement to obtain a water user permit as detailed Water Resources Management Act, 2009 and attaches additional conditions to securing the permit which requires an ESIA statement of the permit application to be submitted to NEMC.

These regulations also include effluent standards (First Schedule – Permissible Limits for Municipal and Industrial Effluents), drinking water standards, specific effluent standards for particular industries and distances from pollution sources to water sources of which TASFAM project must adhere to specifically when managing discharges from the project area.

The Environmental Management (Standards for Control of Noise and Vibration Pollution) Regulations, 2015

The power of formulation of standards for the control of noise and vibration pollution is delegated to the national environmental management standard committee. Among the responsibilities of the committee is to set minimum standards for emissions of noise and vibrations pollution into the environment. The regulation prohibits a person to made any loud, unreasonable, unnecessary on unusual noise that annoys, disturbs, injures or endangers the comfort, repose, health or safety of others and of the environment describes the permissible noise levels from different facilities. According to Regulation 8 Part V, the owner of the machinery or the occupier of the facility or premises has a duty to control noise. Second schedule of the regulation stipulate the tolerance limits for environmental vibration.

National Integrated Coastal Environment Management Strategy (2003)

Describes the principles and attributes of Integrated coastal management, the rationale for a national strategy, and statements of overall vision, mission, goal, and strategies. Defines strategies and implementing mechanisms, particularly concerning planning and integrated management, conservation, research and monitoring, stakeholder participation, and capacity-building for management.

4.2.3 Institutional Framework in Tanzania Mainland

Tanzania is among countries in East Africa with an Act for environmental management legislation. The legislation, Environmental Management Act (EMA) (2004), provides a legal and institution framework that guides the implementation of the environmental management activities. The framework provides a pre-requisite for effective implementation of Environment Policy at all levels (National, Region, Council, and Village/Mtaa/Hamlet). According to the Environmental Management Act (EMA) (2004), there is the National Environmental Management Council (NEMC) at the national level, the Environmental Management Committee established at the Hamlet/Village/Mtaa, Ward, Council and at National level with the responsibility for the proper management of the environment in respect of the area in which they are established. The functions and responsibility of these committees are well explained in the Act. Moreover, section 36 (1), (2) of EMA stipulates that each City, Municipal, District and Town councils shall designate or appoint an Environmental Management Officer (EMO) who shall perform among the following functions:

i) Advice the environmental management committee to which he/she belongs on all matters related to the environment.

ii) Promote environmental awareness in the area he/she belongs on the protection of the environment and the conservation of natural resources.

iii) Monitor the preparation, review and approval of Environmental Impact Assessment for local investments.

The Institutional set up as presented in the **Figure 4.1** explains the layers of decision making from national to Village/Mtaa/Hamlet levels

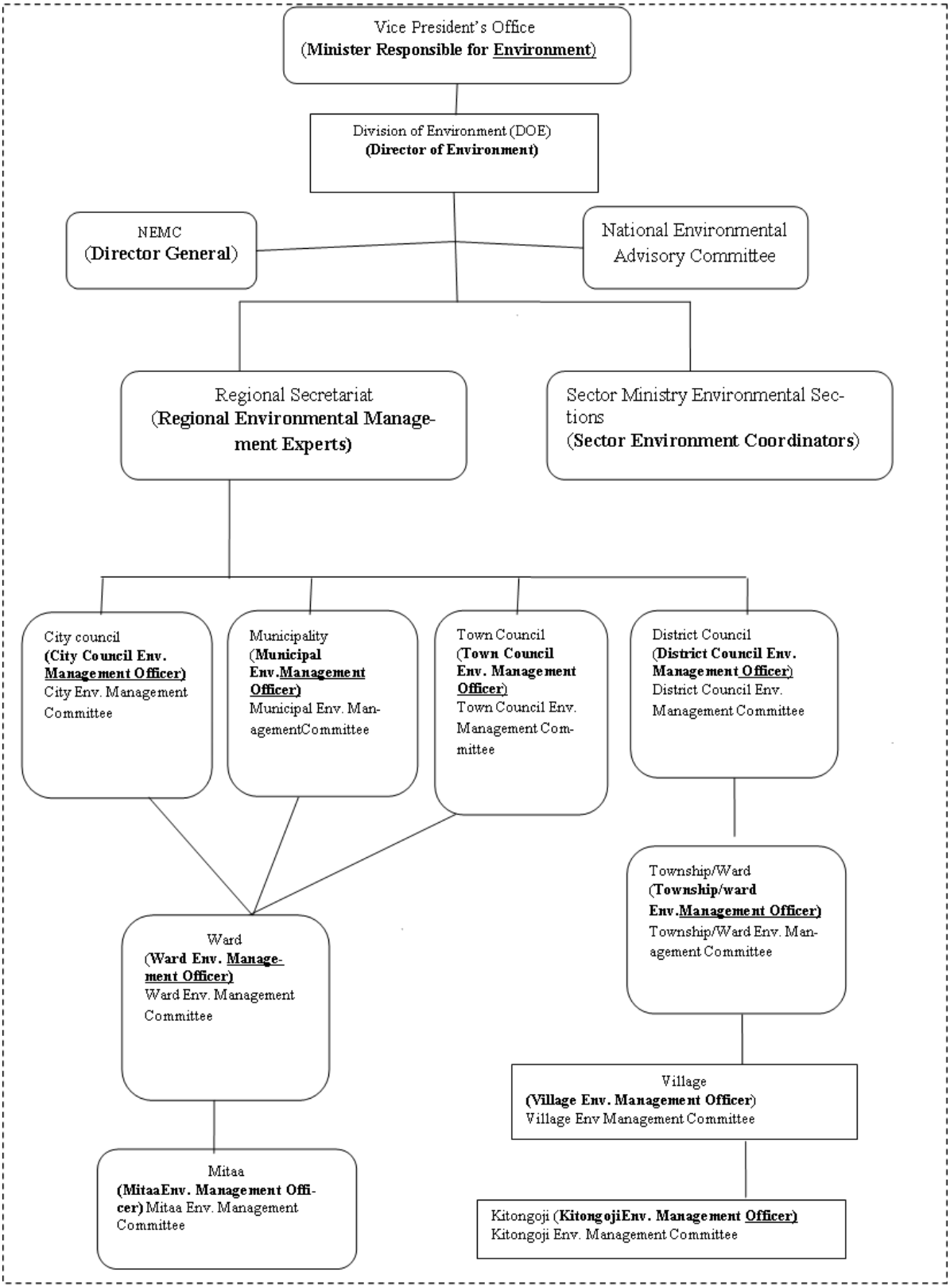


Figure 0.1 Institutional Set Up for Environmental Management in Tanzania Mainland

4.3 Policy, Legal and Institutional framework for Zanzibar

In Zanzibar, Environmental legislation and policy instruments in Zanzibar include the Environmental Management for Sustainable Development Act (1996) and Regulations, amended in 2015. Furthermore, the National Environmental Policy for Zanzibar (1992) with its amendments in 2013, the Establishment of Zanzibar Nature Conservation Areas Management Unit Act (1999), as well as the Forest Resource Management and Conservation Act (1996), and the National Forest Policy for Zanzibar (1999). Other legislation and policy instruments that can affect activities in coastal areas include the Zanzibar Tourism Policy (2004), the Land Tenure Act (1992), and the Land Tenure (Amendment) Act (2003).

The primary instrument for Fisheries management is the Fisheries Act no 7 of 2010. However, the review of the act is underway to suit the new structural setting of the Ministry of Blue Economy and Fisheries. The review also aims at accommodating other acts relating to the management of the MCAs, including the Menai Bay Conservation Area (Establishment) Order of 1997, the Mnemba Island Marine Conservation Area Order of 2002, the Pemba Channel Conservation Area (PECCA) Order of 2005. In addition, two orders were gazetted in 2015 to establish the Tumbatu Marine Conservation Area (TUMCA) and Changuu–Bawe Marine Conservation Area (CHABAMCA). Consequently, the fisheries regulations will also be reviewed to align with the reviewed Fisheries Act. Furthermore, the Zanzibar Blue Economy of 2020 is in place to emphasize a sustainable ocean-based economy (Blue Economy).

4.3.1 Policy Framework in Zanzibar

Zanzibar Environmental Policy, 2013

The overall objective of the Zanzibar Environmental Policy (ZEP, 2013) is to pave the way for the protection, conservation, restoration and management of Zanzibar's environmental resources, in order not to impair the capacity to sustain development and maintain the rich environmental endowment for the present and future generations. The Policy focuses on the following Objectives:

i. Ensuring the maintenance of basic ecological processes upon which all productivity and regeneration, on land and in the sea, depend;
ii. Promoting the sustainable and rational use of renewable and non-renewable natural resources;
iii. Preserving the terrestrial and marine biological diversity, cultural richness and natural beauty of Zanzibar's lands.
iv. Ensuring that the quality of life of the people of Zanzibar, present and future, is not harmed by destruction, degradation or pollution of their environment and natural resources utilization.
v. Strengthening both institutional mechanisms for protecting the environment and the capabilities of the institution involved in environmental management.
vi. Incorporating and binding to the international obligations in Multilateral Environmental Agreements to which the United Republic of Tanzania (URT) is a Party.

The policy takes into account the evolving international scenario in environmental Conventions and Protocols. Zanzibar is a part of the United Republic of Tanzania, but its environmental problems are reminiscent of those faced by other islands and Island States. Hence, the urgency for

Zanzibar to engage in regional and international stakeholders and networks, and participate in and promote relevant Conventions, Protocols and Agreements.

Zanzibar Occupational Safety and Health Policy, 2017

The occupational safety and health policy for Zanzibar is set to strengthen legal and institutional arrangements for effective coordination and management of occupational safety and health; establish appropriate funding mechanisms for occupational safety and health activities; increase access and quality to occupational health services to cover the country's workforce, build the capacity of workers on occupational safety and health issues in both public and private sectors; promote a culture of prevention among employers, workers and the community at large; strengthen OSH data management and information system for evidence-based planning; and strengthen coordination, monitoring and evaluation mechanism. The TASFAM project will be designed to complement the country's efforts to manage occupational safety and health risks as stipulated in the policy. Tanzania Scaling-Up Sustainable Marine Fisheries and Aquaculture Management (TASFAM) Project will provide directives on how to prevent or reduce incidences of work-related injury and disease to workers and other stakeholders.

Zanzibar Tourism Policy of 2004

Describes the vision and mission of tourism development in Zanzibar, which is highly dependent on the use of the coastal zone. Supports Tourism Zoning Plan to guide development further. Defines policy strategies concerning tourism the environment, and culture and traditions. Describes general approaches for achieving local benefits and community participation.

The Blue Economy policy of 2020

Place great concern on high-quality and sustainable development of Zanzibar including the particular focus on sustainable development of oceanic resources. Encouraging the artisanal fishers toward offshore fishing. Provides for effective coordination and management of the ocean for significant contribution to economic prosperity. Emphasizes on effective controlling of the influx of international fisheries companies to balance local artisanal fisheries.

National Water Policy of 2004

The national water policy aims at achieving resource efficiency and sustainability, as well as facilitating sustainable use of water in urban and rural areas of Zanzibar. Its specific objectives are to guide to enable Zanzibar to achieve its aim of providing access to clean and safe water for all people and other water users to fulfil the needs of expanding social and economic activities while considering nature conservation. The policy is recognizing that groundwater is the primary source of water in Unguja and Pemba. A fresh groundwater lens floats above the deeper saline water and sustainable development of groundwater resources must maintain the balance of freshwater flows to prevent this saline water from rising and coming into the freshwater lens or flowing inland from the sea. On the other hand, there are no large and adequate reserves, which can be mined at unlimited discharges. Supplies have to depend on recharge from annual rains. The survival of this precious ground reserve will therefore depend upon the balancing of the rate of extraction for human use and the rainfall recharge. The implementation of The Zanzibar Improving Quality of Basic Education project will have to adhere to this policy in a manner that water resources are not polluted.

Fisheries Policy of 1985

Policy and strategy statement with respect to the conservation, management, and development of fish resources. The policy supports for increasing the fish catch; promoting fishers to fish offshore; ensuring the availability of affordable fishing materials; exploiting offshore resources; increasing aquaculture production; establishing adequate cold storage facilities; improving the economic condition of fishers; promoting conservation of the marine environment; promote integrated coastal zone management; promote efficient marketing; and promote the production and marketing of seaweed.

4.3.2 Legal and Regulatory Framework in Zanzibar

The Environmental Management Act No. 3 of 2015

This Act is the key piece of legislation governing the management of coastal and marine resources in Zanzibar. It has provisions for the establishment of a protected area system in Zanzibar, control and management of specific environmental threats and biological diversity as well as provisions for general environmental obligations, administration, and planning including ESIA. Under this Act, the Zanzibar Environmental Management Authority (ZEMA) is mandated to undertake enforcement, compliance, review and monitoring of environmental and social impact assessment. The ZEMA has also the role of providing general supervision and coordinating all matters relating to the environment in Zanzibar. The Act also vests powers to the Authority to determine whether the proposed project should be subjected to an ESIA, approves consultants to undertake the ESIA study, invites public comments by way of the public hearing and also has the statutory authority to review ESIA and issue ESIA certificate or refuse to do so.

The Environmental Management Act imposes an obligation to developers to conduct an ESIA before the commencement of the project to determine whether the project may/or is likely to have, or will have a significant impact on the environment. Section 56 makes ESIA mandatory for all projects that fall under the ESIA mandatory list (Schedule 2). The proposed project is also included in the mandatory list of projects requiring ESIA.

Zanzibar Water Act

The Act provides for the establishment of the water authority for Zanzibar that has jurisdiction of all matters about the management of water. The Act includes provisions on:

- Regulating, controlling, managing and protecting all catchment areas;
- Promoting the conservation and proper use of water resources;
- Managing production and distribution of water on a sustainable basis;
- Specifying standards of water quality, effluent and water equipment;
- Advising the Government in the formulation of policies related to the development and conservation of water.

The Act could be the basis for regulating water distribution issues between the project proponent's needs and the community water supply rations. This is important in avoiding any conflict between the users. The proposed project should adhere to this Act by ensuring that the design of buildings allows the conservation of water resources.

The Fisheries Act of 2010

Provides for protection, conservation, and regulation and control of fish, fish products, and aquatic flora. Provides for government functions and marine management approaches consistent with TASFAM activities. Focuses on management and enforcement of fishing, aquaculture development, and conservation of fish and fish habitats (including the establishment of parks and sanctuaries).

Zanzibar Oil and Gas (Upstream) Act of 2016

Establish the overall management of the upstream oil and gas subsector for sustainable development through broad participation for maximum value generation. Minimizing the negative impact on the environment, safety, and health.

Forest Resources Management and Conservation Act of 1996

Established to promote the protection, conservation and development of forest resources for the social, economic, and environmental benefits of the people of Zanzibar. Provides a means for managing coastal forest resource use. Formation of Community Forest Management Areas involves the participation of local communities in establishing management agreements, management activities, the rules of use, and the delegation of management responsibilities to local community groups.

Establishment of Zanzibar Nature Conservation Areas Management Unit Act, 1999

This Act provides directives for the conservation of Zanzibar's terrestrial, aquatic or marine ecosystems, including their indigenous plants or animals, through the establishment and management of nature conservation areas. The act directs for the establishment of the semi-autonomous body to conserve terrestrial, aquatic, or marine ecosystems by establishing and managing nature conservation areas. This is a unit to manage nature conservation areas or national protected areas; to build the capacity for nature conservation and management of nature conservation areas. The unit will also have responsibilities to advise, educate, and promote the private sector, local communities, and government departments on issues concerning nature conservation; and to educate the public on the importance of nature conservation.

The Occupational Safety and Health Act No. 8 of 2005

The Zanzibar Occupational Safety and Health Act No. 8, 2005 establishes basic principles of safety and health in Zanzibar. It stipulates the duties and responsibilities of key stakeholders of occupational safety and health. The Act establishes occupational safety and health management systems such as safety and health committees at the national and enterprise level. At the enterprise or workplace level, the occupational safety and health representatives form a committee. The occupational safety and health committee at the national level comprising tripartite social partners (i.e. Government, employers, and workers) is mandated to hear and determine any complaints from decisions of the Director of Occupational Safety and Health. The occupational safety and health representatives at the enterprise level are responsible to identify potential hazards and major incidents at their workplace. The Act also establishes occupational safety and health inspectors for systematic and continuous monitoring as well as evaluation of work environments. The inspectors are also required to devise mechanisms to eliminate and control hazards at workplaces. Ministry of Livestock and Fisheries, Ministry of Blue Economy and Fisheries and Deep-Sea Fishing

Authority will adhere to this act by making sure that the environment at working place during the construction and operation phase of the TASFAM project is safe by having a risk management plan.

The Deep-Sea Fishing Authority Act Cap. 388 R.E. 2020

The Deep Sea Fishing Authority is a Governmental Institution established under the Deep Sea Fishing Authority Act Cap. 388 R.E. 2020, which replaced the Deep Sea Fishing Authority Act No. 1 of 1998 and its Amendments No. 17 of 2007, and the Deep Sea Fishing Authority Regulations of 2009 and its Amendments of 2016. Before the establishment of the Deep-Sea Fishing Authority (DSFA) in February 2010, the management of the deep-sea fisheries resources in the Exclusive Economic Zone (EEZ) of the United Republic of Tanzania was under the Department of Fisheries matters in Mainland Tanzania and Tanzania Zanzibar. The main objective of establishing DSFA was to manage and develop fisheries resources within the Tanzanian EEZ. Also, DSFA is mandated to control fishing activities in areas beyond the national jurisdiction.

Menai Bay Conservation Area (Establishment) Order of 1997; Mnemba Island Marine Conservation Area Order of 2002; Pemba Channel Conservation Order of 2005

It establishes a series of marine conservation areas. MCAs place limits on access to resources within their boundaries. Coexistence with Village Fishermen's Councils (VFCs/SFCs) to establish areas where fishing may occur or where there are access controls may be introduced. TASFAM activities with local fishers will be concentrated in and around 5 MCAs (MBCA, MIMCA, PECCA, TUMCA, and CHABAMCA)

4.3.3 Institutional Arrangement for Environmental Management in Zanzibar

Zanzibar Department of Environment

This is the government arm under the second Vice President Office responsible for environmental matters about the management of the environment. According to the Zanzibar Environmental Act no.3 of 2015, the Department of Environment has the following functions:

i. To develop National Strategies and Guidelines for the management of the environment;
ii. To coordinate the implementation of National strategies and Guidelines for the management of the environment;
iii. To prepare and manage the implementation of strategic environmental assessment;
iv. To recommend environmental standards;
v. Coordinate the implementation of international environmental agreements;
vi. To prepare and issue a report on the state of the environment for Zanzibar in every five years to be submitted to Minister;
vii. To coordinate the implementation of the Environmental Policy;
viii. Coordinate all matters related to climate change adaptation and mitigation measures;
ix. To promote environmental education to society and other stakeholders according to the duties assigned to him;
x. To coordinate and promote environmental research; and
xi. To carry out any other functions necessary to fulfil the purposes of the Act

Zanzibar Environmental Management Authority (ZEMA)

Zanzibar Environment Management Act No. 3 of 2015 established ZEMA under section 14 as a body corporate with its seal, with the following powers: (a) to acquire, own and dispose of any movable and immovable property; (b) to enter into any contract or agreement of which the Authority has the power to perform under the Act. Under section 22 of the Act, the functions of the Authority include:

i. Undertake and coordinate enforcement of the provisions of the Act;
ii. Coordinate the Environmental Impact Assessment process for any activity or investment;
iii. Coordinate environmental audits concerning any activity or investment;
iv. Carry out environmental monitoring supporting the proper management and conservation of the environment;
v. Issue environmental certificates, permits or approvals;
vi. Receive and work on complaints related to the environment;
vii. Promote environmental education, awareness and dissemination to the society and other stakeholders according to the functions assigned to the Authority;
viii. Enforce regulations and ensure compliance with standards, guidelines and orders related to the environment;
ix. Monitor biodiversity, terrestrial and marine ecosystems, coastal zone, waste disposal and natural resources;
x. Any other risks and impacts related to the environment;
xi. Prepare and submit to the Minister, a comprehensive annual implementation report;
xii. Operate the digital Zanzibar Environmental Information Management System;
xiii. Raise funds and receive donations, grants, contributions, and loans from verified sources; and
xiv. Carry out any other functions that are necessary and related to the purposes of the Act.

The Ministry of Labor and Employment

The main role is to ensure that decent work is practised and maintained in Zanzibar. It provides directives, and technical advice, enforces legislation, proposes amendments, allocates resources, oversees all activities carried out by OSHA and ensures that OHS rules and regulations are adhered to and maintained at workplaces.

4.4 Relevant International Agreements, Conventions and Treaties for Tanzania

These apply to both Tanzania and Zanzibar.

Convention on Biological Diversity

The objectives of the convention are to promote: the conservation of biological diversity; sustainable use of its components; and fair and equitable sharing of benefits arising out of the utilization of genetic resources. The convention was adopted on 22nd May 1992. The United Republic of Tanzania ratified the Convention on 8 March 1996.

The Cartagena Protocol on Biosafety to the Convention on Biological Diversity (CBD)
The objective of the protocol is to contribute to ensuring an adequate level of protection in the field of living-modified organisms resulting from modern biotechnology. The protocol was adopted on 29 January 2000. The United Republic of Tanzania ratified the Protocol on 16 March 2003.

Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region and Related Protocols
The objective of the convention is to promote sound environmental management of maritime and coastal areas of the eastern African region, as part of the Regional Seas Programme initiated by UNEP in 1974. The Convention was adopted on 25 June 1985. The United Republic of Tanzania ratified the Convention on 1 March 1996.

The Convention on Wetlands
The Convention on Wetlands (Ramsar, Iran, 1971) called the "Ramsar Convention" is an intergovernmental treaty that embodies the commitments of its member countries to maintain the ecological character of their Wetlands of International Importance and to plan for the "wise use" or sustainable use of all of the wetlands in their territories. The Convention uses a broad definition of the types of wetlands covered in its mission, including swamps and marshes, lakes and rivers, wet grasslands and peatlands, oases, estuaries, deltas and tidal flats, near-shore marine areas, mangroves and coral reefs, human-made sites such as fish ponds, rice paddies, reservoirs and salt pans. The convention was adopted in 1971 and entered into force in 1975. The United Republic of Tanzania acceded to the convention in February 1999. The Convention came into force for the United Republic of Tanzania on 13 August 2000.

United Nations Framework Convention on Climate Change
The objective of the convention is to achieve stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. The Convention was adopted on 9th May 1992. The United Republic of Tanzania signed the convention on 12 June 1992 and ratified it on 17 April 1996. The convention entered into force on 16 July 1996.

4.5 Other International Agreements, Conventions and Treaties
Tanzania also is a party to the following international agreements which have a bearing on fisheries and coastal and marine resource management:

- Convention on Biological Diversity (1992)
- Cartagena Protocol on Biosafety (2000)
- Convention on International Trade of Endangered Species (CITES) (1979)
- Convention on the Conservation of Migratory Species of Wild Animals (1979)
- Convention Concerning the Protection of the World's Cultural and Natural Heritage (World Heritage Convention) (1977)
- Convention on Wetlands of International Importance (RAMSAR) (2000)
- United Nations Convention on Law of the Sea (1985)
- Convention for the Protection, Management, and Development of the Marine and Coastal Environment of the Eastern African Region (the Nairobi Convention) and related Protocols
- International Convention on Oil Preparedness, Response, and Cooperation (1990)
- Port State Measures Agreement

- Indian Ocean Rim Association (IORA) Blue Economy Declaration calls for a sustainable, inclusive, and people-centered approach to the development of BE.

4.6 Regional Agreements

International Labour Organisation (ILO) Conventions ratified by Tanzania include: C138 Minimum Age Convention of 1973, which prohibits child labour, and C182 Worst Forms of Child Labour Convention of 1999. As the conventions have been adopted by the Tanzania Government, TASFAM project will abide by them and ensure that no child labour is practised throughout the project. Other relevant agreements include ILO Convention C148 Working Environment (Air Pollution, Noise and Vibration) Convention of 1977, which protects workers against occupational hazards in the working environment due to air pollution, noise and vibration. TASFAM project will ensure workers have safe environment.

4.7 World Bank Environmental and Social Framework

4.7.1 World Bank Environmental and Social Standards

The World Bank Environmental and Social Policy for Investment Project Financing sets out the requirements that the Bank must follow regarding projects it supports through Investment Project Financing. The Environmental and Social Standards set out the requirements for Borrowers relating to the identification and assessment of environmental and social risks and impacts and mitigation measures associated with projects supported by the Bank through Investment Project Financing. The ten ESSs as per the WB ESF are: ESS 1: Assessment and Management of Environmental and Social Risks and Impacts; ESS 2: Labor and Working Conditions; ESS 3: Resource Efficiency and Pollution Prevention and Management; ESS 4: Community Health and Safety; ESS 5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement; ESS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources; ESS 7: Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities; ESS 8: Cultural Heritage; ESS 9: Financial Intermediaries; and ESS 10: Stakeholder Engagement and Information Disclosure. Given the nature of activities of this project, all the ESSs except for ESS7 and ESS9 are relevant.

Environmental and Social Standard ESS1 applies to all projects for which Bank Investment Project financing is sought. ESS2–10 set out the obligations of the Borrower in identifying and addressing environmental and social risks and impacts that may require particular attention based on the proposed project activities. Borrowers and projects are also required to apply the relevant requirements of 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 implementation of each of the ESSs will be enabled through five instruments which are all part of the Operational Manual of the TASFAM and therefore mandatory and which have been developed based on the respective ESSs:

i) Environmental and Social Management Framework (ESMF) (and subsequent ESIAs/ESMPs/BMPs/CHMPs) as an outline stipulated in **Appendix XIII** for the application of the ESS1, ESS2, ESS3, ESS4, ESS6 and ESS8.

ii) Stakeholders Engagement Plan (SEP) for the application of ESS10 is prepared for the entire project during preparatory stage and is in consistent with the ESCP;

iii) Resettlement Policy Framework (RPF) and any subsequent RAPs for the application of ESS5 is prepared during preparatory stage and is consistent with the ESCP;

iv) Labour Management Procedures for the application of ESS2 will be prepared before commencement of project activities.

Environmental and Social Commitment Plan (ESCP) which will describe the obligations of the borrower to apply the above instruments and other actions will be prepared before commencement of that particular activities.

v) the Process Framework (PF) to be prepared for Project activities that may involve restrictions to natural resources and adverse livelihood impacts, consistent with ESS5; This will be prepared before commencement of project activities.

vi) Strategic Environmental Assessment (SEA) will be prepared before commencement of project activities to guide their implementation;

vii) Environmental Audit (EA) for existing facilities will be conducted for all the existing facilities to establish the impacts caused during operation and suggest the mitigation measures to minimize the impacts.

viii) SEA/SH Action Plan to be prepared before commencement of a particular project activities.

ix) Gender Policy will be prepared during implementation of the project activities.

4.7.2 Project Classification According to the World Bank ESF

According to the WB ESF, The Bank will classify all projects (including projects involving Financial Intermediaries (FIs)) into one of four classifications: **High Risk, Substantial Risk, Moderate Risk or Low Risk.** In determining the appropriate risk classification, the Bank takes into account relevant issues, such as the type, location, sensitivity, and scale of the project; the nature and magnitude of the potential environmental and social risks and impacts; and the capacity and commitment of the Borrower (including any other entity responsible for the implementation of the project) to manage the environmental and social risks and impacts in a manner consistent with the ESSs. Other areas of risk may also be relevant to the delivery of environmental and social mitigation measures and outcomes, depending on the specific project and the context in which it is being developed. These could include legal and institutional considerations; the nature of the mitigation and technology being proposed; governance structures and legislation; and considerations relating to stability, conflict or security. The Bank will disclose the project's classification and the basis for that classification on the Bank's website and in project documents. The Bank will review the risk classification assigned to the project on a regular basis, including during implementation, and will change the classification where necessary, to ensure that it

continues to be appropriate. Any change to the classification will be disclosed on the Bank's website.

According to the WB ESF the TASFAM environmental risk rating is SUBSTANTIAL while the social risk rating is HIGH therefore the overall risk rating for TASFAM project is **HIGH** due to the likelihood of environmental and social impacts generated by the project. Details of the risk classification as well as ESS as per the TASFAM project activities are elaborated in **Table 4.1.**

Table 4.1: The World Bank Environmental and Social Standards (ESS) Applicable to TASFAM

ESSs	Yes/No	Application
ESS 1: Assessment and Management of Environmental and Social Risks and Impacts	Yes	• Maintain a PIUs with qualified staff and resources to support the management of ESHS risks and impacts of the Project including 1 environmental and 1 social specialist. • Adopt the ESIA and ESMP before the relevant contractors' bidding phase and thereafter implement the ESIA and ESMP throughout project implementation. • Adopt and implement an ESIA, and corresponding ESMP for the Project prior to issuing the Expression of Interest (EoI) for related works. • Ensure that the consultancies, studies (including feasibility studies, if applicable), capacity building, training, and any other technical assistance activities under the Project are carried out in accordance with terms of reference acceptable to the World Bank. • The ESIA and ESMP shall align with the World Bank Environmental, Health, and Safety Guidelines (EHSGs) relevant to the Project – specifically, the General EHSG, EHSG for Aquaculture, and EHSG for Fish Processing, to ensure comprehensive coverage of sector-specific health, safety, and environmental management requirements.
ESS 2: Labor and Working Conditions	Yes	• Adopt and implement the Labor Management Procedures (LMP) for the Project, including, inter alia, provisions on working conditions, management of workers' relationships, occupational health and safety (including personal protective equipment, and emergency preparedness and response), code of conduct **(Appendix VIII)** (including relating to SEA and SH), forced labour, child labour, grievance arrangements for Project workers, and applicable requirements for contractors, subcontractors, and supervising firms. • Adopt the LMP before commencement of the civil works and thereafter implement the LMP throughout Project implementation. • Establish a grievance mechanism prior to engaging Project workers and thereafter maintain and operate it throughout Project implementation
ESS 3: Resource Efficiency and Pollution Prevention and Management	Yes	• Adopt and implement a Waste Management Plan (WMP), to manage hazardous and non-hazardous wastes before initiating activities that could lead to waste generation and thereafter implement the WMP throughout Project implementation. The WMP will be included and implemented as part of the ESMP. • Incorporate resource efficiency and pollution prevention and management measures in the ESMP.

ESSs	Yes/No	Application
ESS 4: Community Health and Safety	Yes	• Incorporate measures to manage traffic and road safety risks as required in the ESMP. • Assess and manage specific risks and impacts to the community arising from Project activities including the spread of diseases (such as HIV/AIDS, STDs, etc.) especially during the construction phase of sub-projects, behaviour of project workers, risks of labor influx, etc. and include mitigation measures in the ESMPs to be prepared in accordance with the ESMF (prior to the relevant contractors' bidding phase). • Prepare, adopt, and implement the GBV/SEA/SH Action Plan before the commencement of civil works thereafter implement the GBV/SEA/SH Action Plan throughout Project implementation.
ESS 5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Yes	Not currently relevant. Activities under Components 2 and 3 such as development of necessary infrastructure for commercial small-scale and medium scale are expected to be within unoccupied existing government lands. Therefore, land acquisition or involuntary resettlement are not anticipated. If such need were to be identified during project execution, it would need to be managed in accordance with ESS5. A provision on this point will be specified in the ESCP. However, the project has prepared a Process Framework to cover possible loss of access to protected areas and adverse impacts associated with potential restrictions in access to natural resources in legally-designated parks and protected areas. A PF has been prepared to cover project support for plans developed to regulate use of MPAs, MCAs, MRs etc. or as part of implementation of FMPs, that may involve temporary livelihood displacement. This requirement has also been included in the ESCP
ESS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources	Yes	• Adopt and implement a Biodiversity Management Plan (BMP) as part of the ESMP in accordance with the guidelines of the ESIA prepared for the Project, and consistent with ESS6' • Adopt the BMP before commencement of relevant subproject activities and thereafter implement the BMP throughout Project implementation.
ESS 7: Indigenous People/Sub-Saharan African Historically Underserved Traditional Local Communities (IP/SSAHUTLC)	No	Not currently relevant
ESS 8: Cultural Heritage	Yes	• Adopt and implement a Cultural Heritage Management Plan (CHMP) as part of the ESMP in accordance with the guidelines of the ESMF prepared for the Project, and consistent with ESS8.
ESS 9: Financial Intermediaries	No	This ESS is currently not relevant to the Project.

ESSs	Yes/No	Application
ESS 10: Stakeholder Engagement and Information Disclosure	Yes	• Establish, publicize, maintain, and operate an accessible grievance mechanism without retribution, including concerns and grievances filed anonymously, in, to receive and facilitate the resolution of concerns and grievances about the Project, promptly and effectively, in a transparent manner that is culturally appropriate and readily accessible to all Project-affected parties, at no cost and a manner consistent with ESS10. • The grievance mechanism shall be equipped to receive, register, and facilitate the resolution of SEA/SH complaints, including through the referral of survivors to relevant gender-based violence service providers, all in a safe, confidential, and survivor-centred manner. • Establish the grievance mechanism before project implementation and thereafter maintain and operate the mechanism throughout Project implementation. • Ensures stakeholder engagement and information disclosure, as described in this ESMF

4.7.3 World Bank Group ESHS Guidelines

The World Bank Groups Environmental, Health, and Safety (EHS) Guidelines are technical reference documents with general and industry specific examples of Good International Industry Practice (GIIP). EHS Guidelines are applied as required by their respective policies and standards. These industry sector EHS guidelines are designed to be used together with the General EHS Guidelines document, which provides guidance to users on common EHS issues potentially applicable to all industry sectors. Specific guidelines which will be used is Environmental, Health, and Safety (EHS) Guidelines: Environmental Waste Management. As stipulated earlier the guidelines will be used together with the Environmental, Health, and Safety General Guidelines.

4.7.4 Other World Bank Instruments Applicable for TASFAM Project

- Environmental and Social Framework - Guidance Notes for Borrowers[6];

The World Bank has developed several Guidance Notes to ensure the governments (borrowers) comply with the World Bank Environmental and Social Standards. This guidance are public documents that be accessed in the World Bank website[7].
Among the applicable guidance notes for TASFAM are:

[6] http://www.worldbank.org/en/projects-operations/environmental-and-social-framework/brief/environmental-and-social-framework-resources#guidancenotes

[7] https://www.worldbank.org/en/projects-operations/environmental-and-social-framework/brief/environmental-and-social-framework-resources#guidancenotes

- Community Health and Safety: http://documents.worldbank.org/curated/en/290471530216994899/ESF-Guidance-Note-4-Community-Health-and-Safety-English.pdf

- Gender based violence: http://documents.worldbank.org/curated/en/399881538336159607/Environment-and-Social-Framework-ESF-Good-Practice-Note-on-Gender-based-Violence-English.pdf

4.8 Gap Analysis

The assessment has established that Tanzania mainland and Zanzibar have the legislative/regulatory provisions and the institutions to ensure consistency with the requirement of the World Bank. However, implementation is not consistently effective in the areas of environmental and social management plan (ESMP) implementation, supervision and monitoring. During implementation where there are gaps between national legislation and policies and the ESF, the ESF will prevail. **Table 4.2** shows actual gaps of the Tanzania mainland and Tanzania's regulatory framework to meet World Bank Environmental Social Standards. The ESMF includes measures to mitigate these underlying risks/gaps in the project.

Table 4.2: Gap Analysis between the WB ESS and the Tanzanian Legislation

ESS &Topic	Major requirements	Key requirements/gaps in Tanzania framework
ESS 1: Assessment and Management of Environmental and Social Risks and Impacts		
Scope of application	ESSs apply to associated facilities to extent of Borrower's control/influence	Associated facilities not covered by Tanzania ESIA law
Borrower's E&S Framework	May use Borrower's framework if can meet objectives of ESSs	No provision for alternative requirements
A. E&S Assessment	Conduct E&S assessment, including stakeholder engagement Retain international expert(s) for high-risk projects Apply national framework, ESSs, EHSGs/GIIP Apply mitigation hierarchy Offset significant residual impacts Differential measures for vulnerable or disadvantaged people Consider primary suppliers	Social part in ESIA is not explicit in Tanzanian laws, No distinction between international and Tanzanian experts No reference to ESSs, EHSGs or GIIP No equivalent provision for offsets No equivalent provisions for vulnerable and disadvantaged people No coverage of primary suppliers
B. ESCP	ESCP for compliance in a specified time	Projects which comply with regulations are approved and given permit
C. project monitoring & reporting	Monitor proportionate to the nature of the project, risks and impacts, and compliance requirements Reports to World Bank	The regulation insists on supervision and monitoring but receives little attention on the ground
D. Stakeholder engagement and information disclosure	Engage stakeholders through the life cycle	The law insists on disclosure of ESIA but not continued engagement. Engagement is always done during ESIA preparation and poor to none during implementation.
ESS2: Labor and Working Conditions		
Scope of application	ESS2 applies to workers employed by Ministry of Livestock and Fisheries, Ministry of Blue Economy and Fisheries, Deep Sea Fishing Authority who work on the project and to contracted workers, primary supply workers, and community workers	Labour code of Tanzania applies to an employer's direct employees and contracted workers

ESS &Topic	Major requirements	Key requirements/gaps in Tanzania framework
A. Working conditions and management of labor relations	Written labour management procedures Terms and conditions of employment Non-discrimination and equal opportunity Worker's organizations	Written employment contract required, including procedures and employment conditions Specific non-discrimination and equal opportunity requirements Organizations are allowed
B. Protecting the workforce	Child labour Forced labour	No employment under the age of 18 No forced labour
C. Grievance mechanism	A grievance mechanism has to be provided for all direct and contracted workers	The government systems have not diversified grievance redress mechanisms to capture the whole community, the complaint system is fragmented
D. Occupational Health and Safety (OHS)	Measures relating to occupational health and safety will be applied to the project: Apply World Bank Group General and sector-specific EHS Guidelines Requirements to protect workers, train workers, document incidents, emergency preparation, address issues Provide a safe working environment Workers are allowed to report safety issues and refuse to work under certain circumstances Provide appropriate facilities (canteens, toilets, etc.) and ensure accommodations meet the needs of workers All employers to collaborate on applying OSH requirements Monitor OSH performance	The Act is generally in line with WB requirements but the implementation is still very low due to manpower Current legislation does not set minimum requirements for worker accommodations although it does require per diem for work at distances from home
E. Contracted workers	Reasonable efforts to verify contractors have labour management procedures to meet requirements of ESS2 (except those that apply to community and primary supply workers) Procedures for managing and monitoring performance Access to a grievance mechanism	Tanzanian law applies to contracted workers A grievance mechanism has to be developed for subcontracted workers.
F. Community workers	Requirements for working conditions and OHS applied to community labor	No such requirements

ESS &Topic	Major requirements	Key requirements/gaps in Tanzania framework
G. Primary supply workers	Depending on the level of GSE/contractor control/influence,	No such requirements
ESS3: Resource Efficiency and Pollution Prevention and Management		
Resource Efficiency		
Scope of application	Borrowers must apply feasible resource efficiency and pollution prevention measures per the mitigation hierarchy	No specific requirements for mitigation hierarchy but Tanzanian law is generally consistent with WB legislation and directives
A. Energy use	Adopt measures in EHSGs if the project is significantly using energy	There is general requirements in Tanzanian law. Not Specific for this project.
B. Water use	Assess water use and impacts and communities and adopt mitigation measures as needed	Not explicitly shown in the Environmental laws of Tanzania
C. Raw material use	Use GIIP to reduce significant resource usage	No specific requirements for this project.
Pollution prevention and management		
General requirements	Avoid, minimize, and control the release of pollutants, apply the more stringent of EHSGs and national law Historic pollution and non-degradation requirements	In general, requirements are consistent with the ESS
A. Management of air pollution	Requires assessment of potential air emissions and implementation of technically and financially feasible and cost-effective options to minimize emissions	There are emission guidelines in Tanzania
B. Management of hazardous and non-hazardous wastes	Apply mitigation hierarchy to waste management National and international conventions for hazardous waste management and movement Verify hazardous waste management contractors are licensed and disposal sites operate to meet standards	Laws are in place but enforcement is still insufficient
C. Management of chemicals and hazardous materials	Minimize the use of hazardous materials Avoid the use of internationally controlled materials	Tanzania has regulations for chemicals and hazardous materials
D. Management of pesticides	Requirements for pesticide use	Not applicable to this project

ESS &Topic	Major requirements	Key requirements/gaps in Tanzania framework
ESS4: Community Health and Safety		
Community health and safety		
A. Community health and safety	Evaluate risks to community health and safety and apply mitigation hierarchy and GIIP to reduce risks Consider third-party safety risks in designing infrastructure and equipment, concerning high-risk locations Ensure the safety of services provided to communities identify traffic/road risks, assess risks if needed, consider safety in fleet decisions, take measures to protect the public Assess and avoid impacts on provisioning and regulating ecosystem services as appropriate Avoid or minimize the potential for disease transmission and communication, considering vulnerable groups Address risks to the community of hazardous materials management Prepare and respond to emergencies, consider in ESIA s, prepare response plans	No specific requirements for design, or GIIP, No services to be provided General traffic laws apply, and ESIA law requires the assessment of risks No specific requirement for ecosystem services No specific requirements for labour influx, including gender-based violence, communicable diseases, etc. General health requirements generally meet ESS, but no requirement for vulnerable groups Detailed requirements for emergency planning
B. Security personnel	Assess and address risks of security arrangements Apply principles of proportionality, GIIP, and law Verify contracted workers are not implicated in past abuses and are trained Investigate incidents, report unlawful acts to authorities	No specific requirements
ESS5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement		
Applicability	Assessment needs during the ESIA process Applies to permanent and temporary displacement, listing types of infringements Limitations on applicability This applies to land users and owners	Land use is recognized under the law.
A. General	Affected people: land owners, users with legal claims, and users with no legal claims	Land use is recognized and protected under law, but not illegal use

ESS &Topic	Major requirements	Key requirements/gaps in Tanzania framework
	Design project to avoid/minimize displacement Provide replacement cost and assistance, disclose standards, offer land-for-land where possible, pay compensation before displacing people where possible Engaged with affected communities, including women Grievance mechanism Census, cut-off dates, notices; detailed plan and monitoring required; require audit if significant displacement	Existing practice is to pay under expected development on land used by non-owners, but no further assistance is provided if the land is lost There is a specific requirement on crops to avoid displacement and has already in use. Procedures for establishing value and payments, also there are requirements for livelihood restoration, assistance, land-for-land by uses a meeting with parties for agreeing. Few specific requirements for consultation are required, and there are specific efforts to engage women There are the requirement for a grievance mechanism
B. Displacement	Detailed requirements for physical displacement Detailed requirements for economic displacement, including livelihood restoration	Less detailed requirements for physical displacement Less detailed requirements to address economic displacement, and little special consideration for vulnerable people
C. Collaboration with other responsible agencies or subnational jurisdiction	Collaborate with other involved agencies, provide support as needed; include arrangements in the Plan	There is specific requirements to involve other parties
D. Technical and Financial Assistance	Address environmental and social risks and impacts associated with technical assistance (TA) that is supported through Investment Project Financing (IPF) under the Environmental and Social Framework (ESF).	No requirements for TA.
Annex 1: Involuntary resettlement instruments	Detailed requirements for resettlement plans, resettlement frameworks, and process frameworks	No requirements for detailed written resettlement or other plans

ESS &Topic	Major requirements	Key requirements/gaps in Tanzania framework
ESS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources		
A. General	Consider direct, indirect, & cumulative impacts in ESS1 ESIA Characterize baseline conditions Manage risks with mitigation hierarchy and GIIP, including adaptive management Differentiated habitats, ESS applies to all, provides for offsets ESS applies to modified habitats with significant biodiversity value Avoid natural habitats unless no feasible alternative; If affected, achieve no net loss of biodiversity Requirements if a project affects legally protected and international recognized areas of high biodiversity value Strict conditions on affecting critical habitats requires Biodiversity Management Plan No introduction of spreading of invasive species Requirements for projects involving primary production and harvesting	Procedures to address impacts on critical habitats are in place Protected areas: less restrictive requirements for impacts on most protected areas Invasive species: awareness but no specific requirements The project does not involve primary production
B. Primary suppliers	Requirements when Borrower purchases natural resource commodities	Not relevant to this project
ESS10: Stakeholder Engagement and Information Disclosure		
Requirements	Engage stakeholders throughout the project life cycle, and determine how they wish to be engaged Provide stakeholders with information, Maintain a documented record of engagements	Tanzania Environmental Management Act requires that the ESIA process should involve consultations with relevant stakeholders. It does not explicitly state their involvement throughout the project cycle.
A. Engagement during project preparation	Identify and analyze stakeholders, including disadvantaged or vulnerable A stakeholder Engagement Plan (SEP) is required, with detailed requirements for disclosure, the timing of consultations, measures for the disadvantaged or vulnerable, etc.	The regulation does not state the involvement of stakeholders before project commencement except during the ESIA process. No Stakeholder Engagement Plan required

ESS &Topic	Major requirements	Key requirements/gaps in Tanzania framework
	Disclosure of information early to allow consultation on design Consultation to allow ongoing two-way communication throughout the project life cycle	Draft ESIA report had to be disclosed for views The regulations do not state two-way communication throughout the project life cycle
B. Engagement during project implementation and external reporting	Engagement and disclosure of information to continue throughout implementation, following the Plan	The regulation does not have such a requirement
C. Grievance mechanism	Establish and implement prompt, effective, culturally appropriate, and discreet grievance mechanism No limit on legal remedies	No equivalent requirement The project owner/developer has to respond only to formal correspondence and claims.
D. Organizational capacity and commitment	Define roles & responsibilities, assign personnel to implement stakeholder engagement activities	No similar requirement
Annex 1: Grievance mechanism	Options for managing mechanism: ways of submission, log, advertised procedures, appeals process, mediation	No requirement for a grievance mechanism

CHAPTER FIVE

POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS AND MITIGATION MEASURES

5.1 Introduction

Identifying the consequences of a project on its environment and society is the key step in any environmental and social management. These consequences are usually known as impacts. These are deduced from the overlaying project activities during preparatory phase, construction phase and during operation phase, and the components of the affected domains or environments; biophysical and socio-economic environment.

5.2 Environmental and Social Risk Classification of the project as per the World Bank ESF

According to the WB ESF the TASFAM overall risk rating is **HIGH** due to the likelihood of environmental and social impacts generated by the project. The project will involve activities such as expanding marine parks and reserves; restore critical ecosystems (mangroves, seagrass, coral reefs); and improve and construct new infrastructure for protected area management and eco-tourism, provision of ICT equipments and infrastructure improvement, provision of inputs and equipment, infrastructure works (expansion of marine parks and reservse and infrastructure works (fish landing sites, fish markets, small-scale fish processing plants). Construction will also include finalizing the construction of the National Mariculture Resource Centre (NMRC) in Kunduchi and operationalize both the Kunduchi and Ruvula NMRCs through provision of research equipment and processing facilities.

5.3 Environmental risks and the associated impacts

The Environmental risks are considered Substantial. Environmental impacts and risks anticipated include removal of vegetation and cutting down trees where project sites will be located, noise and air pollution during construction, water pollution, generation of solid waste and hazardous waste. Construction of aquaculture and landing site facilities can lead to removal of mangroves, changes in landscape hydrological patterns and its activities during oepration can lead to eutrophication of effluent receiving ecosystems, salinization of soils, as well as ecological impacts. In addition to these construction-related environmental risks and hazards, the operation phase of the fish markets would generate wastewater from fish processing and marketing activities, and would have potential health and safety risks and hazards associated with fish processing and storage facilities. Operation of fish landing site could have impacts on marine biodiversity. Occupational health and safety impacts associated with confined spaces in fish processing operations (e.g., storage areas, boat holds) are common to most industries. Other physical hazards include falls caused by slippery floors and stairs; equipment safety issues associated with filleting knives and other sharp tools; and cuts from sharp edges on process equipment. The fish processing facilities are also associated with biological hazards such as workers involved in manual gutting, skinning, and general handling of fish and shellfish may develop infections and or allergic reactions resulting from exposure to the fish itself, or bacteria on the fish. Water spraying processes may result in the formation of aerosols with bacteria that can be inhaled. Furthermore, fish processing activities may include a variety of situations in which workers can be exposed to lifting, carrying, repetitive work, and work posture injuries. Many of the manual operations in less mechanized fish processing

plants include lifting heavy boxes of raw materials. Repetitive strain injuries may result from manual filleting and trimming operations. Exposure to chemicals (including gases and vapors) includes handling chemicals such as chlorine, lye, and acids that are related to cleaning operations and disinfection in process areas. Occupational health and safety impacts associated with confined spaces in fish processing operations (e.g. storage areas, boat holds) are common to most industries. Noise and vibration exposure may result from proximity to noisy machinery (e.g. compressors, automatic packing machinery, condensers, ventilation units, and pressurized air). Noise and vibration exposure may result from proximity to noisy machinery (e.g., compressors, automatic packing machinery, condensers, ventilation units, and pressurized air).

Construction of marina/jetties could have some environmental impacts such as (i) impacts on coastal morphology that could result from dredging activies, (ii) impacts on water quality. This could result from dredging operations as these heavily wil disturb the settled bottom sediments causing them to suspend in the water column and (iii)impacts on air quality due to the use of machinery and equipments. The World Bank's general Environmental Health and Safety (EHS) Guidelines as well as EHS Guidelines for Aquaculture and Fish processing will be carefully assessed and used particularly to address issues that will arise throughout project phases.

Also construction/renovation of other project facilities (office buildings, laboratoiesetc.) will be associated with different OHS and waste management issues as descirbed above. The operation of laboratories and seafood processing facilities will be associated with risks related to handing of hazardous subsatances and wastes, and also risks related to food safety if the processing is not well controlled. The increase of fishing and seafood production may lead to impacts on senstive species (vulnerable, endangered or critically endangered) and complying with the requirements of marine parks and conservation areas will be key in minimizing risks to biodiversity. The project will also involve technical assitance activities and studies, which may lead to some downstream economic activities associated with different environmental, health and safety risks. The TA, development of plans and guidelines, and updating of policy frameworks activities need to be analyzed and suitable environmental assessment instruments need to be identified to capture risks related to posible downstream economic activities.

5.4 Social risks and impacts

The social risks are assessed to be High. The project is financing equipment, operating costs and technical assistance for conducting Monitoring, Control and Surveillance (MCS) and fisheries enforcement activities, which may generate risks of unreasonable use of force and inciting violence with affected individuals/communities. In addition, there are risks related to restrictions in access to natural resources in and around Marine Protected Areas (MPAs), particularly those expected to experience increased protection and expansion.

Components 1 and 2 will be implemented mainly within the existing government facilities, thereby minimizing the need for land acquisition. Activities in components one and two may generate social impacts and risks including: (i) OHS and CHS risks related to road construction/rehabilitation; (ii) labor influx and associated risks of Gender Based Violence/Sexual Exploitation and Abuse-Sexual Harassment (GBV/SEA-SH); (iii) pressure on local amenities and resources; (iv) increased incidence of transmission of communicable diseases including HIV/AIDS and COVID-19 related to interactions among project workers and between project

workers and local communities; (v) potential exclusion of disadvantaged persons such as people living disabilities, women, the elderly, and other vulnerable groups, resulting from limited access to information and project benefits, and elite capture of benefits associated with the productive and livelihood improvement activities planned under Components 2 and 3; ; and (vi) potential stakeholder opposition to some activities supported by the Project, particularly those related to the enablement of policy reforms to be supported by Component 2, especially if they involve subsidies for certain commercial fishing activities and not for others, as well as opportunity costs for the local population associated with greater private sector participation.

5.5 Sexual Exploitation and Abuse/Sexual Harassment (SEA/SH) Risk Rating

SEA/SH Risk Rating is moderate for this project. The SEA/SH risk will be re-assessed throughout the project life cycle. The project used the Sexual Exploitation and Abuse/Sexual Harassment (SEA/SH) Risk Assessment Tool to assist in this initial determination. The ESMF will include an assessment of the SEA/SH risks, along with an action plan proportional to the SEA/SH risks. The project will ensure that the SEA/SH risk is adequately addressed through sensitization about GBV/SEA/SH for all project workers and members of project affected local communities. SEA/SH risks linked to labor influx are expected to be minimum, given that only small labor teams will be required on-site for the expected civil works. Further, there could be SEA/SH risks due to abuse of authority especially during issuing of credit to female beneficiaries for livelihood diversification programs. To mitigate these risks, a behavioral standard clearly stating zero-tolerance for SEA/SH with consequences will be adopted and communicated to all project actors. In addition, there will be an effective confidential channel in the project Grievance Redress Mechanism (GRM) for persons to submit GBV/SEA/SH complaints, and also provisions to ensure implementation of a Code of Conduct as stipulated under Appendix VIII for project workers in the project Labor Management Procedures. Through Code of Conduct and GRM, protocols will be established to address biases, harassment or violence. Vulnerable groups, especially females, will be empowered to report any cases encountered. Environmental and Social Specialists working on the project will receive trainings on addressing SEA/SH in Investment Project Financing to increase client capacity to manage project related SEA/SH risks.

5.6 Potential Environmental and Social Impacts during the Preparatory and Construction Phase and their mitigation measures

5.6.1 Positive Social impacts and enhancement measures

Jobs creation

The construction activities will be envisaged to create more employment opportunities to local people. The project components expect to employ many workers from the locality and it is expected that more jobs will be directly connected with construction of the infrastructure.

Enhancement Measures

- Employment should be based on the principle of equal opportunities for all gender;
- Reasonable wages should be paid to both skilled and unskilled labourers to be employed by the project

- The contractor shall be encouraged to employ local, unemployed yet willing-to-work hard manpower to the extent viable subject to a maximum of 50% unskilled labour. This will ensure that local people are more benefited out of the project;
- Employment opportunities are to be offered based on merits and known interviewing procedures and grading systems.
- On Job training should be done for workers

Income to local suppliers and service providers

The proposed project will need construction materials and other services in respective project region. Materials needed for this project is very large. This is good news to suppliers of building materials as well as those who will provide food and waste collection services.

Enhancement Measures

- Qualified local vendors/ entrepreneurs should be given priority to supply different goods and services to the project;
- Ensure monitoring of labour standards among contractors, sub-contractors, workers and service providers;

Increased skills and impart knowledge to local communities

Whilst the operations related to constructions of concrete structures and installation of electrical wiring system and equipment are well known to local experts, the equipment and technology might be new to most practicing local engineers and consultants. The project activities will therefore benefit local experts in updating their knowledge and have opportunity for practical learning by participating in the whole process.

Enhancement Measures

- The contractor shall provide on job skills and training.

5.6.2 Negative Social risks and Impacts and mitigation measures

Occupational Safety and Health impacts

On a daily basis, construction workers face dangerous employment conditions. Even though construction workers are trained and know basic safety measures, accidents can still happen. The risks taken every day during regular construction work make it difficult for job sites to remain accident-free. Accidents on site could be caused by defective or collapsing scaffold, electrocutions, falls, falls from ladders, and defective machinery such as forklifts, conveyors, hoists, cranes, malfunctioning tools and other equipment. Accidents can result in serious injuries or death.

Mitigation Measures

- The project will prepare Environment, Health and Safety Guidelines (EHSG) to guide and mitigate all the EHSG risks;
- Appropriate working gear (such as nose, ear and mouth masks and clothing) and good construction site management shall be provided;

- During construction, the contractor shall ensure that the construction site is fenced and hygienically kept with adequate provision of facilities including waste disposal receptacles, sewage, firefighting and clean and safe water supply;
- A well-stocked First Aid kit (administered by medical personnel) shall be maintained at the construction site. The medical personnel shall also be responsible for the primary treatment of ailments and other minor medical cases as well as providing health education to the workforce;
- Reporting mechanisms for the public to register concerns or complaints regarding perceived risks to their health and safety due to the construction operation shall be put in place;
- Emergency contact details in the event of an accident shall be provided;
- Training all contractor staff in emergency planning and spill response; and
- Developing a detailed health and safety plan and training all contractor staff on the plan.

Community Safety – Social Conflict

It is expected that the increased number of workers and higher concentration of residents near construction sites will have an impact on local communities. The construction of the project shall definitely be accompanied by in-migration of job seekers and opportunistic businesses and speculators. This will increase social interactions amongst the construction workers and local communities. The presence of workers increases the risk of SEA/SH (GBV) towards members of the community. Influx of temporary workers may have a potential increase in crime in the community. With an increase in construction activities and the possibility of job seekers arriving, it may be more difficult to identify strangers in the community. It is expected that contractors will hire staff to provide security for their camps and other properties. Increased presence of security personal can lead to community health and safety risks associated with any inappropriate use of force, GBV(SEA/SH) and intimidation of the community.

Mitigation Measures

- Maintain good security in the area with signage like "No employment at the moment", to keep away job seeker to avoid unnecessary people in project sites
- Local workers will be hired to the extent possible to minimise influx
- Workers will be required to sign worker codes of conduct.
- Contractors will need as part of their C-ESMP to include camp management requirements
- Ongoing engagement with local stakeholders including relevant authorities on construction activities
- Ensure that all stakeholders are aware of the grievance redress mechanism and have access to the same.
- GBV, SEA/SH Action Plans will be developed to prevent and respond to project related GBV and SEA/SH risks associated with the community.
- The contractor shall (i) make reasonable inquiries to verify that the direct or contracted workers retained to provide security are not implicated in past abuses; (ii) train them adequately (or determine that they are properly trained) in the use of force, and appropriate conduct toward workers and affected communities; and (iii) require them to act within the applicable laws of Tanzania.

Community Health – Communicable Disease Transmission

The construction of the project shall definitely be accompanied by in-migration of job seekers and opportunistic businesses and speculators. This will increase social interactions amongst the construction workers and local communities. The presence of a large number of workers can give rise to an increased spread of communicable diseases. This among other factors may also produce an inherent increased risk of transmission of sexually transmitted diseases, HIV/AIDS and other contagious diseases taking into consideration that the project will be implemented in different coastal areas of Tanzania.

Mitigation measures

- In order to prevent more HIV/AIDS infection, during the implementation phase, the project shall include information education and communication component (IEC) for workers and the community in its budget. This will help to raise more awareness on HIV/AIDS and means to suppress its incidence.
- The contractor shall deploy locally available labour as practically possible
- A safety, health and environment induction training shall be conducted to all workers, putting more emphasis on HIV/AIDS and communicable diseases.
- Staff shall be encouraged the use of preventive measures like condoms by availing condom dispensers.
- Contractors will be required as part of the ESMP to include measures to demonstrate how they will work in a Covid-19 secure manner where relevant to minimise transmission risks.
- Worksites will be well maintained to avoid the creation of breeding sites for vectors. This will include to avoid the construction of small pools of water (mosquitos), waste (rodents) etc. which contribute to diseases transmission. (water will be stored in containers)
- Contractors will have access to potable water and adequate sanitation facilities to prevent disease transmission.

Community Health – Accidents and Injury

During the building works, the risks related on public safety and the personnel increase. The traffic related to construction will contribute to reduced road safety especially on local roads where some contractor's facilities are located, especially where the traffic passes through settled areas and towns located close to the road. The traffic to construction site will depart from the public roads. Residents from local settlements on these haulage roads will be exposed to increased possibilities for accidents and injuries. Children can be at particular risk of such impacts if they are unaware of project risks.

Mitigation measures

- The project will prepare Environment, Health and Safety Guidelines (EHSG) to guide and mitigate all the EHSG risks
- Develop and implement an emergency response plan including spill response and train workers on the same;

- Institute good site practices including prevent public access to the construction site by securing equipment and demarcate excavate, using warning signs with appropriate text (local language) and graphics programs;
- Institute traffic management and safety programme including, training and testing of heavy vehicles operators and drivers, enforcement of speed limits, maximum loading restrictions and compliance with all Tanzania transportation law and standards
- Undertake stakeholder engagement with local communities to inform them of activities on the site and associated risks.
- Enforcement of speed limits of 30km/hr shall be done

Gender-based violence and discrimination

Construction works may attract labour movement from different areas, although given the scale and duration of any given construction activity this is expected to be limited. The presence of none-local and local workers could exacerbate the risk of GBV, sexual harassment and/ or other sexual offenses including rape. Construction workers may engage in sexual fraternization and transactional sex in particular with younger women and girls. This can support the spread of Sexually Transmitted Diseases (STDs) including HIV/AIDS.

Mitigation Measures

- The project will prepare a GBV Action Plan and Gender policy that ensure a project awareness-raising strategy (for workers and community members), a list of GBV service Providers to which GBV survivors will be referred, revisions to the GRM to ensure it can address GBV complaints, and information on GBV allegation procedures in the workplace.
- This project will ensure that there is the involvement of women in project activities.

Child labour

Children in Tanzania engage in the worst forms of child labour, including in mining, quarrying, and domestic work. Children also perform dangerous tasks in agriculture. A report by ILO and the National Bureau of Statistics which was launched in 2016 indicates 4.2 million children (28.8%) aged of 5 - 17 years are involved in child labour in Tanzania with agriculture, forestry and fishing being the most dominant sectors.

Mitigation measures

i. The project will prepare Labour Management Procedures (LMP) to guide the implementation of labour issues including child labour
ii. Ministry of Livestock and Fisheries, Ministry of Blue Economy and Fisheries and Deep-Sea Fishing Authority will conduct regular monitoring of project workers to health, working conditions, hours of work, minimum age, and the other requirement of national law.
iii. Work with local authorities and schools in the area to control school dropout
iv. Cooperate with relevant authorities like the Ministry of Labour to control child labour
v. Create awareness raising to the communities on the importance of education for the children
vi. The local authorities should develop bylaws to control the engagement of children in petty business or work in project-related activities

Damage to Cultural Heritage

Inappropriate siting of facilities as well as construction (excavation) activities could result in damage to cultural heritage. While internationally and nationally protected sites are well documented and can be avoided this may not be the case with locally important sites.

Mitigation measures

- Implementation of the chance finds procedure as appropriate
- Screening of potential construction sites to identify cultural heritage.
- Engagement with local leaders and communities to understand the location of locally important cultural heritage (as part of screening).

Risk due to misconducts of Patrol Officer

Use of patrol officers can lead to use of force, violation and abuse of human rights especially when people are caught doing illegal activities in restricted marine areas. This is some areas of Tanzania has been a challenge with communities in abundant natural resources areas such as in areas where REGROW were implemented complaining about misconducts by patrol officers against the country's laws, regulations and guidelines. Such violations might lead to political influence, GBV, SH and violence between patrol officers and communities.

Mitigation Measures

- Strictly measures and guidelines will be put in place for all patrol officer working on the project
- Patrol officers who will be found guilty of misconduct against community members will be faced with stern measures including loss of job
- Training and awareness campaigns to patrol officers shall be key to avoiding violation of guidelines and abuse against community members
- Training and awareness campaign to community members on how to follow rules and regulations while executing project activities.
- Provision of right equipment to patrol officers to ensure that they undertake their duties and responsibilities with due diligence and avoid tensions with the communities.

Exclusion / discrimination of vulnerable group

There might be possible discrimination against certain groups, such as women and ethnic minority, leading to social inequality. Also, possible exclusion of female organizations in the use of fishing technologies and practices due to high illiterate levels among women. Likewise, long-standing gender gaps in fishing productivity that could impose challenge, exclusion of disabled women and girls in the process because of social stigmatization.

Mitigation Measures

- Training to be conducted to vulnerable groups on how to tap project opportunities
- Vulnerable groups such as women, ethnic minority and girls will be given priorities in opportunities which suit their demand and participation

Risks related to restriction to natural resources

Project activities might lead to restriction on access to land or use of other resources including communal property and natural resources such as marine and aquatic resources, timber and non-timber forest products, fresh water, medicinal plants, hunting and gathering grounds and grazing and cropping areas. According to the ESS 5 as described in the ESF experience and research indicate that physical and economic displacement, if unmitigated, may give rise to severe economic, social and environmental risks: production systems may be dismantled; people face impoverishment if their productive resources or other income sources are lost; people may be relocated to environments where their productive skills are less applicable and the competition for resources greater; community institutions and social networks may be weakened; kin groups may be dispersed; and cultural identity, traditional authority, and the potential for mutual help may be diminished or lost.

Mitigation Measures

As stated earlier under the ESS applicable for this project, land acquisition or involuntary resettlement are not anticipated, but if such need were to be identified during project execution, it would need to be managed in accordance with ESS5. A provision on this point will be specified in the ESCP. However, the project will prepare a Process Framework to cover possible loss of access to protected areas and adverse impacts associated with potential restrictions in access to natural resources in legally-designated parks and protected areas. A PF will be prepared to cover project support for plans developed to regulate use of MPAs, MCAs, MRs etc. or as part of implementation of FMPs, that may involve temporary livelihood displacement. This requirement has also been included in the ESCP.

5.6.3 Environmental risks and impacts, and mitigation measures

The exploitation of borrow pits/quarries and other natural resources
Extractions of water, construction materials from both authorized borrow pits and quarries on government land, communal land and on private-owned land are associated with rampant degradation with no efforts of restoration/re-vegetation.

Mitigation Measures

- The exploitation of construction materials will take place from authorized sources only
- Restoration of the borrow pits/quarries after use constituting of levelling the area and seeding or planting of trees and/or grasses will be done in association with local government (the department responsible for natural resources) and local environmental NGOs. If appropriate, the levelled area will be left for natural re-vegetation

Contamination and /Impaired Quality of Receiving Body – Land and Water

Main sources of construction waste are cleared vegetation and top-soil (overburden) and domestic waste from camps. During construction activities, various type of wastes will be generated including solid and liquid wastes. The wastes may contaminate land or be washed into local surface and ground water resources and impair the quality of these receiving bodies.

Mitigation measures

- Efficient collection and disposal system based on the principles of reduction, re-use and recycling of materials, shall be instituted at project areas;
- To reduce the cost of the project, much of the excavated soil and rubble materials will be reused as initial filling materials where levelling of runway, taxiway and apron is required;
- Introduction of waste disposal bins, warning notices, posted at strategic points;
- No, on site burial or open burning of solid waste shall be permitted;
- Wastes not suitable for incinerations and general municipal waste damping (e.g. Batteries, plastics, rubbers, tyres, etc) shall be removed for recycling, treatment, and/or disposal by licensed contractor as appropriate; and
- Instructions to contractor to put on his/her methodologies for handling hazardous waste such as oils, lubricants and non-combustible waste during bidding process.

Increased Solid waste management problem in project areas

Main sources of construction waste are cleared vegetation and top soil (overburden), scrape metals, asbestos, remnant of timbers and domestic waste from construction crews. During construction activities, various type of solid wastes will be generated including solid wastes from labourers camps and offices. The wastes may contaminate land or be washed into local surface and ground water resources and impair the quality of these receiving bodies. Other associated impacts include flies and increased bird population (attracted by food waste).

Mitigation Measures

i. All materials which can be reused shall be reused
ii. Materials that cannot be reused shall be sent to an authorised dumpsite
iii. The contractor shall have adequate facilities for handling the construction waste; and
iv. Topsoil shall be stockpiled and used for reclamation or re-vegetation at the site during landscaping.

Increase in Wastewater Management problems

The types of wastewaters generated during construction activities include sewage, gray water and process water. Sewage effluent from camps and associated buildings will be produced in the sanitary facilities provided and collected on site. Septic waste produced in scattered sites will also pose a problem to human health. This will be particularly severe if the waste is not collected directly and / or is released directly into the wild without any treatment. Gray sewage will pose less of a direct problem to human health but will be produced in large quantities in the camps. Hunting and process water will be generated from batching plants, equipment maintenance centers and ordinary sites. Wastewater discharge in the natural environment can pollute environment and causing unhygienic sanitary conditions and nuisances to the human perceptions.

Mitigation Measures

i. Wastewater shall be properly treated in the Septic Tank Before disposal into the Soak Away Pit within the site;
ii. The contractor shall be instructed to put in place an acceptable procedure for handling hazardous waste such as oils, lubricants and non-combustible waste; and

iii. Training on waste management shall be done for all personnel, operators and service providers.

Impacts on air quality due to emissions and dust

Construction activities have potential to emit dusts and noxious gases such as CO2, CO, NOx, SO2, VOC and CH4. Vehicles and equipment's with internal combustion engines have potential to emit noxious gases. Construction works that are likely to generate dusts are mainly related to the movement of materials and machinery and construction work. When dust is exceptionally fine and when the populations resident undergo an exposure prolonged and persistent (such as in proximity of a career) there are risks of attacks of the public health.

Impairment of air quality due to emissions

Mitigation measures

i. Equipment shall be maintained in good running condition and equipment, which generates excessive black smoke shall not be used;
ii. Enforce vehicle road restrictions to avoid excessive emissions from engine overloading, where practical switching off engines will be done when machines are not in use;
iii. There will be a routine inspection of equipment;
iv. Trucks transporting materials shall be fully covered; and,
v. Turn off engines to reduce idling.

Impairment of Air Quality Due to Dust

Mitigation Measures

i. Protect stockpiles of friable material subject to wind through wetting;
ii. Cover loads with friable material during transportation;
iii. Restrict speed on loose surface roads to 30 km/hr during dry or dusty conditions; and,
iv. Douse with water work sites with loose open soil to reduce dust generation when necessary.

Increase noise level

During construction works, the noises come mainly from the units of building site (power picks, mechanical shovels, cranes, concrete batching and mixing plant etc), trucks and semitrailers charged to transport materials as well as use of explosives (career of massive rock). The extent of the nuisance will depend on the spatial organization of the site and mainly the location of borrow pits, as well as the crushing plant, concrete plants and other noisy machines compared inhabited areas.

Mitigation measures

i. Vehicles carrying construction materials shall be restricted to work during night time only;
ii. Machine operators in various sections with significant noise levels shall be provided with noise protective gear; and,
iii. Ministry of Livestock and Fisheries, Ministry of Blue Economy and Fisheries and Deep Sea Fishing Authority shall include in tenders, employment contracts, subcontractor agreements and work method statements clauses that assure the minimization of noise and compliance with directions from management to minimize noise;
iv. Ensure that site managers periodically check the site, nearby residences and other sensitive receptors for noise problems so that solutions can be quickly applied;

v. Avoiding the use of radios and stereos outdoors and the overuse of public address systems where students/teachers and dwellers can be affected;
vi. Avoid shouting, and minimize talking loudly and slamming vehicle doors;

Increase in vibration level

Construction activity can result in varying degrees of ground vibration, depending on equipment and Method Employed. Vibration will be produced by construction vehicles, plant and machinery during delivery of materials, processing of materials, and actual construction work. The Construction activities that typically generate the most severe vibrations are blasting and impact pile driving for foundation. Due to an increase in activities and number of operational vehicles, the impacts vibration will cause disturbance to neighbours and physical damage to properties near the construction site.

Mitigation Measures

i. Impact pile driving shall be avoided where possible in vibration-sensitive areas; and,
ii. Vibratory rollers and packers shall be avoided.

Erosion and land degradation of Exposed Surfaces

Inadequate compaction and resurfacing compounded by rain, trampling, vegetation clearance etc. may cause erosion and consequent sediment load in runoffs. This is mostly likely to happen if construction is undertaken during the months of rain seasons -heavy rains.

Mitigation Measures

i. Construction will be done as per engineering design and procedure of which a maximum requirement of compaction strength is achieved during the construction. That is the maximum dry density (MDD) specified in the design manual by the consultant;
ii. Maintain gravel fill and/or re-vegetate around the structures;
iii. Unnecessary ground clearance and sensitive re-alignments shall be avoided;
iv. Directing flow to properly designated channels;
v. All excavation works shall be properly backfilled and compacted; and,
vi. Most of the construction activities will be done during dry weather.

Biodiversity impacts (Loss of flora (vegetation including mangroves) and fauna)

There might be a loss of vegetation both during the construction of subprojects, among others. The vegetation will be cleared in the area where the construction work is to take place is clear for the construction work to be performed. These activities will expose the land to elements of erosion such as wind and water and thus could trigger the process of land degradation. There could also be some rare or endangered species near the subproject area, and therefore the impact on rare and endangered species of flora and fauna cannot be ruled out.

Mitigation Measures

i. Clearance of patches of native forest remaining in the neighbourhood of the proposed project shall be avoided;

ii. Close supervision of earthworks shall be observed to confine land clearance within the project site;
iii. An appropriate landscaping programme to help in the re-vegetation of part of the project area after construction shall be designed and implemented.

5.7 Potential Environmental and Social Impacts during operation

5.7.1 Potential Social benefits and their enhancement measures

Poverty reduction

The program will lead to an increase in productivity of fishing activities, as well as improved quality and accessibility of fishing services thus improving the incomes and overall welfare and quality of life of coastal communities, especially the rural poor and vulnerable. Thus, aiming on poverty reduction.

Increased food security

The program will lead to increases in fish production and productivity, thus contributing to both a reduction in poverty and an increase in food security. Food security is largely a function of poverty and low incomes. Any measures that contribute to a reduction in poverty will increase food security.

Job creation and gender equality

The program will create employment opportunities for the local population, thus helping to reduce unemployment and poverty. Moreover, the program can contribute to gender equality by providing employment opportunities and training for women, as well as promoting gender-sensitive policies and practices.

Improved fishing infrastructure

Fishing infrastructure development and value addition sub-projects will be implemented during the program and improve its structures entirery.

Economic and community development

The program can stimulate economic development in coastal areas, leading to increase income and improved living standards for the local inhabitants. Also, the program will help to build strong and vibrant communities, improving social cohesion, and quality of life for the local people.

5.7.2 Negative Social risks and impacts and mitigation measures

Gender and vulnerable group discrimination

There might be possible discrimination against certain groups, such as women and ethnic minority, leading to social inequality. Also, possible exclusion of female organizations in the use of fishing technologies and practices due to high illiterate levels among women. Likewise, long-standing gender gaps in fishing productivity that could impose challenge, exclusion of disabled women and girls in the process because of social stigmatization.

Spread of diseases

Possible spread of communicable diseases such as HIV/AIDS due to migrant worker influx. Also, community health and safety risks may be encountered due to construction activities.

Traffic interruptions and accident

Traffic interruptions and accidents during construction of irrigation schemes and post-harvest facilities, as well as during the implementation of other subproject activities may be observed.

Social tensions

The program can lead to social tensions within communities, as different groups may have different interests and agendas.

5.7.3 Negative Environmental risks and impacts, and mitigation measures

Eutrophication of effluent receiving ecosystems

During operation phase of the fish markets would generate wastewater from fish processing and marketing activities, and would have potential health and safety risks and hazards associated with fish processing and storage facilities leading to eutrophication. Eutrophication of effluent-receiving ecosystems can have profound environmental impacts. When nutrient-rich effluents, such as sewage or agricultural runoff, enter water bodies, they can lead to excessive growth of algae and aquatic plants. This process, known as eutrophication, can deplete oxygen levels in the water, causing hypoxia or "dead zones" where aquatic life cannot survive. The imbalance in the ecosystem can lead to the loss of biodiversity, harm to fisheries, and degradation of water quality. Additionally, the decay of algal blooms can produce harmful toxins, posing risks to both wildlife and human health. Addressing eutrophication requires reducing nutrient inputs and implementing sustainable management practices to protect these vital ecosystems.

Mitigation measures

i. Regularly monitoring water quality and restoring affected ecosystems through measures like aeration, biomanipulation, and nutrient inactivation can help mitigate the effects of eutrophication.
ii. Educating communities about the causes and consequences of eutrophication and promoting practices such as proper disposal of household chemicals and reducing the use of lawn fertilizers can make a difference.

Salinization of soils

Fishing activities, particularly aquaculture, can contribute to soil salinization in several ways such as saltwater intrusion whereas **c**oastal aquaculture often involves the use of saltwater ponds. If these ponds are not properly managed, saltwater can seep into the surrounding soil, increasing its salinity. Also, in areas where aquaculture ponds are used, the evaporation of water can leave behind salts, which accumulate in the soil over time. Fishing activities can also lead to the discharge of saline water from aquaculture operations into nearby land or freshwater bodies can lead to the salinization of soils and water sources. Lastly destruction of Mangroves by converting them into aquaculture ponds can disrupt natural coastal processes and lead to increased soil salinity. Mangroves play a crucial role in maintaining the balance of salt and freshwater in coastal ecosystems

Mitigation measures

i. Using efficient irrigation methods like drip irrigation can help minimize the amount of water applied to the soil, reducing the risk of salt accumulation.
ii. Periodically applying excess water to the soil can help flush out accumulated salts. This process, known as leaching, is particularly effective in areas with good drainage.
iii. Adding organic matter or gypsum to the soil can improve its structure and enhance its ability to leach salts. Organic matter increases soil permeability, while gypsum helps displace sodium ions.
iv. Planting salt-tolerant crops can help maintain agricultural productivity in saline soils. Crops like barley, sugar beet, and certain varieties of rice are more tolerant to salinity

Health and Safety Risks Due to Fire Hazards

Buildings are very prone to fire hazards because of different types of combustible materials and machines, which are used and installed, respectively. Electrical fault is by large the main culprit in fire accidents in buildings in Tanzania. The components of a fire are fuel (combustible substance), heat and oxygen. Unless all three are present fire will not occur. Fire can cause the following effects:

- Loss of lives;
- Serious Injuries;
- Loss of properties etc.

Mitigation measures

- The project will prepare Environment, Health and Safety Guidelines (EHSG) to mitigate the health and safety risks.
- Adequate number of portable fire extinguishers shall be placed at strategic locations;
- Good housekeeping shall be maintained at all sites to reduce the fire risk;
- The design of buildings shall strictly adhere to the Fire Safety Standards;
- Fire detectors and sprinkler system shall be installed in the buildings; and
- The proponent shall insure buildings against fire Hazards.

Impacts on marine biodiversity

Operation of fish landing site could have impacts on marine biodiversity. Potential impacts include introduction of invasive flora species, which may become invasive and harm native species; loss of high value trees and plant species especially those with medicinal value; potential damage to aquatic habitats; and habitat destruction and loss of overall biodiversity including flora and fauna. Such areas of ecological sensitivity may include all aquatic and marine ecosystem in project areas.

Mitigation Measures

i. The TASFAM project will need to ensure that ecologically important areas of marine ecosystem are not negatively affected, according to the WB and the country's environmental regulations and guidelines.
ii. Establishing and effectively managing MPAs can provide safe havens for marine species, protect critical habitats, and allow ecosystems to recover from human impacts.
iii. TASFAM project will reduce marine pollution from land-based sources, such as plastics, chemicals, and runoff from fishing activities, prevent habitat degradation and protect marine life. Proper waste management, reducing single-use plastics, and promoting clean-up initiatives are essential steps.

Impacts of Overfishing and Seafood Harvesting

TASFAM activities might lead to depletion of fish stocks by reducing the population of fish species to unsustainable levels, threatening their ability to reproduce and recover. It can also lead to potential extinction of certain species, disrupting marine food webs and ecosystems.

Mitigation Measures

i. Sustainable Fishing Practices**:** Implementing quotas, size limits, and seasonal closures to ensure fish populations can replenish. Encouraging the use of selective fishing gear to reduce bycatch.
ii. Marine Protected Areas (MPAs)**:** Establishing no-fishing zones to protect critical habitats and allow fish populations to recover.
iii. Fisheries Management**:** Enforcing regulations and monitoring fish stocks to maintain sustainable harvest levels. Promoting adaptive management practices that respond to changing conditions.
iv. Aquaculture**:** Supporting sustainable aquaculture practices to reduce pressure on wild fish stocks while ensuring minimal environmental impact.
v. Consumer Awareness: Educating consumers about sustainable seafood choices and promoting certification programs like the Marine Stewardship Council (MSC) to

Risks related to eco-tourism and lack of access to natural resources

TASFAM will promote ecotourism through its selected activities. Ecotourism can lead to risks such as environmental Impact whereas it can lead to habitat destruction, wildlife disturbance, and pollution. Also, excessive numbers of visitors can exceed the carrying capacity of a destination, leading to resource degradation and loss of biodiversity. Eco-tourism can disrupt local cultures and traditions, leading to cultural erosion and loss of identity. The economic benefits of eco-tourism are not always evenly distributed, often leaving local communities with minimal financial gain and lastly travellers may face health risks such as gastrointestinal and respiratory infections, vector-borne diseases, and injuries from risky activities. On the other side TASFAM might lead to

lack of access to natural resources for certain communities which might lead to social conflicts and economic loss to such communities.

Mitigation measures

i. Encourage the use of eco-friendly practices such as waste reduction, recycling, and the use of renewable energy sources in eco-tourism operations. Promote the use of biodegradable products and minimize single-use plastics.
ii. Limit the number of visitors to natural areas to prevent over-tourism. Implement reservation systems, permit requirements, and visitor quotas to control the flow of tourists.
iii. Engage local communities in eco-tourism planning and decision-making processes. Ensure that they benefit economically from eco-tourism activities through employment opportunities and revenue-sharing.
iv. Support and fund conservation projects aimed at protecting wildlife, habitats, and ecosystems. This can include reforestation, habitat restoration, and wildlife protection programs.

Occupational Health and safety impacts

Occupational health and safety impacts associated with confined spaces in fish processing operations (e.g., storage areas, boat holds) are common to most industries. Other physical hazards include falls caused by slippery floors and stairs; equipment safety issues associated with filleting knives and other sharp tools; and cuts from sharp edges on process equipment. The fish processing facilities are also associated with biological hazards such as workers involved in manual gutting, skinning, and general handling of fish and shellfish may develop infections and or allergic reactions resulting from exposure to the fish itself, or bacteria on the fish. Water spraying processes may result in the formation of aerosols with bacteria that can be inhaled. Furthermore, fish processing activities may include a variety of situations in which workers can be exposed to lifting, carrying, repetitive work, and work posture injuries. Many of the manual operations in less mechanized fish processing plants include lifting heavy boxes of raw materials. Repetitive strain injuries may result from manual filleting and trimming operations. Exposure to chemicals (including gases and vapors) includes handling chemicals such as chlorine and acids that are related to cleaning operations and disinfection in process areas. Occupational health and safety impacts associated with confined spaces in fish processing operations (e.g. storage areas, boat holds) are common to most industries.

Mitigation Measures

- The project will prepare Environment, Health and Safety Guidelines (EHSG) to mitigate the health and safety risks.
- Appropriate working gear (such as nose, ear and mouth masks and clothing) and good construction site management shall be provided;
- During construction, the contractor shall ensure that the construction site is fenced and hygienically kept with adequate provision of facilities including waste disposal receptacles, sewage, firefighting and clean and safe water supply;
- A well-stocked First Aid kit (administered by medical personnel) shall be maintained at the construction site. The medical personnel shall also be responsible for the primary

treatment of ailments and other minor medical cases as well as providing health education to the workforce;

- Reporting mechanisms for the public to register concerns or complaints regarding perceived risks to their health and safety due to the construction operation shall be put in place;
- Emergency contact details in the event of an accident shall be provided;
- Training all contractor staff in emergency planning and spill response; and
- Developing a detailed health and safety plan and training all contractor staff on the plan.

Noise and vibration

Noise and vibration exposure may result from proximity to noisy machinery (e.g. compressors, automatic packing machinery, condensers, ventilation units, and pressurized air).

Mitigation measure

i. Increase proximity to the machine
ii. Use of sound suppressing materials where appropriate
iii. Use of noise barrier

5.8 Management of the environmental and social impacts

Most of the identified impacts are site-specific and short term which will can be adequately managed during project implementation in accordance with the Environmental and Social Management Framework (ESMF). Others impacts might be of significant nature and longterm. These will be adequately managed in accordance with site specific instruments (ESIA and their ESMPs) that will be prepared for the subprojects. All civil works/construction activities would be guided by site-specific Environmental and Social Management Plans (ESMPs) and appropriate tools such as Health and Safety Management Plans (HSMP), Traffic Management Plans (TMPs), GBV/SEA/SH Management Plan, BMPs, CHMPs, WMPs and RSMPs. Furthermore, the potential cumulative impacts/risks will be addressed during the preparation of site specific ESIAs and its ESMPs of the subprojects and during the preparation of Strategic Environmental Assessment (SEA) for the TA, policies, plans and guideline preparation studies.

CHAPTER SIX

PROCEDURES TO ADDRESS ENVIRONMENT AND SOCIAL ISSUES

6.1 Introduction

This chapter provides specific stages to be taken for environmental and social screening process, review and approval of TASFAM project activities. Once the project components have been identified and locations selected, project implementing team will have to use this section as the guideline for screening project component and implementing the appropriate measures while ensuring compliance to all respective WB environmental and social framework (ESF) and country's legislative requirements for screening environmental and social impacts for development projects as stipulated in Environmental Impact Assessment and Audit (Amendment) Regulations, 2018. The procedures presented in this section are established as a framework to ensure compliance throughout project cycle i.e. identification, preparation and implementation.

6.2 Environmental and Social Screening and Review Procedures for Project Components

Environmental and social screening process helps to foresee whether the future project activities are likely to have potential adverse impacts. The process identifies impacts and proposed mitigation measures; incorporates mitigation measures into project design; and reviews and approves project components proposal. In addition, the screening process and other procedures specified in the ESMF will apply to all project components financed under TASFAM project.

The World Bank is committed to supporting Borrowers (MLF, MBEF, & DSFA) in the development and implementation of environmentally and socially sustainable projects and enhancing the capacity of Borrowers' environmental and social frameworks to assess Borrowers' environmental and social frameworks and manage the environmental and social risks and impacts of projects. Therefore, projects that receive funding from the World Bank require an assessment of environmental and social risks or impacts posed by the project. An environmental and social screening is a process that "examines the issues and impacts associated with a project consists of a program and/or series of sub-projects and the impacts cannot be determined until the program or sub details have been identified." The E&S screening lays out the guidelines and procedures for assessing future proposed subprojects' environmental and social impacts and defines measures to mitigate, manage, and monitor those impacts.

The objectives of the environmental and social screening are to:-

- To establish clear procedures and methodologies for screening subprojects, undertaking the required level of environmental and social assessment;
- To guide on the preparation of appropriate E&S instruments {namely Environmental and Social Impact Assessments (ESIA), Environmental and Social Management Plans (ESMPs), Health and Safety Management Plans (HSMP), Traffic Management Plans (TMPs), GBV/SEA/SH Management Plan, BMPs, CHMPs, WMPs and RSMPs} review, approval and monitoring implementation of subprojects to be financed under the Project;
- Describe the process for the preparation of various relevant environmental and social documents;
- Provide procedures for filing grievances and resolving disputes associated with various subproject activities/phases;

- To specify appropriate roles and responsibilities, and outline the necessary reporting procedures, for managing and monitoring environmental and social concerns related to subprojects;
- To determine the training, capacity building, and technical assistance needed to successfully implement the provisions of the ESMF; and
- To establish the budget required to implement the ESMF requirements/E&S instruments.

6.3 Sub-Project Preparation, Review, and Approval

As specific projects and locations have been identified, the screening, assessing, managing and monitoring of potential subproject EHS direct, indirect and cumulative impacts and risks of such projects will be identified. Most of the subprojects and other project activities requiring the use of the ESMF fall under Components 1, 2, and 3 of the project, because they involve public, private, or community-based business development and creation activities and new or expanded entrepreneurial ventures. Some subprojects may involve infrastructure investments.

6.4 Possible Types of Sub-Projects

Several sub-projects may be developed based on research and capacity-building efforts undertaken by TASFAM as shown in **Table 6.1**.

Table 6.1: Possible Types of Subprojects

Project Sub-component	Possible Subproject	Comments
Component 1		
1.1.3. Intensification of information systems for increased economic benefits and productivity to communities (ICT to PFZs)	Establishment of Fisheries information centers for marine fisheries resources	The subproject involves the construction of infrastructures that must conduct ESIAs and ESMP. These assessments for construction phase and operation and maintenance phase will include a focus on resource efficiency, particularly in terms of water and energy use, in accordance with ESS3. Additionally, the design and construction phases will address ESS4 issues, including infrastructure and equipment design and safety, safety of services, traffic and road safety, and emergency preparedness and response. Furthermore, the design will incorporate considerations for potential natural disasters and climate change impacts to enhance resilience.
1.2.3. MPAs and MCS Centres in coastal areas strengthened	Construct 3 Outpost Office at Ushongo Pangani, Nyororo Mafia, and Kigamboni DSM for management of MPA and collection center for tourism revenues	The subproject involves the construction of infrastructures that must undertake ESIAs and ESMP

Project Sub-component	Possible Subproject	Comments
1.2.4. Strengthening Seaweed production systems for increased production	Construct five seaweed warehouses in Mtwara DC, Kilwa, Lindi MC, Mafia, and Mkinga	The subproject involves the construction of infrastructures that must have undetaken ESIAs and ESMP that will address among other issues related to ESS 3 and ESS 4.
	Construct ten seaweed drying facilities in Mtwara DC, Lindi DC, Lindi MC, Kilwa, Mkuranga, Mafia, Bagamoyo, Pangani, Tanga, and Mkinga.	
1.3.2. Promote Eco-tourism in MPAs	Construction of natural steps at Hamahama Pond (Mlola Forest), Blue Lagoon (Juani), boardwalk at Ras Kisimani, and natural trails at Mlola Forest at MIMP for improving tourist attraction site Construction of (MIMP).	The subproject involves construction activities that must undertake ESIAs and ESMP
Component 2		
2.3.1. Fisheries and aquaculture value chain enabling environment in place to support the growth of the sector and the people that use aquatic resource Construction, Extension, and rehabilitation of Fisheries sector institutions (Hatchery, ZAFIRI, Nyangumi House)	Facilitate the establishment of TAFIRI Marine Research Substations in Mtwara	The subproject involves the construction of infrastructures that must undertake ESIAs and ESMP
	Construction and facilitation of TAFIRI Dar Centre Administration Block	
	Construction and facilitation of TAFIRI Dar Centre Conference Centre	
	Construct and facilitate the operation of the Tawalani Mariculture Centre in Tanga.	
	Construction of Fisheries Resource Centres (BMUs) in 6 LGAs in coastal Districts	
	Construct 3 jetties at DMRS, MBREMP & TACMP	
	Construct 4 visitor centers and 3 accommodation centers in 4 MPAs: MIMP, MBREMP, TACMP, and DMRS	
	Construct 8 tented camps in 4 MPAs	
	Establish a Mariculture Lab for training purposes at FETA Mbegani	
	Construction of 3 classrooms and a Lab at FETA Mikindani	
2.4.1. To reduce post-harvest losses of fish and fisheries products through best practices	Construction and facilitation of fish landing Sites at Somanga, Sahare, Bagamoyo and Kisiju,	The subproject involves the construction of infrastructures that must undertake ESIAs and ESMP
	Construction of Fish Market and Cold Storage at Somanga	
	Construct pilot processing technologies of dagaa using alternative energy source –MAFIA	
	Improve artisanal fisheries infrastructure Promote investment in small and medium fisheries processing centers.	

Project Sub-component	Possible Subproject	Comments
2.5.1. Enabling environment for public/private partnerships created	Construction of Government - Private Operated Ice Making Plant at Bagamoyo.	The subproject involves the construction of infrastructures that must undertake ESIAs and ESMP
	Construction of Government - Private Operated Ice Making Plant at Kisiju, Mkuranga.	
	Construction of Government - Private Operated Ice Making Plant at Ferry market in Dar es Salaam.	
	Construction of 40 tons cold room at Ras Mkwavi Kigamboni, Dar es Salaam	
	Rehabilitation Engineering Workshop and small vessel Slipway at Ras Mkwavi Docking area.	
Component 3		
3.3.3. Extension Services	Construction of Fisheries and Aquaculture Coordination Centres at Tawalani Tanga and Lindi Regions	The subproject involves the construction of infrastructures that must undertake ESIAs and ESMP

6.5 Project Exclusion List

Projects involving unlawful fisheries-related or other economic activities or those that may have significant adverse environmental or social implications would be barred from consideration. Projects and subprojects involving the following aspects will be excluded from funding under TASFAM:

- Subprojects that use land of national parks, natural reserves, world heritage, historical-cultural sites, nationally protected landscapes, and biosphere conservation sites;
- Projects that cause significant conversion or degradation of critical natural habitats, such as converting mangrove forests to fishponds or other land uses, or other unsustainable cutting of mangrove forests;
- Illegal fishing activities involving dynamite or illegally-sized fishing nets;
- Projects that physically block or restrict fishers' access to the water (e.g., walled hotels or other shoreline obstructions or barriers that physically prevent fishers from accessing or launching their boats using customary or longstanding paths, roads, or other rights of way);
- Activities that involve removal or destruction of physical, and cultural resources; and
- Activities that involve high social impacts such as involuntary resettlement of individuals or households.
- Activities or subprojects that causes significant conversion or degradation of critical natural habitats or cultural heritage sites.
- Activities or subprojects that causes air, water, or soil contamination leading to significant adverse impacts on the health or safety of individuals, communities, or ecosystems.
- Activities or subprojects that causes workplace conditions that expose workers to significant health and personal safety risks.

- Activities that warrant land acquisition and/or resettlement of a scale or nature that will have significant adverse impacts on affected people, or the use of forced evictions without demonstration of mechanism to mitigate it.
- Activities or subprojects that causes large-scale changes in land use or access to land and/or natural resources.
- Activities or subprojects that causes adverse environmental and social impacts covering large geographical areas, including transboundary impacts, or global impacts such as greenhouse gas (GHG) emissions.
- Activities or subprojects that causes significant cumulative, induced, or indirect impacts.
- Activities that involve the use of forced or child labour.
- Activities or subprojects that causes the marginalization of, or conflict within or among, social groups; or
- Activities with high risk of GBV and SEA.
- Activities that would (a) have adverse impacts on land and natural resources subject to traditional ownership or under customary use or occupation; (b) cause the relocation of VMGs from land and natural resources that are subject to traditional ownership or under customary use or occupation; or (c) have significant impacts on cultural heritage that is material to the identity and/or cultural, ceremonial, or spiritual aspects of the affected communities.

6.6 Proposed Screening Review and Appraisal Process

Table 6.2: Subproject Screening and Review Process

1. The Project implementing agency shall complete the environmental and social screening checklist (**Appendix 1**), with the help of implementing partner (Local Government Authorities (LGAs);
2. The initial Checklist is provided to the District Environmental Officer, who conducts a Desk Review;
3. If all questions are answered "No" there is no significant environmental impact and no environmental approval is needed to proceed with other preparations for the project;
4. Suppose checklist completion indicates a Simple Environmental Review (**Appendix II**) or Limited Environmental Assessment (**Appendix III**) is required. In that case, the District Environmental Officer Proponent will conduct this in consultation with the Proponent. The environmental officer may decide to conduct a field appraisal, using one of the two forms as the template for the review;
5. Once the District Environmental Officer has verified the form(s) needed by the project proponent have been correctly completed, the forms should be presented to the TASFAM PIU as part of the overall subproject proposal appraisal process;
6. The proponent will consult with NEMC (Mainland Tanzania) or the Zanzibar Environmental Management Authority (ZEMA) for the for screening to decide what further studies will be needed (**Tables 6.3 and 6.4**). The impacts are classified based on their risk/risk category level using the screening template and field appraisal. Mainland Tanzania outlines which projects require an ESIA and which projects may or may not require an ESIA (**see Appendix IV and V**), while Zanzibar identifies which projects require an ESIA certificate and which ones do not require an ESIA (**see Appendix VI**). In making the decision on whether an ESIA is necessary, it is essential to also consider the World Bank Environmental and Social Framework (ESF) and its Environmental and Social Standards (ESSs) criteria. Subprojects that trigger national

ESIA requirements will be sent to the appropriate government agency, which in Mainland Tanzania is the NEMC, and in Zanzibar is ZEMA. In terms of World Bank ESF and Bank classifications, it is expected that, except for Project-imposed fishing access controls (which are dealt with through the Process Framework), the risk rating for the project has been categorized as **HIGH**.

7. In line with the requirements of the World Bank Environmental and Social Framework (ESF), the proponent will also need to prepare an Environmental and Social Management Plan (ESMP) specifically for the construction of buildings and facilities. Once NEMC or ZEMA has reviewed the ESIA and ESMP and if they are approved, they will be presented to the TASFAM PIU as part of the overall subproject appraisal process; other tools such as HSMP, TMPs, GBV/SEA/SH MPs, BMPs, CHMPs, WMPs and RSMPs will also be prepared based on the type pf the proposed activity, and
8. Steps 6 and 7 both require that information on the project, including whatever environmental assessment is carried out, be disclosed at the District level and to the community where the project will take place.

6.7 Screening Procedures for Tanzania

6.7.1 Screening procedures for Tanzania Mainland

Once the project component has been screened and approved by World Bank, the project implementation institutions will hire an environmental consultant who will conduct the environmental and Social Impact assessment. The assessment will be based on WB environmental and social framework (ESF) as well as Environmental Management Act, 2004; ESIA and Audit (Amendment) Regulations, 2018, in which upon submission to NEMC, the environmental authority shall advise on the nature of information and instrument required for approval decision of the sub-project. When necessary NEMC/or other authorities might require that other additional studies are needed. **Table 6.3** shows categories of the project identified in ESIA and Audit (Amendment) Regulations, 2018. Two outcomes of screening at NEMC are possible; No ESIA required or ESIA required.

Table 0.3: Category of the project and instrument as per the Tanzanian Environmental Laws and Regulations

Category	Required submissions for screening	Instrument	Other instruments to be prepared based on the nature of the activity
A- Mandatory project	Scoping	ESIA (ESMP)	HSMP, TMPs, GBV/SEA/SH MPs, BMPs, CHMPs, WMPs and RSMPs, EHSGs.
B1- Borderline project	Scoping report	ESIA (ESMP)	
B2- Non-mandatory	Project brief	EMP/ESMP	
Special category	Scoping	ESIA	

If the project is under category 'B2", Project implementer shall hire environmental expert to prepare the project brief under supervision of project implementation unit. Where the Council is satisfied that the potential impacts will be sufficiently managed by application of proposed mitigation measures in project design, and the project would not cause significant negative impacts; the subproject will not require an ESIA. NEMC may recommend to the Minister to approve the project and issue a certificate.

In the event that a subproject is screened and found to be in category A, B1 or Special; it will be categorized for detailed assessment, and a full ESIA (involving scoping and development of TOR followed by detailed impact assessment study) will be required. For project component that may result into involuntary resettlement or displacement (including economic displacement), the project implementing institution will be required to submit a RAP to the relevant authority for approval. Moreover, the project implementer will be responsible for sourcing and paying for the service of environmental impact assessment from the consultant, review costs and charges for certificate at NEMC. This level of assessment may require a team of experienced Environmental and Social specialists/consultants.

6.7.2 Screening Procedures for Zanzibar Island

The proponent of any project listed in **Appendix VI** of the Environment Impact Assessment (procedures) Regulations, 2002 is required to register with ZEMA by submitting an application, together with the feasibility study, business plan or concept note explaining the scope of the project. Based on this information, the ZEMA will make a decision on the level of environmental assessment that needs to be undertaken, and which procedure applies (**Table 6.4**).

Table 6.4: Screening results in Zanzibar

Type of project	Instrument	Other instruments based on the nature of the activity
Proposed projects with insignificant or no social and environmental impacts	Direct clearance	HSMP, TMPs, GBV/SEA/SH MPs, BMPs, CHMPs, WMPs and RSMPs, EHSGs
Proposed projects with limited social and environmental impacts	Environment Report	
Proposed projects with potential significant social and environmental impacts	Environmental and Social Impact Assessment	
For existing projects with limited social and environmental impacts	Pre-audit	
For existing projects with potential significant and environmental impacts	Audit	

6.8 Approval of project components

Environmental and Social Specialist at the institution level in collaboration with client will have the mandate to clear the project sub-components designs and proposals that comply with environmental and social management and then submitting to World Bank for approval. Generally, the project document is accompanied with the copy of completed environmental and social screening forms. During the approval processes the following documents must be submitted for considerations; a) Environmental and Social Screening results, b) Environmental and social checklists, c) project proposal, designs and implementation schedule, d) Environmental clearance or Certificate for project components that undertook ESIA, and e) Environmental and Social Management Plan (ESMP) and other plans such as HSMP, TMPs, GBV/SEA/SH MPs, BMPs, CHMPs, WMPs and RSMPs as necessary. The World Bank will review and clear subprojects after satisfactorily confirming that, the project design have identified and considered environmental and social impacts, mitigation plan, management plan, monitoring plan and institutional measures to be undertaken during implementation and operation of the subproject (**Table 6.5).**

Table 6.5: Project Preparation Assistance and Approvals by Type of Subproject

Project Subcomponent	**Subproject Type**	**Proponent or beneficiary**	**Project Preparation & Approval Authority**
1.1 Sustainable Utilization and Marine Resources	To strengthen the Fisheries and Aquaculture resources monitoring to guide management decisions at various levels of governance for planning, policy harmonization, and information exchange among the authorities	MPRU, LGAs, BMUs.	Preparation Assistance: PIU Approval: PIU
2.1 Strengthening Institutional reform to realize blue economy development in Tanzania	Policies and legal framework works developed and implemented	Private entrepreneurs MPRU, FETA, TAFIRI and DFS	Preparation assistance: Implementing partner Approval: PIU
2.3Supporting investment in Fisheries and Aquaculture infrastructure and facilities	The fisheries and Aquaculture value chain enables the environment in place to support the growth of the sector and the people who use Aquatic resources.	TAFIRI, DAQLGAs, BMUs, MPRU, FETA and DRTE	Preparation Assistance: PIU Approval: PIU
3.1 Facilitating coastal community's engagement in the protection and safeguarding of marine and coastal resources	Strengthen co-management structure and intra and interagency collaboration	BMUs, CFMAs, MLF, PO-RALG	Preparation Assistance: PIU Approval: PIU

6.9 Preparation of Environmental and Social Instruments

6.9.1 Preparation of ESIA and ESMP

An ESIA along with an ESMP shall be prepared based on the outlines given in the ESIA and Audit Amended Regulations of 2018 for the Tanzania mainland. ESIA procedures are attached as **Appendix XI** while the indicative outline for the ESIA report as per ESS1 is attached as **Appendix XII**. ESIAs will address direct, indirect, induced and cumulative impacts. ESIA and ESMPs will have to be submitted to NEMC as well as the World Bank approval and for obtaining certification as appropriate. In this situation environmental procedures (from registration, scoping, to preparation of ESMPs/ESIA, review, to issuing of an ESIA certificate) as provided by NEMC will apply. Apart from adhering to report structure and content, the ESIA shall have attachment on summary of public consultations carried out, Terms of Reference for which guided preparation of an ESIA and drawings for the project component. Detailed content for ESIA and Scoping reports as well as submission criteria for category A, B1 and B2 projects are described in ESIA and Audit Regulations of 2005 and its Amendment of 2018.

The ESMP shall provide all mitigations with associated monitoring measures as well as responsible institution for particular action. The ESMF requires the ESMP to be implemented during implementation and operations of all project components under TASFAM project. This will be done to minimize identified adverse environmental and social impacts to levels that will not have negative impact to the nearby surrounding or area of influence. The ESMP will be one of the crucial documents for submission during approval of the project component and will be made part of the legal contract for contractors to ensure its compliance. Key aspects of the ESMP are described hereunder; every mitigation measure shall be well explained and how it will be implemented. In case the implementation will involve other institutions apart from the implementing institution then other institutions will also be mentioned and their specific roles for implementing the mitigation measure and implementation costs

6.10 Monitoring of Environmental and Social Impact Assessment and Environmental and Social Management Plan

The monitoring is a process for assessing the effectiveness of the mitigation measure applied for specific impacts by observing the response of the indicator of the impact. The objectives for monitoring are: (i) to alert project implementing institutions and to provide timely information about the success or otherwise of the ESIA process as outlined in this ESMF in such a manner that changes to the system can be made, if required; (ii) to make a final evaluation in order to determine whether the mitigation measures designed into the infrastructure projects have been successful in such a way that the pre-infrastructure project environmental and social condition has been restored, improved upon or worse than before.

In order to assess whether these goals are met, the infrastructure projects will indicate parameters to be monitored, institute monitoring milestones and provide resources necessary to carry out the

monitoring activities. Environmental monitoring activities will be based on parameter to be measured/ direct or indirect indicators of emissions, noise, effluents, resource use applicable to the particular project as well as indicators of social impacts of the project. Monitoring activities will indicate methods to be used to measure a specific parameter, sampling locations and frequency. Monitoring frequency will be sufficient to provide representative data for the parameter being monitored. The monitoring will be conducted by trained individuals, following monitoring and record-keeping procedures and using properly calibrated and maintained equipment. The monitoring data will be analysed and reviewed at regular intervals and compared with the operating standards based on Tanzanian Standards/WHO standards. The ESMP will also provide specific period set for monitoring purposes because some of the impacts are short term and others are long terms. Therefore, it will reach a time when monitoring of short-term impacts will cease while the long term one will continue. The ESMP will also be cost effective to avoid unnecessary costs. The following are indicators for monitoring of the implementation of mitigation plans for TASFAM subprojects.

6.10.1 Environmental Indicators

The indicators for environmental monitoring include:

- Air quality - particulate pollution, noise pollution
- Water quality - chemical content, sediment load and bacterial counts
- Bio-indicators of environmental conditions - presence or absence of selected species of mammals, reptiles, birds, insects and aquatic animals
- Vegetation change

6.10.2 Social Indicators

- Levels of decision-making of affected people
- Availability of number of GBV cases and how they were solved/attended
- Availability/provision of post violence legal aid to affected people
- Number of gender discrimination cases and how they were attended
- Level of understanding of project impacts and mitigation/ resettlement options
- Effectiveness of local authorities to make decisions
- Frequency and quality of public meetings
- Degree of involvement of women or disadvantaged groups in discussions

- Height-weight ratio for children to measure nutritional status and food security
- Malaria prevalence, bilharzia (intestinal and urinary), and water-borne vector diseases (blood and stool testing)
- Amount of waste generation and disposal from camps as well as rubbish disposal and sanitation arrangements for camps
- Availability of water use and safe drinking water
- Conditions of local dispensaries and staffing
- Availability of STD/VCT Services for addressing HIV/AIDS issues and prevention program for project area and camps
- Quality of buildings in project area and temporary dwellings for worker camps

- Effectiveness of compensation payments and procedures
- Effectiveness of resettlement of affected families and procedure -provisions for support in relocation
- Traffic safety
- Worker safety, referral system to hospitals and work site inspections
- Effectiveness of Grievance Redress Mechanisms (GRMs)
- Levels of employment of local people on the project site
- Percentage of Population influx and general security in the project area

6.11 Preparation of Resettlement Action Plan (RAP)

Project components will be mostly sited on the current location of existing infrastructure. Where land is required, i.e expansion or extension, the project will utilize land acquired from individuals. Compensation procedures and payment of compensation costs for physical and economic displacement will be in accordance with RAPs prepared and approved for respective subprojects in accordance with the Resettlement Policy Framework (RPF) developed in parallel with ESMF.

6.12 Consultation and Disclosure of Environmental and Social Documents

6.12.1 Consultation

Stakeholder consultation will be done to people affected by land acquisition, utility service providers, Districts/municipalities, wards, Ministries, vulnerable groups and other interested parties. This will continue throughout the project life i.e. design, during construction and operation. This includes during preparation of E&S instruments. Participation needs to be meaningful and inclusive of all stakeholders and communities, with emphasis on gender, ethnicity, income groups, minorities and vulnerable people.

However, the level of stakeholder engagement will depend on subproject phase, location, likelihood and magnitude of impacts. The project will provide all required information but will focus on meaningful engagement involving dialogue and discussion. All consultations for project related investments will be a two-way dialogue with provision of project related information and obtaining feedback from participants. Collected feedback will need be used to improve project design and mitigation plans. Consultations such as during preparation of ESIA will be documented. This includes list of stakeholders, issues raised, response provided and how those issues reflected in the design. Other measures could include diversified mechanisms for sharing engagement, smaller meetings and use of mechanisms such as radio etc.

6.12.2 Disclosure

Upon final clearance of the project components, institutions through Project Implementing Unit will disclose the approved project components information (ESIA, ESMP) to the public. More than one avenue can be used as most suitable to the project area however at the minimum the Team shall ensure that the key findings of the environmental and social impacts and mitigation process are:

- Accessible in a public place i.e. notice board, public information point /centre/ library, Ward, District, etc; for notification and response to issues raised by stakeholders.
- Presented in an understandable form, manner and language by using the non-technical summaries of the ESMP that is in both Kiswahili and English; and
- The Bank will make the E&S documents available to the public in accordance with Bank ESS 10 and Policy on Access to Information

6.13 Key Issues During Project Implementation Phases

6.13.1 Procurement of Contractors

The Project Teams will ensure that all relevant resources (human and financial) for proposed mitigations are complete before initiating subproject implementation. Execution of project works and operation of some facilities (e.g. wastewater treatment, storm-water drainage) will be undertaken by institutions implementing projects through Contractors. Project Team in institutions will have to work with Procurement Section (responsible for supervising the tendering process) so that environment and social issues are taken on board and incorporated in the contracts throughout project life. Contractors must be aware of their obligations upfront and demonstrate their understanding of the requirements and costs and resources for implementing the Environmental and Social (E&S) (including health and safety) requirements and conducting self-monitoring in their proposals. Contractors' contracts will include all the E&S health and safety requirements, including requirements for the contractor to develop Construction Environmental and Social Management Plans (CESMPs) during construction for issues such as noise, traffic, labour and grievances by workers and communities and carrying out self-monitoring during implementation.

6.13.2 Permits and Notifications

The sub-project implementation shall be carried out in accordance with international and Tanzania environment, health, safety and security requirements, standards and best practices including all conventions ratified by Tanzania. The equipment and materials used will have all necessary certification/registration and fully compliant with specific requirements for subproject size and purpose.

Proponents will seek and obtain the necessary permits and/or MOUs from relevant authorities and undertake notifications as per environmental management regulations. The Project Teams will ensure that all relevant project approvals including ESIA Certificate, building permits, OSHA etc. are in place. APIU and UPIU at the institution and implementing partners/agencies/universities will carry further the consultations before commencement and during the implementation of individual subproject.

6.13.3 Management Controls by Sub-project Contractor

The Contractor shall ensure that those mitigation measures that are to be implemented during mobilisation and construction and operation are attended to according to ESMP and specific work plans. The Contractor shall simultaneously undertake monitoring and reporting of environmental and social performance/improvement in implementation. Mitigation implementation shall specifically entail:

- Waste Management Plan;
- Occupational and Community Health and Safety Plan;
- Stakeholders Engagement Plan; and
- Emergency Response Plan (ERP).
- HIV/AIDS Management Plan
- GBV (SEA/SH) Action Plan
- Traffic Management Plan (where necessary)

The purpose of the construction environmental and social management plans is to outline how during construction the contractor will avoid, minimize or mitigate effects on the environment and surrounding area. CESMPs are 'live' documents that will be reviewed and updated at regular intervals throughout the project life cycle. The CESMP will be approved by the Supervision Engineer/Consultant and will be made as part of the contract to ensure its compliance. Construction environmental and social management plans may be structured as follows:

i. Introduction
ii. General purpose,
iii. Scope and structure of the document.
iv. Scope of work and sub-project description
v. Environmental requirements and controls – Policy and planning, environmental impacts, risks and mitigation, procedures for monitoring the construction processes against environmental objectives, pollution control measures, environmental risk register, incidents/accidents register
vi. Consents and permissions
vii. Management plans – Specific management plans such as noise and vibration, traffic, labour, grievances etc.,
viii. Health and safety procedures and requirements
ix. Community consultations / site-specific GRM
x. Training
xi. Incident reporting and investigation
xii. Emergency response measures/plans
xiii. GBV Action Plans

6.13.4 Occupational Health and Safety and Environmental and Social sensitization

The awareness and sensitization programme will be implemented with participation of project Contractor(s) to ensure continued project acceptance by the stakeholders' groups, manage expectations and minimize conflicts. The programme will be developed mindful of type of communication information, awareness creation tools, communication channels and messages fit for specific targets/audience. The key aspects shall include but are not limited to: Defining issue of Project's health, safety, and security procedures and requirements concerning the communities (site hazards during construction; vehicle movements and traffic accident; interactions with project personnel; exposure to disease and transmissions (HIV/AIDS).

Client with support from the supervision consultant will ensure regular training to permanent and temporary workers (including community workers) on occupational health and safety to workers

and information relevant to health risk including malaria, yellow fever, hepatitis, etc is provided to workers. During the construction period the contractor shall provide, equip and maintain adequate personal protective equipment, 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.

6.13.5 Environmental Supervision during Construction

The Supervision engineer/consultant will oversee the construction activities and ensure compliance with the contractor Environmental and Social Management Plans. Where non-compliances are observed, the supervision engineer/consultant will work with the contractor to rectify the problem in coordination with the PIUs. In case of significant non-compliance in particular where there is harm to individuals, communities and or the environment the work will be stopped and the information will be shared with the client immediately. Chance Find Procedure is included as **Appendix VII** will be followed if tangible cultural heritage is encountered during civil works Environmental and social supervision of works will also be carried out directly by Ministry of Blue Economy and Fisheries, Ministry of Livestock and Fisheries.

6.13.6 Subproject Review and Audit

After a period of implementation, the ESMPs of sub-project will be subject to annual reviews / audits. Annual Reviews of sub-projects will be carried out using external/independent reviewers/auditors as commissioned by client. These are to be Third Party audits (by independent Local Consultant, NGO or Service provider) which will review the implementation of environmental and social management in the project. The purpose and use of the audit recommendations are to improve the implementation and compliance of ESMPs to ensure timely and quality delivery of project activities. In case the audit has found a noncompliance to one of the ESMPs adequate measures will be taken as per the contract agreement.

6.14 Grievances Redress Procedures

Purpose

A Grievance Redress Mechanism (GRM) is necessary for addressing the legitimate concerns of the project affected persons. Grievance handling mechanisms provide a formal avenue for affected groups or stakeholders to engage with the project on issues of concern or unaddressed impacts. Grievances are any complaints or suggestions about the way a project is being implemented, and they may take the form of specific complaints for damages/injury, concerns around resettlement and compensation, concerns about routine project activities, or perceived incidents or impacts.

The stakeholder engagement process will ensure that the PAPs are adequately informed of the procedure. The GRM is designed with the objective of solving disputes at the earliest possible time, which will be in the interest of all parties concerned and therefore, it implicitly discourages referring such matters to a tribunal/court for resolution.

Principles

A functional GRM will be established in implementing entities which are Ministry of Livestock and Fisheries, Ministry of Blue Economy and Fisheries and Deep Sea Fishing Authority in order to ensure grievances emanating from the TASFAM project implementation are reported and raised accordingly. GRM is necessary for addressing the legitimate concerns of the project affected persons (PAPs). In addition, GRM provide a formal avenue for affected groups or stakeholders to engage with the project on issues of concern or unaddressed impacts. In the interest of all parties concerned, the GRMs are designed with the objective of solving disputes at the earliest possible time. Such mechanisms are fundamental to achieving transparency and voicing PAPs' concerns about overall project activities.

(a) Project GRM

Grievance emanating from the operational activities, will be handled at the institutional level (Ministry of Livestock and Fisheries, Ministry of Blue Economy and Fisheries and Deep-Sea Fishing Authority) ideally through the appointed *Grievance Handling Officers (GHOs)*. At the Institutional level a Grievance Handling Officers comprising of TASFAM Project Coordinator, Environmental Officer and Community Development Officer/Sociologist will be responsible for addressing all grievances related to Project performance. The GHOs shall maintain records where grievances and complaints, including minutes of discussions, recommendations and resolutions made, will be recorded as outlined below which will be adapted, where relevant, to align with the institution while maintaining the requirements outlined.

Grievance emanating from the Institution operations, will be handled at the local institutional level (Ministry of Livestock and Fisheries, Ministry of Blue Economy and Fisheries and Deep Sea Fishing Authority) ideally through the appointed *Grievance Handling Officers (GHOs)*. To ensure effectiveness and efficiency, GRM the procedures for handling grievance will be simple. The GHOs shall maintain records where grievances and complaints, including minutes of discussions, recommendations and resolutions made, will be recorded. Quarterly reports on grievances received, registered, resolved or channelled to the appropriate departments/Institutional staff for explanation or resolution as well as grievances referred to the responsible Government Institutions for further scrutiny such as the *Prevention and Combating Corruption Bureau-PCCB, Commission for Human Rights and Good Governance-CHRGG, security and legal recourse*, will be submitted to the Grievance Redress Integrity Committee (GRIC) for discussion and way forward.

The GRM has the following steps:

Step 1: The Project Affected Person (PAP) shall file the grievance through a special e-mail established for receiving grievances, suggestion boxes, meetings or directly to the GHO who will record grievances/complaints receipt and resolution form (**Appendix II**). Grievance will be recorded in the grievance/complaints register. All alternative ways of submitting grievances to the management of the Institution concerned will be made known to the PAPs for easy communication.

The GHOs will keep records of all complaints received and the responses made in order to track the resolution of grievances. The GHO will acknowledge the complaint has been received. The

response will either accept or refute responsibility for the grievance and next step will be the investigation and resolution or immediate actions to be taken. The GHOs will aim at completing investigation within two weeks of the grievance first being logged and will involve the aggrieved person/people in this investigation to ensure their views are incorporated.

If complainant is satisfied, the GHOs will seek their sign off and determine if any follow up is needed to monitor resolution implementation. Once the measures have been implemented the grievance will be closed. If the grievance still stands then the GHO will initiate further investigation and determine the steps for future action.

Step 2: If the PAP is not satisfied with decision of GHOs, the grievance is referred to the Grievance Redress Integrity Committee (GRIC) respond within 2 weeks' time from the submission. The GRIC members would preferably be senior staff who would be required to present the status of Grievance handling to the decision organ of the responsible Institution for discussion and decision on proposed mitigation measures. GHOs will present the report of the number of grievances registered and attended to the Grievance Redress Integrity Committee (GRIC) for discussion and way forward.

Step 3: If the PAP is not satisfied with decision of GRIC, the grievance is reported to the TASFAM Project Implementation Unit at the Ministry of Livestock and Fisheries, Ministry of Blue Economy and Fisheries and Deep Sea Fishing Authority.

Step 4: If the PAP is not satisfied with decision of APIU/UPIU, the grievance(s) is reported to Ministry of Livestock and Fisheries, Ministry of Blue Economy and Fisheries, Deep Sea Fishing Authority. If the PAP is not satisfied with decision of Ministry of Livestock and Fisheries, Ministry of Blue Economy and Fisheries, Deep Sea Fishing Authority, he/she is will channel the grievance to legal redress. The TASFAM project GRM flow chart is presented in **Figure 6.1**.

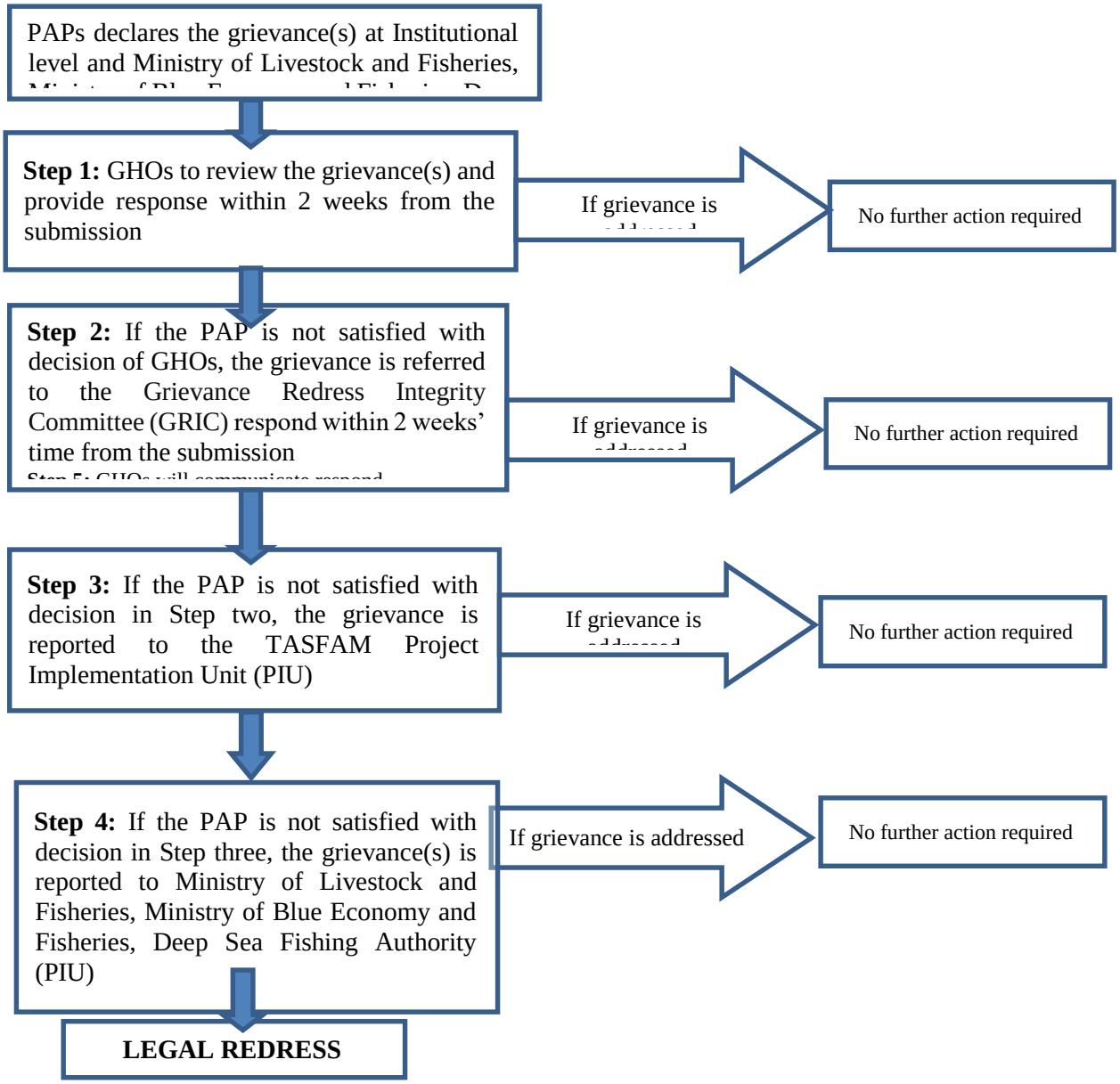


Figure 0.1: The flow chart for steps in Construction and General GRM

(b) Workers GRM

This will be administered by the respective project implementing institutions and will address grievances associated with the construction of new buildings and rehabilitation of existing buildings including grievances related to land and contractor's grievances.

a) Step 1: Submission of Grievances

The affected person shall file their grievance to the GHO, which will be recorded in writing. The grievance note should be signed and dated by the aggrieved person. A grievance can be submitted to in a number of ways as follows:

- through suggestion box (which will be in accessible locations including at construction site).
- during regular meetings held with stakeholders;
- through the Local Consultative Forums established in the affected locations;
- during informal meetings;
- through communication directly with management – for example a letter addressed to site management/ institution; and
- email, what's app messages and telephone (where appropriate).
- all complaints about abuse in service, potential corruption must be channelled to proper authorities no more than 5 days after the complaint is received.

b) Step Two: Logging the Grievance

The CGC keeps records of all complaints received, whether and how the CGC resolved them, and which complaints were forwarded to the VC. Once a grievance has been received it must first be logged in the grievance database register by the CGC. A sample grievance logging form is provided in Annex 2.

Anonymous grievances will be accepted recognizing that this may limit the possibility of investigation and resolution. Those who collect grievances will be trained on how to collect grievances related to GBV in the appropriate manner (see below).

c) Step Three: Providing the Initial Response

The person or community or stakeholder that lodged the initial grievance will then be contacted within 2-3 days to acknowledge that CGC has received the complaint. This response will either accept or refute responsibility for the grievance. This notification will include details of the next steps for investigation of the grievance, including the person/department responsible for the case and the proposed timeline for investigation and resolution which will depend on the severity of the incident. In some cases it may be necessary to provide an immediate response to avoid further harm while more detailed investigations are undertaken eg in the case of fatalities, workplace accidents, community safety pollution of natural resources, conflict with communities etc.

d) Step Four: Investigating the Grievance

The CGC will aim to complete investigation within two weeks of the grievance first being logged. Depending on the nature of the grievance, the approach and personnel involved in the investigation will vary. A complex problem may involve external experts for example. A more simple case may be easier, and quicker to investigate. The CGC will involve the aggrieved person/people in this investigation, where possible, to ensure participation. The CGC will continually update the aggrieved on the progress of the investigation and the timeline for conclusion. Unless highly

complex, the investigation will be completed within 14 days, although efforts should be made to complete this process faster.

e) Step Five: Communication of the Response

The CGC will outline the steps taken to ensure that the grievance does not re-occur and any measures needed to resolve the complaint. The response will be communicated within 1 day of the resolution being determined.

f) Step Six: Complainant Response

If complainant is satisfied then SGC will seek their sign off from the complainant and determine what if any follow up is needed to monitor the implementation of the resolution. The resolution will be implemented promptly. This may happen at the time the resolution is proposed or within a timeframe agreed between the CGC and complainant but ideally within 5 days.

g) Step Seven: Grievance Closure or Taking Further Steps if the Grievance Remains Open

Once the measures have been implemented to the complainant's satisfaction the grievance will be closed. If, however the grievance still stands then the CGC will initiate further investigation and determine the steps for future action. Once all possible redress has been proposed and if the compliant is still not satisfied then they will be advised of their right to appeal to the next level as outlined above. If the grievances cannot be resolved at the PIU or Ministry of Livestock and Fisheries, Ministry of Blue Economy and Fisheries, Deep Sea Fishing Authority, the complainant will be advised of their right to legal recourse.

6.15 Gender Based Violence (GBV)

The Project may result in incidences of Gender Based Violence (GBV) and Sexual Exploitation and Abuse (SEA) affecting workers and the community. GBV cases are different from other complaints that are typically handled through the grievance redress mechanisms. As outlined in the ESMF, a GBV action plan will be developed for the Project and will be modified for each PIUs once service providers have been identified. A GBV referral pathway will be identified in each district mapping services with the appropriate capacity and quality of service delivery. The CGC will be trained on how to manage GBV related grievances including matters of confidentiality, treating survivors with empathy and what non-identifiable data will be collected and how to close the case. In addition, members of the village council will also be trained on how to receive and manage this information. However, the Village Council will not be involved in resolving GBV related cases as this will be determined by the survivor with support from the appropriate service providers based on their needs and wishes.

In cases involving a Project Worker, the contractor and PIUs will be advised about the case who will in turn inform the GBV Specialist at the national level who will instigate any investigation required involving the contractor, PIUs, services providers etc. They will then recommend action

to be taken by the contractor/CGC in ensuring that administrative sanctions are taken against an alleged perpetrator of sexual assault.

6.16 Adaptation for Vulnerable Groups

This GRM will be presented to Vulnerable Groups and adapted as needed to meet their requirements and decision-making processes while maintaining the principles underlying the mechanism and the roles and responsibilities. Such adaptations will be discussed and agreed during the preparation of the Vulnerable Groups Plans but may include roles for traditional leaders and decision-making processes for example in addressing land issues. The aim for this adaptation is to ensure that vulnerable groups are able to raise their concerns in a manner they feel will be listened to and which they feel is accountable to them.

Gender Based Violence (GBV) Grievance Redress Mechanism:

In case of complaints related to **Gender Based Violence** (GBV), the GHO will treat these grievances with due confidentiality. Specific provisions will be included for complaints related to Sexual Exploitation and Abuse (SEA) that could be derived from the project to ensure the survivor's confidentiality and rights. The GRM will ask for, or record, information on three aspects related to the GBV incident: (a) the nature of the complaint (what the complainant says in her/his own words without direct questioning, (b) if, to the best of their knowledge, the perpetrator was associated with the project, and (c) if, possible, the age and sex of the survivors. Survivors will be advised of their right to referral pathways include security and legal recourse, health services and, psychosocial counselling. Details of the GBV GRM will be included in the GBV action plan.

Resettlement Grievance Redress Mechanism

Resolution of involuntary resettlement and construction related grievances will be handled by the existing land dispute resolution structures established at the village/mtaa level to the Ward and District level. The project affected persons (PAPs) shall file the grievances to the local government (village/mtaa) office for mediation and resolution of disputes emanating from resettlement issues.

In situations where PAPs are not satisfied with the village/mtaa government decision on resettlement disputes, the PAPs can approach the Village Land Council (VLC) for mediation. The VLC will try as much as possible to arrive at a compromise for the complaints raised. This may be obtained through series of conciliations, mediations and negotiations exercises between the two parties *(the PAPs, the subproject proponents and head of the institution concerned).* If disagreement on the resolutions persists, the PAPs will be allowed to submit their appeal to the Ward tribunal, District land and Housing tribunal, Ministry of Land, Housing and Human Settlement Development before being transferred to the court of law and court of appeal, where necessary, with a view to determine claims validity and compensation required. The response time for cases handled will depend on the issues addressed but it will be as short as it is possible.

Records Keeping of GRM

All comment responses and, grievances are to be logged using grievance logging forms and registers. This includes details of the claim/grievance/complaint, the claimant/aggrieved, and ultimately the steps taken to resolve the grievance. A master database will be maintained by the CGC to record and track management of all grievances. Regardless of the actual establishment of such a database, typically documentation on grievances keeps track of the following:

Monitoring of GRM

It is vitally important to monitor the effectiveness of the grievance mechanism. Appropriate measures for this include monthly reporting on the number of grievances received, resolved and outstanding and associated timeframes. This will be undertaken by the CGCs and reported to PIUs/Ministry of Livestock and Fisheries, Ministry of Blue Economy and Fisheries, Deep Sea Fishing Authority. As part of stakeholder engagement and consultation, involving the views of the stakeholders for whom the Grievance Mechanism is designed will be part of client Monitoring.

CHAPTER SEVEN

PROJECT IMPLEMENTATION ARRANGEMENTS, RESPONSIBILITIES AND CAPACITY BUILDING

7.1 Introduction

The National PIU would have general oversight over subprojects initiated under TASFAM. However, the path subprojects take for approval and implementation may vary depending on which project subcomponent funding vehicle (PIU MLF; PIU MBEF; or PIU DSFA). Depending on the anticipated volume of subprojects generated by project initiatives, the PIUs on Mainland and Zanzibar should each a dedicated Environmental and Social Officers or at a minimum have staff member(s) who will be responsible for E&S management and monitoring of ESMPs.

7.2 Responsibilities for Environmental and Social Management of the Project

Ministry of Livestock and Fisheries, Ministry of Blue Economy and Fisheries and Deep-Sea Fishing Authority shall establish a project implementation unit (PIUs) for strategic planning and implementation of project components (**Table 7.1**). Monitoring and Evaluation guidelines developed to monitor the entire project will include parameters for compliance with proposed measures to safeguard the environmental and social risks and impacts. Monitoring activities by the Implementers will be performed periodically through performance surveys/audits. Ministry of Livestock and Fisheries, Ministry of Blue Economy and Fisheries and Deep-Sea Fishing Authority have no unit of environment. Ministry of Livestock and Fisheries, Ministry of Blue Economy and Fisheries and Deep-Sea Fishing Authority shall each obtain one (1) Environmental specialist and one (1) Social Specialist with knowledge and experience in managing resettlement, Inclusive fishing activities, community engagement, Gender Based Violence or Sexual Exploitation and Abuse Risks.

Table 7.1: Roles and Responsibilities for Implementing ESMF

Level/Type	Organization	Role(s) in ESMF
National	Ministry of Livestock and Fisheries (Mainland Tanzania) Ministry of Blue Economy and Fisheries and (Zanzibar)	Lead Agencies, overall policy planning, and decision-making through Union-level National Steering Committee (NSC)
National	National Implementation Units at MLF (Tanzania) MBEF (Zanzibar) and DSFA	• Determines investments in infrastructure subprojects; • Supports disclosure to stakeholders on planned subprojects; and • Engages/manages consultants or NGOs to support the development of potential subprojects, including consultation processes and impact assessments.
	National Environmental Management Council (NEMC) (Mainland Tanzania) Dept of Environmental (Zanzibar)	Reviews and approves subproject ESIA s and EMPs (if required)

District	District Government, including District Fisheries Co-management Committees (DFCCS)	Assist in identifying and developing subprojects DEMO (Mainland) or SMS-Environment (Zanzibar) may assist in screening subproject proposals, responsible for monitoring subprojects once implemented
Village /Local	Village government traditionally authorizes	Play a convening role in consultations and conflict or grievance procedures
Village/Local	Village Savings & Loan Groups (VSLs)	Self-help groups or Fishery Cooperatives pool savings and receive credit and technical assistance to pursue alternative livelihood projects
Local co-management	Beach Management Units (BMUs-Mainland) Shehia Fisheries Committees (SFCs –Zanzibar)	May participate in developing subprojects and conducting environmental screening; may plan role in grievance procedures
Other	Implementing NGOs or other partners	Will assist self-help groups or other entrepreneurs to develop subprojects, can assist with project screening, and with ESIA and ESMP training
Other	Private investors	Responsible for meeting ESIA and ESMP requirements for proposed infrastructure, value-added, processing, etc. subprojects

7.2.1 Roles and Responsibilities of World Bank

World Bank will be part of project implementation team whose responsibilities will involve but not limited to;

i. Review and clear the ESIAs, ESMPs and site specific ESMPs where necessary;
ii. Review quarterly reports by the implementing agencies;
iii. Monitor compliance with the ESMF; and
iv. Undertake implementation support missions.

7.2.2 Roles and Responsibilities of the National Environmental Management Council (NEMC) and the Zanzibar Environmental Management Agency (ZEMA)

NEMC and ZEMA will play role in the project based on their legal mandate in development projects as described in the Environmental Management Act of 2005. Their roles in TASFAM will include\

i. Receive ESIA/ESMP reports, review and provide recommendations for improvement and further guidance
ii. Provide environmental permit where necessary upon receiving of ESIA / ESMP reports prepared by consultants on behalf of clients.
iii. Invited to deliver presentations in some of the trainings conducted by the project on environmental and social issues in the country. They can be invited as participants sometimes to allow them share experience.
iv. Conduct monitoring of environmental and social issues during project implementation and provide guidance on the way forward

7.2.3 Environmental Specialist for the client

i. Assist the implementing agency in drafting the Environmental, Social, Health and Safety requirements in the bidding and contract documents in accordance with the ESMP and integrating the ESMP into the contract documents.
ii. Assist the implementing agency in review and approval of the various documents prepared by the contractor such as C-ESMP, code of conduct as described under Appendix VIII, labour procedures, job hazard analysis and monitoring reports.
iii. Supervise the contractor's work to ensure compliance with the environmental, social, health and safety requirements of the bidding documents and ESMP. Provide recommendations for implementation of corrective actions for any non-compliances and suggest improvements for contractor's performance.
iv. Investigate and report all incidents related to environmental, social and health aspects. Carry out root cause analysis for all major incidents, and recommended actions to be taken to rectify the failure that led to these incidents.
v. Provide regular training programs to the contractor's labour on environmental, social, health and safety aspects associated with the construction activities.
vi. Carry out regular consultations with the stakeholders following Stakeholder Engagement Plan.
vii. Assist the implementing agency in implementing its Environmental Social Commitment Plan (ESCP).
viii. Prepare quarterly progress reports on the implementation of the ESMP for submission to the World Bank throughout the project lifecycle.
ix. The specialist shall coordinate preparation of ESIA and environmental and social management plans (ESMPs) done by consultant and site-specific ESMPs (SSESMP).
x. He/she will ensure that contractors have an Environmental Health and Safety Officer (EHS), who are familiar with the compliance requirements, including WB EHS guidelines.
xi. He/she also review progress reports by the supervision engineer/consultant during civil works and conduct inspection of the sites.

TOR for the Environmental Specialist for the client is attached as **Appendix IX**.

7.2.4 Roles and Responsibilities of Social Specialist

i. Undertake consultations, focus group discussions, and other activities to ensure that the objectives of the SEP are met.
ii. Liaise, as relevant, with local authorities to ensure smooth implementation of the SEP. and RAP
iii. Coordinate SEP implementation with various areas/regions/etc. as relevant.
iv. Establish and maintain an effective grievance tracking system and where relevant ensure that grievances are channeled to appropriate response mechanisms (e.g. out-of-project, GBV service providers, etc.).
v. Receive and develop resolution of grievances as required.
vi. Participate in grievance committee meetings as relevant.
vii. Undertake a regular review of grievances and where relevant identify systemic issues to be addressed and trends that require attention from management.

viii. Serve as a conduit of information between stakeholders and the project implementing team, especially in regard to emerging environmental and social risks, impacts and potential mitigation measures.
ix. Update the SEP including updating the stakeholder identification, as relevant, and as detailed in the Environmental and Social Commitment Plan.
x. Provide technical support and capacity building to relevant institutional and community actors to support the implementation of the SEP.
xi. Prepare progress reports on the implementation of SEP, including grievance management, and submit them to project management.
xii. Coordinate implementation of RPF and or livelihood restoration
xiii. Ensure that community health and safety are observed during project implementation
xiv. Undertake project sites E &S screening.

TOR for the Social Specialist for the client is attached as **Appendix X**.

7.2.5 Roles and Responsibilities of ESIA Consultants

i. Work with the client to understand the requirements of the environmental and social assessment;
ii. Conduct initial site visits with the client 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;
viii. Assist the client in preparing documentation to obtain certification from NEMC for the ESIAs and ESMPs.

7.2.6 Design Consultants

i. Understand the sub-project setting and site-specific requirements with discussions with the client;
ii. Incorporate the issues identified in the ESIAs, ESMPS into the project design
iii. Provide cost estimates for implementing the design requirements, including mitigation measures proposed in ESIA/ESMP.

7.2.7 Supervision Engineer/Consultant

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

i. Assist the client to ensure that the necessary environmental, health and safety authorizations and permits have been obtained;
ii. Maintain open and direct lines of communication between the client and contractor(s) with regard to environmental matters;
iii. Review and approve the contractor's site-specific construction ESMPs (CESMP), Health and Safety, Labour Management Plans and Traffic Management Plans together with the client; Conduct regular site inspections of all work areas to ensure compliance with CESMPs and E&S specifications for contractors Assist the contractor in finding environmentally responsible solutions to problems;
iv. 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;
v. 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;
vi. Provide training to the contractor on the EHS requirements to be followed;
vii. Monitor the contractor's environmental awareness training program for all personnel working onsite;
viii. In case of any accidents or incidents, immediately notify the client and support the process of documenting and reporting the case to the WB;
ix. Prepare written reports for the client 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.

7.2.8 Roles and Responsibilities of the Contractor

The contractor and his employees shall avoid or 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 contractor shall appoint an Environmental, Social, Health and Safety Officer to oversee the E&S aspects. The duties of the contractor include:

i. Compliance with relevant environmental and social 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 CESMPs based on the ESMP in the bidding documents and contracts;
iv. Train workers about EHS (including relevant WBG EHS Guidelines) and the site-specific environmental and social measures to be followed;
v. The EHS officer of the contractor will participate in the joint site inspections with the client and Environmental Supervision Engineer/consultant;
vi. Immediate notification of the CLIENT and supervision engineer of any significant social or environmental health and safety incident linked with the project, and indication about the measures taken or that are planned to be taken to address the incident as well as propose any measures to prevent its recurrence.
vii. Carry out any corrective actions instructed by the Supervision Engineer/consultant;
viii. In case of non-compliances/discrepancies, carry out investigation and submit proposals on mitigation measures, and implement remedial measures to reduce environmental impact;

ix. Propose and carry out corrective actions in order to minimize the environmental impacts;
x. Send weekly reports of non-compliance to the Supervision Engineer/consultant;
xi. Send monthly progress reports to the Supervision Engineer/consultant.

Existing Capacity, Gaps and Weakness in Addressing E&S Issues

Tanzania has provided substantial supporting environment for addressing environmental and social issues in various interventions. A clear framework for environmental management is defined through Environmental Policy and Environmental Management Act. Most of the ministries, departments and local governments do not have the required capacity to comply with the requirements of the Environmental Policy and Environmental Management Act. Similar situation may also be revealed in this project in which the institutions may lack the necessary capacity to implement the ESMF. Major gaps and weaknesses in addressing the E&S issues include among others inadequate understanding of requirements of the World Bank ESF, procedures and guidelines.

Therefore, the institution which is the implementing project component does not have the capacity to screen, review and clear their sub-projects under the TASFAM Project. These weaknesses define the inadequacies on managing environmental and social issues along with implementing the ESMF in this project. Thus, the ESMF will be implemented through administrative and management structure defined in this project. However, the implementing sector has to be strengthened in terms of resources and training for capacity building. For instance, Part III (e) of EMA, 2004 provides requirement for all government ministries to set up sections and staff responsible for environmental management.

7.3 Needs for capacity building

7.3.1 Training for Project Implementing Unit in addressing E&S issues

In order to ensure that there is adequate capacity to implement and monitor the performance E&S issues, it is advised that an Environmental Specialist /officer and Social specialist be appointed by institutions executing the project. The Specialists will report to the main bodies responsible for execution of the project. The capacity building will also be needed to project team in the institution to facilitate effective mitigation of E&S issues. The capacity building will enable improvement of the understanding and capacity for monitoring and evaluation reporting expected by PIUs and compliance with the World Bank standards and procedures. Under this ESMF, the capacity building objectives will intend to achieve the following:

- Develop and impart skills to EO and project team in respective institution for screening and monitoring environmental and social concerns; and
- Impart skills to contractors, service providers and communities to prepare subproject proposals and plans in line with the WB ESF and national legislations; and Facilitate Professional Service.

7.3.2 Training Needs to Environmental and Social Specialists and Other Project Staff

For successful implementation of the E&S issues, capacity enhancement through training will be done to institution project team. The training can be in the form of the whole project staff or

Training of Trainers (TOT), and it can be in the form of short or long workshop. This training will ensure that the project specialists are able to manage and monitor the environmental and social aspects of project activities. The workshop will take place in early stages of TASFAM project implementation. The workshop can be conducted by an external consultant with substantial knowledge on the environmental management requirements for Tanzania, including World Bank ESF and its ESS requirements. Other relevant staff members of the institution can be included in the training in order to widen the familiarization of the E&S issues of the project.

However, before selection of specific trainings that will be conducted, training need assessment will be conducted to identify gaps of knowledge, skills and abilities for employee who will be involved in implementation of E&S related activities. The gap between existing capacity and required one for successful implementation/supervision of environmental and social related actions will be used for identification of specific training. Thus, key training areas can include, but not limited to the following;

(a) Environmental and Social assessment process:

- Screening process;
- Impact prediction and identification;
- Formulation of mitigation measures;
- How to prepare terms of reference for environmental and social impact assessment;
- How to integrate environmental and social management considerations in project design and preparation of contract documents for constructions;
- Reviewing, approving ESIAs;
- Formulation of environmental and social management plan;
- Public participation in ESIA process; and
- Monitoring and reporting of project implementation.

(b) Environmental and Social policies, procedures and guidelines:

- How to incorporate Environmental and social policies and legislation according to the nature of project;
- World Bank Environmental and Social Standards (ESS);
- Review of ESIA and ESMP; and
- Collaboration with relevant institutions.

(c) Occupational Safety and Health issues:

- Hazard identification
- Hazard assessment and management
- Risk assessment and management
- Emergency preparedness plan and Response
- Risks and crises management
- Stakeholder engagement and grievance management, including in relation to the worker grievance mechanism, for the social and environmental staff.

(d) Other key topics on environmental and social issues:

- How to prepare Environmental and Social Management System;
- How to screen projects; appraise and approve ESIAs;

- How to review of environmental and social screening and assessment process;
- How to supervise and report the implementation of the project components;
- How to create baseline information prior to project implementation;
- Environmental pollution;
- Waste management; and
- Protection of water resources against pollution.

(e) Capacity building for GRM focal persons and members of the Grievance Redress Integrity Committee (GRIC)

Focal persons (Grievance Handling Officers - GHOs) and members of the Grievance Redress Integrity Committee (GRIC) of the eligible Institutions will have to get trained on the use of GRM guide which include grievances handling, reporting and escalation to the respective authorities. The guide has to be prepared in a manner that GRM could capture and report Sexual Exploitation, Abuse and Harassment (SEAH) and Gender Based Violence cases. In order to ensure optimal utilization of the GRM by the PAPs at work places, publicization and sensitization on the existence of GRM is mandatory and has to be done by the responsible institution.

7.5 Cost for Implementing Environmental and Social Management Framework

Adequate budget allocation is a critical requirement for addressing environmental and social issues. An estimated budgetary allocation of **US$ 1,490,000** will be required to comply with environmental and social standards **(Table 7.2).** The proposed costs are only indicative, should the proposed development proceed with the suggested changes, Ministry of Livestock and Fisheries, Ministry of Blue Economy and Fisheries and Deep-Sea Fishing Authority will work out on actual costs and include them in the overall cost of the project.

The costs include a budget for developing and implementing a Safety and Health System for Ministry of Livestock and Fisheries, Ministry of Blue Economy and Fisheries and Deep-Sea Fishing Authority and a budget for capacity support via recruitment of one (1) dedicated environmental and one (1) social risk and impacts specialists for Ministry of Livestock and Fisheries, Ministry of Blue Economy and Fisheries and Deep-Sea Fishing Authority team. The team will strengthen the existing capacity to ensure the effective implementation of the ESMP. There will be a cost for preparing a traffic impact management plan, waste management, emergency response management plan, occupational safety and health management systems etc. Another aspect of the cost will cover training in the form of short and long workshops to enhance skills on environmental and social issues which are likely to be addressed in the project implementation such as environmental and social policies, procedures and guidelines, screening process, impact assessment, developing mitigation plans, monitoring and reporting. Other training will include environmental and social issues like gender, environmental pollution, waste management and occupational health and safety issues.

Table 7.2: Cost of implementing Environmental and Social Management Framework (ESMF)

Item #	Mitigation Measure	Responsible Entity	Deadline	Monitoring Frequency	Budget (US$)
Establishment of Environmental and Social Unit					
1.1	Procurement of office furniture and working facilities	Ministry of Livestock and Fisheries, Ministry of Blue Economy and Fisheries and Deep-Sea Fishing Authority management/PIU/Consultant	During the first year of TASFAM Implementation		10,000
Develop and implement Safety and Health Management System					
2.1	Develop Occupational Health and Safety policy	Ministry of Livestock and Fisheries, Ministry of Blue Economy and Fisheries and Deep-Sea Fishing Authority management	During first year of Ministry of Livestock and Fisheries, Ministry of Blue Economy and Fisheries and Deep-Sea Fishing Authority Implementation	Verification Report	10,000
2.2	Develop an emergency response management plan and display on-site spill response procedures				10,000
2.3	Developments of a local emergency plan and local major outbreaks in case of infrastructure breakdowns, especially near roads or residential areas				10,000
2.4	Develop a monitoring programme and system which will allow performance evaluation and review of the OHS system for continuous improvement.				10,000
2.5	Define performance monitoring indicators and how to measure them to assess the performance of OHS system				10,000
Cost for engaging consultants for the preparation of Environmental and Social Instruments					
3.1	Preparation of SEA/ESIA/ESM/ESMPs/BMPs/CHMPs/EA	Ministry of Livestock and Fisheries, Ministry of Blue Economy and	Ready in November 2023 Before finalization/	Reports	400,000

Item #	Mitigation Measure	Responsible Entity	Deadline	Monitoring Frequency	Budget (US$)
	for all sites	Fisheries and Deep-Sea Fishing Authority PIU/Consultant	preparation of bidding documents for civil works		
Cost for hiring an independent firm/consultant to monitor and review on-site implementation of the E&S measures by the contractor					
4.1	Environmental Specialist	Ministry of Livestock and Fisheries, Ministry of Blue Economy and Fisheries and Deep-Sea Fishing Authority Management/ PIU/Consultant	Get engaged Before the commencement of any civil works and work throughout the TASFAM Project Implementation	Reports	600,000
4.2	Social Specialist				
Develop Gender Policy					
5.1	-Develop Gender Policy to mainstream gender outcomes into the TASFAM project and SEA/SH Action Plan -Training on GBV/SEA/SH AP, CoCs, and Operating the GRM	Ministry of Livestock and Fisheries, Ministry of Blue Economy and Fisheries and Deep-Sea Fishing Authority management/Consultant	By November 2024	Study Report approved by the Management	100,000
Recruit Dedicated E&S risk and impacts staff to improve on the capacity for TASFAM Project Implementation					
6.1	Recruit one (1) Safety and Health Specialist for the Ministry of Livestock and Fisheries, Ministry of Blue Economy and Fisheries and Deep-Sea Fishing Authority team	Ministry of Livestock and Fisheries, Ministry of Blue Economy and Fisheries and Deep-Sea Fishing Authority management/PIU	Before the end of the first quarter following Project approval by the Bank	Report	200,000
Training					
7.1	Environmental and Social assessment process: • Screening process;	Ministry of Livestock and Fisheries, Ministry of Blue Economy and Fisheries and Deep-	Before the end of the first quarter following Project	Verification Report	30,000

Item #	Mitigation Measure	Responsible Entity	Deadline	Monitoring Frequency	Budget (US$)
	• Impact prediction and identification; • Formulation of mitigation measures; • Formulation of the environmental and social management plan; • How to prepare terms of reference for environmental and social impact assessment; • How to integrate environmental and social management considerations in project design and preparation of contract documents for construction; • Reviewing, and approving ESIAs; • Public participation in the ESIA process; and • Monitoring and reporting of project implementation.	Sea Fishing Authority management/PIU/Schools' administrations/Consultant	approval by the Bank		
7.2	Environmental and Social policies, procedures and guidelines: • How to incorporate Environmental and social policies and legislation according to the nature of the project; • World Bank Environmental and Social Standards • Review of ESIA and ESMP; and • Collaboration with relevant institutions.	Ministry of Livestock and Fisheries, Ministry of Blue Economy and Fisheries and Deep-Sea Fishing Authority management/PIU/Schools' administrations/Consultant	Before the end of the first quarter following Project approval by the Bank	Verification Report	20,000
7.3	Occupational Safety and Health issues: • Hazard identification • Hazard assessment and management • Risk assessment and management	Ministry of Livestock and Fisheries, Ministry of Blue Economy and Fisheries and Deep-	Before the end of the first Quarter following Project	Verification Report	30,000

Item #	Mitigation Measure	Responsible Entity	Deadline	Monitoring Frequency	Budget (US$)
	• Emergency preparedness plan and Response • Risks and crises management • Training for local communities on risk management • Training on child protection • Training on safety issues	Sea Fishing Authority management/Consultant	approval by the Bank		
7.4	Other key topics on environmental and social issues: • How to prepare Environmental and Social Management Systems; • How to screen projects; appraise and approve ESIAs; • How to review environmental and social screening and assessment processes; • How to supervise and report the implementation of the project components; • How to create baseline information before project implementation; • Environmental pollution; • Gender issues during project implementation • Waste management; and • Protection of water resources against pollution. • Curriculum design, assessment, review and monitoring • Research skills	Ministry of Livestock and Fisheries, Ministry of Blue Economy and Fisheries and Deep-Sea Fishing Authority management/Consultant	Before the end of the first Quarter following Project approval by the Bank	Verification Report	50,000

Item #	Mitigation Measure	Responsible Entity	Deadline	Monitoring Frequency	Budget (US$)
	• Training on Climate Change Management and Adaptation and Strategic Environmental Assessment.				
Grand Total				**(US$)**	**1,490,000**

CHAPTER EIGHT

SUMMARY AND CONCLUSION

8.1 Introduction

The Tanzania Scaling-Up Sustainable Marine Fisheries and Aquaculture Management Project (TASFAM) project proposed activities are expected to comply to all the requirements of WB ESS as per the ESF. The United Republic of Tanzania and institutions have strengths and opportunities to comply with World Bank ESF. The ESMF recognizes the importance of strengthening the capacity of key staffs at the implementing institutions in order to be able to comply with the requirements of the World Bank ESF and Tanzania environmental and social policies and laws. This will enhance their capacity in future to address environmental and social issues appropriately. Training will be conducted to key staff involved in decision making, screening, reviewing, monitoring and approvals at the implementing institution. Thus, the subproject will entail minimal adverse environmental impacts if adequate mitigation measures are proposed and incorporated in the project design. In that regard, the project is expected to have enormous socio-economic benefits in fishing sector to Tanzania. The major issues of concern are land degradation, pollution, Stormwater generation and overflows, increased pressure on Social Services and Utilities and Occupational health and safety during construction.

The project implementers will ensure compliance of all requirements of the ESMF. The ESMF outlines all key processes and procedures to be followed so that the project risks and impacts are adequately and timely mitigated. Institutions will have to be committed in implementing all the recommendations given in this ESMF and further carrying out the environmental auditing and monitoring schedules.

9.0 REFERENCE AND BIBIOGRAPHY

Ministry of Health and Social Welfare (MoHSW) (Tanzania Mainland) Ministry of Health (MoH) [Zanzibar], National Bureau of Statistics (NBS), Office of the Chief Government Statistician (OCGS), and ICF International (2015). Tanzania Service Provision Assessment Survey Key (TSPA) 2014-15 Key Findings. Dar es Salaam, Tanzania, and Rockville, Maryland, USA: MoHSW, MoH, NBS, OCGS and ICF International.

i) Ministry of Health and Social Welfare (2012). National Guideline for the Management of HIV and AIDS

ii) Ministry of water and Irrigation (2017). Climate Resilient Water Supply Project, Simiyu

iii) National Bureau of Statistics (NBS) and the Ministry of Industry, Trade and Investment (MITI), (2016). The 2013 Census of Industrial Production: Analytical Report, Dar es Salaam, Tanzania

iv) National Bureau of Statistics (NBS) (2013). The 2012 Population and Housing Census, Population Distribution by Age and Sex (Volume II), Dar es Salaam, Tanzania

v) The United Republic of Tanzania, National Environmental Policy, 1997

vi) The United Republic of Tanzania, The Environmental Management Act, 2004

vii) The United Republic of Tanzania, The Environmental Impact Assessment and Audit Regulations, 2005

viii) The United Republic of Tanzania, The Environmental Management (Environmental Impact Assessment and Audit) (Amendment) Regulations, 2018

ix) The United Republic of Tanzania, Environmental Management (Hazardous Waste Control and Management) Regulations of 2008

x) The United Republic of Tanzania (URT) Environmental Impact Assessment and Audit Regulations G.N. No 339. Government Printers, Dar es Salaam, 2005.

xi) The Tanzania Development Vision 2025

xii) The United Republic of Tanzania (2015). The Employment and Labour Relation Act No. 6 of 2004

xiii) The United Republic of Tanzania (2015). The Environment Impact Assessment and Audit Regulations, 2005 (G.N. No. 348/2005)

xiv) The United Republic of Tanzania (2015). The Environmental Management Act, Cap 191

xv) The United Republic of Tanzania (2015). The Land Use Planning Act No.6 of 2007

xvi) The United Republic of Tanzania (2015). The National Construction Policy (2003)

xvii) The United Republic of Tanzania (2015). The National Environmental Policy (1997)

xviii) The United Republic of Tanzania (2015). Land Disputes Courts Act (No. 2 of 2002).

xix) The United Republic of Tanzania (2015). Land Acquisition Act (1967).

xx) The United Republic of Tanzania (2015). Land Regulations, 2001.

xxi) The United Republic of Tanzania (2015). Constitution of Tanzania 1977

xxii) The United Republic of Tanzania (2015). The National Employment Policy (1997)

xxiii) The United Republic of Tanzania (2015). The National Energy Policy (URT 1992)

xxiv) The United Republic of Tanzania (2015). The Land Act, 1999 (No.4 of 1999)

xxv) The United Republic of Tanzania (2015). The Land Policy (1997):

xxvi) The United Republic of Tanzania (2015). The National Environmental Policy (URT 1997)

xxvii) The United Republic of Tanzania (2015). The National Health Policy (1990)

xxviii) The United Republic of Tanzania (2015). The National Land Act, Cap 113

xxix) The United Republic of Tanzania (2015). The National Land Policy (URT, 1996)

xxx) The United Republic of Tanzania (2015). The National Policy on HIV/AIDS (2001)

xxxi) The United Republic of Tanzania (2015). The National Water Policy (URT, 2002)

xxxii) The United Republic of Tanzania (2015). The Occupational Health and Safety Act, 2003 (Act No. 5/2003)

xxxiii) The United Republic of Tanzania (2015). The Tanzania Development Vision 2025

xxxiv) The United Republic of Tanzania (2015). The Urban Planning Act No. 8 of 2007

xxxv) The United Republic of Tanzania (2015). The Water Resource Management Act, 2009 (Act No. 12/2009)

xxxvi) The United Republic of Tanzania (2015). The Workmen's Compensation Act Cap 263

APPENDICES

Appendix 1: Environmental and social Screening Form

Guidelines for Screening

The evaluator will undertake the assignment after;
• Gaining adequate knowledge of baseline information of the area
• Gaining knowledge of proposed project activities for the area
• Having been briefed/trained in environmental and social screening.
The form is to be completed with the consensus of at least three people, knowledgeable of the Screening processes (such as the Environmental Management Officers)

The filled form is to be submitted to the Environmental and Social Officers in the implementing entity for review and clearance.

Name of project: ……..……..……....…
Name of Institution: …….....…….....……...
Contact details of the person who is responsible for filling out this form
Name: ……..…….....
Title; ……..…….....
Telephone Number: ……..…….....
Fax number: …….…….....
E-Mail address: ……..……...…….....
Date: …….....……...…….....
Signature: ……....……

1. Project Description
Please provide information on the type and scale of the project (project area, area of construction buildings, access roads, and landscape), waste generated (solid, liquid and air).
2. The Natural Environment
a) Describe the vegetation/trees in/adjacent to the project area.
……
……
b) Estimate and indicate where vegetation/trees might need to be cleared
……
……
c) Are there any environmentally sensitive areas or threatened species (specify below) that Could be adversely affected by the project?
Yes …… …....No …….
i. Natural Forests Yes ……. No ……
ii. National Parks Yes ……. No ……
Iii. Rivers Yes ……..... No ……
iv. Lakes Yes ……. No ……
v. Wetlands (swamps, seasonally inundated areas)
Yes …….....No ……
vi. Habitats of endangered species for which protection is required under Tanzania laws And/or international agreements

Yes ……. No …….
vii. Others (describe). Yes …….. No ……

3. River Ecology
Is there a possibility that, due to the installation of structures, such as houses and water system, the river ecology will be adversely affected? Attention will be paid to water quality and quantity, the nature, productivity and use of aquatic habitats and variations of these over time.
Yes……No……
4. Protected Areas
Does the project component area (or components of the project) occur within/adjacent to any Protected areas designated by government (national park, natural reserve, world heritage site Etc.)?
Yes……No……
If the project component is outside, but close to, any protected area, is it likely to adversely affect the ecology within the protected areas (e.g. interference with the migration routes of mammals or Birds)?
Yes……No……
5. Geology and Soils
Based upon visual inspection or available literature, are there areas of possible geologic or soil Instability (erosion prone, landslide prone, subsidence prone)?
Yes……No……
Based on visual inspection or available literature, are there areas that are at risk of a large-scale Increase in soil leaching and/or erosion?
Yes……No……
6. Landscape/aesthetics
Is there a possibility that the project component will adversely affect the aesthetic attractiveness of the local landscape?
Yes……No……
7. Invasive Plant species
Is the sub project likely to result in the spread of invasive plant species
Yes……No……
8. Historical, Archaeological or cultural heritage sites
Based on and local knowledge available source, and after consultation with local authorities and/or observations, could the project component alter any historical, archaeological or cultural heritage sites or require excavation near these sites?
Yes……No……
9. Resettlement and/or Land Acquisition
Will involuntary resettlement, land acquisition, or loss of access to land as defined by World Bank ESS5 be caused by project component implementation?
Yes……No……
10. Loss of Crops, Fruit trees and Household Infrastructure
Will the project component result in the permanent or temporary loss of crops, fruit trees and household infrastructure?
Yes……No……
11. Noise pollution during construction and Operations
Will the operating noise level exceed the allowable decibel level for the zone?

Yes……No……

12. Will the project have adverse impacts on natural habitats that will not have acceptable Mitigation measures according to ESS 6 on Natural Habitats?

Yes……No……

13. Public Consultation Process

Briefly describe the sub project consultation process in terms of when consultations took place, where they took place, who participated and what criteria were used to select participants in this process that were the contributions from the participants, was it recorded and were the contributions from participants included in decision making, (use separate sTASFAM if necessary).

……
……

14. Did the consultation and participatory process described in 13 above involve the following Social/ vulnerable groups?

Women: Yes…….....…….No…….……

The elderly: Yes……..……No…….....……..

Widows/widowers: yes……No……..…….

Orphans: Yes…….No…….

15. Will the groups (in 14 above) have access to and benefit from this project component?

Yes……No…….....

Appendix II: Environmental Categorization and Scope of ESIA

Based on the results of the screening, would the project have potential to cause (check one):
The filled form is to be submitted to the Environmental and Social Officers in the PIU for review and clearance.

Impact	**Check (✓) if yes**	**Description**
Significant, diverse, unprecedented negative environmental and/or social impacts?		If checked, the project is a Category A as per the Tanzania and Zanzibar environmental laws and Regulations and will proceed according to the ESIA standards for content, consultation and disclosure included in World Bank ESF, and the format for a full ESIA according to NEMC/ZEMA guidelines.
Moderate environmental and social impacts that are largely site-specific.		If checked, project is Category B and will proceed with the appropriate level of environmental assessment and include mitigation measures based on the ESF and country regulations. EA will be consistent with NEMC/ZEMA guidelines for EA.
Minimal or no environmental and social impacts.		If checked project is Category C and can utilize basic environmental guidelines to mitigate any impacts or no further action required if no impacts noted in the checklist.

Please explain rationale for environmental category selected

Please tick all World Bank Environmental and Social Standard to be complied

Environmental and Social Standards	**Compliance Requirements** (check (✓) appropriate)
ESS 1: Assessment and Management of Environmental and Social Risks and Impacts.	
ESS 2: Labor and Working Conditions.	
ESS 3: Resource Efficiency and Pollution Prevention and Management.	
ESS 4: Community Health and Safety; • Environmental and Social Standard.	
ESS 5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement.	

ESS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources.	
ESS 7: Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities.	
ESS 8: Cultural Heritage.	
ESS 9: Financial Intermediaries; and	N/A
ESS 10: Stakeholder Engagement and Information Disclosure.	

Please outline next steps for compliance with NEMC requirements and World Bank ESF, including dates as relevant:

Appendix III: Checklist Questions

S/N	No. Answer the following questions	YES	NO
1	Will the project cause or facilitate any significant loss or degradation to natural habitats, and their associated biodiversity and ecosystem functions/services (temporary or permanently) that require additional management measures to be in place to avoid, minimize, mitigate and/or offset?		
2	Will the project have negative socio-economic and cultural impacts (temporary or permanently) that require additional management measures to be in place to avoid, minimize, mitigate and/or offset?		
3	Will the project propose to create or facilitate significant degradation and/or conversion of natural habitats of any type, including those that are legally protected, officially proposed for protection, identified by authoritative sources for their high conservation value, or recognized as protected by traditional local communities?		
4	Will the project propose to carry out unsustainable harvesting of natural resources –animals plants, timber and/or Non-Timber Forest Products (NTFPs) - or the establishment of forest plantations in critical natural habitats?		
5	Will the project propose an introduction of exotic species that can certainly become invasive and harmful to the environment, for which is not possible to implement a mitigation plan?		
6	Will the project contravene major international and regional conventions on environmental issues?		
7	Will the project involve involuntary resettlement, land acquisition, and/or the taking of shelter and other assets belonging to local communities or individuals?		
8	Does the project plan to implement activities related to agricultural extension services including the use of approved pesticides (including insecticides and herbicides) whether lawful or unlawful under national or international laws?		
9	Will the project involve the removal, alteration or disturbance of any physical cultural resources?		
	If YES, is the answer to any of the questions above, the project requires additional environmental and social management actions – proceed to national legislative and WB ESF requirements presented in Chapter 4		
	If NO is the answer to all of the questions above, please proceed with approval of the project component with World Bank		

Appendix IV: NEMC Schedule 1 Projects that require an ESIA

1. Agricultural
    - Cultivating natural and semi-natural not less than 50ha;
    - Water management projects for agriculture (drainage, irrigation);
    - Large-scale monoculture (cash and food crops);
    - Pest control projects (i.e. tsetse, armyworm, quelea, locusts, rodents, weeds), etc;
    - Fertilizer and nutrient management;
    - Agriculture Programs necessitating the resettlement of communities; and
    - Introduction of new breeds of crops.
2. Livestock and Range Management
    - Large-scale livestock movement;
    - Livestock markets;
    - Introduction of new breeds of livestock;
    - Introduction of improved forage species;
    - Fencing;
    - Provision of public water supply (watering points, wells);
    - Ectoparasite management (cattle dips, area treatment);
    - Intensive livestock-raising units; and
    - Livestock routes.
3. Forest Activities
    - Timber logging and processing;
    - Forest plantation and forestation and introduction of new species;
    - Selective removal of single commercial tree species; and
    - Pest management.
4. Fisheries activities
    - Medium to large scale fisheries;
    - Artificial fisheries (Aqua-culture for fish, algae, crustaceans shrimps, lobster, or crabs); and
    - Introduction of new species in water bodies.
5. Wildlife
    - Introduction of new species;
    - Wildlife catching and trading;
    - Hunting;
    - Wildlife ranching and farming; and
    - Zoo and sanctuaries.
6. Tourism and Recreational Development
    - Construction of resort facilities or hotels along the shorelines of lakes, rivers, islands, and oceans;
    - Hilltop resort or hotel development;
    - Development of tourism or recreational facilities in protected and adjacent areas (national parks, marine parks, forestry reserves, etc) on the island and surrounding waters;
    - Hunting and capturing;
    - Camping activities, walkways, trails, etc.;
    - Sporting and race tracks/sites; and
    - Tour operations.
7. Energy Industry

- Production and distribution of electricity, gas steam, and hot water;
- Storage of natural gas;
- Thermal power development (i.e. coal, nuclear);
- Hydro-electric power-electric power;
- Bio-mass power development;
- Windmills power development;
- Solar (i.e. Impact due to pollution during the manufacture of solar devices, acid battery spillage, and improper disposal of batteries); and
- Nuclear energy.

8. Petroleum Industry
   - Oil gas field exploration and development, including seismic survey;
   - Construction of offshore and onshore pipelines;
   - Construction of oil and gas separation, processing, handling, and storage facilities;
   - Construction of oil refineries;
   - Construction of product depots for the storage of petrol, gas, diesel, tar, and other products within commercial industrial or residential areas; and
   - Transportation of petroleum products.
9. Food and beverage industries
   - Manufacture of vegetable and animal oils and fats;
   - Oil refinery and ginneries;
   - Processing and conserving of meat;
   - Manufacture of dairy products;
   - Brewing distilling and malting fish meal factories;
   - Slaughterhouses;
   - Soft drinks;
   - Tobacco processing;
   - Canned fruits, and sources;
   - Sugar factories; and
   - Other agro-processing industries.
10. Textile in the industry
    - Cotton and synthetic fibers;
    - Dye for cloth; and
    - Ginneries.
11. Leather industry
    - Tanning;
    - Tanneries;
    - Dressing factories; and
    - Other cloth factories.
12. Wood, pulp, and paper industries
    - Manufacture veneer and plywood;
    - Manufacture of fiberboard and particle –board; and
    - Manufacture of pulp, paper, sand-board cellulose – mills.
13. Building and Civil Engineering Industries
    - Industrial and housing estate;
    - Major urban projects (multi-story buildings, motor terminals, markets, etc);
    - Tourist installation;

- Construction and expansion/upgrading of roads, harbors, shipyards, fishing harbors, airfields and ports, railways, and pipelines;
- River drainage and flood control works;
- Hydro-electric and irrigation dams;
- Reservoir 8. Storage of scrap metal;
- Military installations;
- Construction and expansion of fishing harbors; and
- Developments on beach fronts.

14. Chemical industries
    - Manufacture, transportation, use, and storage of pesticides or other hazardous and or toxic chemicals;
    - Production of pharmaceutical products;
    - Storage facilities for petroleum, petrochemical, and other chemical products (i.e. filling stations); and
    - Production of paints, varnishes, etc.
15. Extractive industry
    - Extraction of petroleum;
    - Extraction and purification of natural gas;
    - Other deep drilling boreholes and wells;
    - Mining;
    - Quarrying;
    - Coal mining; and
    - Sand dredging.
16. Non-metallic industries (products)
    - Manufacture of cement, asbestos, glass, glass fiber, and glass wood;
    - Processing of rubber;
    - Plastic industry; and
    - Lime manufacturing, tiles, ceramics.
17. Metal and engineering industries
    - Manufacture of other means of transport (trailers, motorcycles, motor vehicle bicycles – bicycles);
    - Bodybuilding;
    - Boiler making and manufacture of reeser4voirs, tanks, and other sheet containers;
    - Foundry and forging;
    - Manufacture of nonferrous products;
    - Iron and steel; and
    - Electroplating.
18. Waste treatment and disposal

(a) Toxic and Hazardous waste
- Construction of incineration plants;
- Construction of recovery plant (off-site);
- Construction of secure landfills facility;
- Construction of storage facility (off-site); and
- Collection and transportation of waste.

(b) Municipal solid waste
- Construction of incinerator plant;

- Construction of composting plant;
- Construction of recovery/re-cycling plant;
- Construction of municipal solid waste landfill facility;
- Construction of waste depots; and
- Collection and transportation.

(c) Municipal sewage

- Construction of wastewater treatment plant;
- Soil collection transport and treatment; and
- Construction of sewage system.

19. Water supply
    - Canalization of water coursed;
    - Diversion of normal flow of water;
    - Water transfers scheme;
    - Abstraction or utilization of ground and surface water for build supply; and
    - Water treatment plants.
20. Health projects
    - Vector control projects (malaria, bilharzia, trypanosomes, etc).
21. Land Reclamation and land development
    - Rehabilitation of degraded lands;
    - Coastal land reclamation;
    - Dredging of bars, grayness, dykes, estuaries, etc; and
    - Spoil disposal.
22. Resettlement/relocation of people and animals
    - Establishment of refugee camps;
23. Multi-sectoral Projects
24. Agro-forestry
    - dispersed field tree intercropping;
    - alley cropping;
    - living fences and other liner plantings;
    - windbreak/shelterbelts;
    - taungya system;
    - Integrated conservation and development Programs e.g. protected areas;
    - Integrated pest management (e.g. IPM); and
    - Diverse construction – public health facilities schools, storage buildings, nurseries, facilities for ecotourism and field research in protected areas, enclosed latrines, small enterprises, logging mills, manufacturing furniture carpentry shops, access roads, well digging, camps, dams reservoirs, river basin development, and watershed management projects food aid, humanitarian relief.
25. Trade: importation and exportation of the following
    - Hazardous chemicals/waste;
    - Plastics;
    - Petroleum products;
    - Vehicles;
    - Used materials;
    - Wildlife and wildlife products;
    - Pharmaceuticals;

- Food; and
- Beverages.

26. Policies and Programs
    - Decisions of policies and programs on environmental and development;
    - Decisions to change designated status;
    - Family planning;
    - Technical assistance; and
    - Urban and rural land use development plans eg. Master plans, etc.

Annex V: NEMC Schedule 2: Projects that May/May not require an ESIA

ENVIRONMENTAL IMPACT ASSESSMENT AND AUDIT REGULATIONS NO.349 OF 2005,

SCHEDULE II – PROJECTS THAT MAY/MAY NOT REQUIRE AN ESIA

1. Fish culture
2. Beekeeping
3. Small animal husbandry and urban livestock keeping
4. Horticulture and floriculture
5. Wildlife catching and trading
6. Production of tourist handcrafts
7. Charcoal production
8. Fuel wood harvesting
9. Wooden furniture and implement making
10. Basket and other weaving
11. Nuts and seeds for oil processing
12. Bark for tanning processing
13. Brewing and distilleries
14. Bio-gas plants
15. Bird catching and trading
16. Hunting wildlife ranching
17. Zoo, and sanctuaries
18. Tie and dye-making
19. Brick making
20. Beach sailing
21. Seaweed farming
22. Salt pans
23. Graves and cemeteries
24. Urban livestock keeping
25. Urban agriculture
26. Fish landing stations
27. Wood carving and sculpture
28. Hospitals and dispensaries, schools, community centers, social halls, playground
29. Woodworks e.g. boat building
30. Market places (livestock and commodities)
31. Technical assistance
32. Rainwater harvesting
33. Garages
34. Carpentry
35. Blacksmith
36. Tile manufacturing
37. Kaolin manufacturing
38. Vector control projects e.g. malaria, bilharzia, trypanosomes
39. Livestock stock routes
40. Fire belts

41. Tobacco curing kilns
42. Sugar refineries
43. Tanneries
44. Pulp plant
45. Oil refineries and ginneries
46. Artisanal and small-scale mining

Annex VI: Activities Which Do Not Require ESIA Certificate and Which Do Require an ESIA in Zanzibar

THE ZANZIBAR ENVIRONMENTAL MANAGEMENT ACT NO. 3 OF 2015
ENVIRONMENTAL ASSESSMENT REGULATIONS, 2019
(Made under section 86)

SECOND SCHEDULE
SCREENING CRITERIA AND SCREENING LISTS
[Made under regulation 25(2)]

In addition to the general screening criteria, the attached screening lists may be used by the Authority to decide whether an ESIA, Environmental Report or no assessment is required.

From Environmental Act, No. 3 2015, 40(a) to (f)
Criteria for determining activities that require an ESIA certificate.

1. For this section, an activity shall be considered likely to have a significant impact on the environment and shall be required to prepare an Environmental Impact Assessment Report and have an Environmental Impact Assessment Certificate, if such activity, or cumulatively with other activities of similar nature or Location.

    a. Use the major number of resources, either living or non-living:
    b. Result in the production of waste which would be in large quantity or hazardous nature:
    c. Modify the environment on a large scale
    d. Influence population shifts in major ways
    e. Affect environmentally sensitive areas: or
    f. Embody such other characteristics as may prescribe this Act.

Note: In addition to the activities and thresholds mentioned, the Authority may require ESIA or Environmental Clearance for any other activity deemed necessary.

Sector	ESIA or Environmental Audit Applicable criteria	Environmental Report or pre-Audit Applicable criteria Or Direct clearance
Agriculture, irrigation, livestock, and fish farming		
Project for the use of uncultivated land or semi-natural areas for intensive agricultural purposes	The area of land exceeds 2 hectares	The area of land of 2 hectares and below
Water management projects for agriculture, including irrigation and drainage projects	The area of land exceeds 2 hectares and a large amount of water are needed	The area of land of 2 hectares and below
Agricultural projects necessitating the resettlement of communities	In all cases	

Sector	ESIA or Environmental Audit Applicable criteria	Environmental Report or pre-Audit Applicable criteria Or Direct clearance
Introduction of Genetically Modified organisms (GMOs)	In all cases	
Large-scale application of agrochemicals for disease and pest control.	In all cases	
Livestock farming	Herd of cattle 400 and above	Herd of cattle 400 and below
Mari culture or aquaculture	In some cases	In some cases
Extractive industries		
Mining of metal and non-metal minerals	In all cases	
Quarrying of non-renewable natural resources (Sand, stone, gravel, lime, or limestone brick, coral reef, moorum, rock, and rock aggregate)	Where the exceeds 0.5 hectares (including existing small-scale plots expanding)	Where the area is 0.5 hectares and below
Petroleum operations (a) Upstream: i. Exploration ii. Field development iii. Production iv. Construction of facilities, including central processing facilities, pipelines, and camps. v. Offshore platforms for petroleum and natural gas (b) Midstream: I. Construction of petroleum refineries. II. Construction of petroleum separation, processing, conversion, and handling plants. III. Transmission of chemicals, petroleum, and petroleum products. IV. Storage facilities for petroleum and petroleum products (e.g. LNG depots). V. Construction of facilities, including pipelines and camps.		

Sector	ESIA or Environmental Audit Applicable criteria	Environmental Report or pre-Audit Applicable criteria Or Direct clearance
(c) Downstream i. Construction and or expansion of petroleum product deport. ii. Construction of facilities, and camps. iii. Liquefied petroleum and natural gas filling plants. iv. Asphalt plants.		
Energy		
Installation, production, and transmission of power lines and other means of electrification, including submarine cables from conventional sources from conventional sources of energy.	In some cases	In some cases
Installation of wind power solar photo-voltaic, sea wave, biogas, and waste-to-energy system	In some cases	In some cases
Petrol filling/petrol/fuel stations, and LPG gas station	In some cases	In some cases
Tourism establishment		
Beach Resort, Condominiums, Apartments, complexes, and associated development projects	In cases where the project - is located in a conservation area and its buffer zone or near	40 rooms and below
	Sensitive areas such as beaches, mangrove waterways, lagoons, remote islands, and sandbanks. More than a hotel with more than 40 rooms with its associated facilities	
Underwater Establishment	In all cases	
Golf course activities such as kite surfing activities diving activities and game fishing	In all cases	
Food and beverage industry		

Sector	ESIA or Environmental Audit Applicable criteria	Environmental Report or pre-Audit Applicable criteria Or Direct clearance
Packaging and canning of animal and vegetable products	In all cases In all cases	
Manufacturing and dairy products	In all cases	
Confectionary and syrup manufacture	In all cases	
Installation for the slaughter of animals	In all cases	In all cases
Sugar factory	In all cases	
Edible Oil refineries and ginneries	In all cases	
Production of bottled water and soft drinks	In all cases	
Infrastructure projects,		
Construction expansion or rehabilitation of roads	In all cases	In all cases
Construction, expansion major rehabilitation of airports, heliports, airstrips, and their ancillary facilities	In all cases	
Construction of new, or expansion of shipyards, ports, and harbor facilities including marinas, piers, land reclamation maintenance dredging Extension of jetties, an extension of the slipway for the shipyard development for loading and unloading connected to the land	In all cases	
Container yard	In all cases	In all cases
Flood control schemes, such as canalization and other flood-relief work on land	In all cases	In all cases
Coastal work to combat erosion and maritime works capable of altering the coastal zone through the construction for example dykes and walls.		
Waste disposal		
Wastewater treatment plants		
Solid waste disposals facilities such as incinerators, composting areas, recycling, and refurbishment units, and transfer stations.	In all cases	In all cases
Landfills	In all cases	
Municipal sewer lines, stormwater drainage, and sea outfall	In all cases	

Sector	ESIA or Environmental Audit Applicable criteria	Environmental Report or pre-Audit Applicable criteria Or Direct clearance
Storage of scrap metal items and plastic materials		In all cases
Communications		
Installation of wired and wireless telecommunication, internet, and broadcasting systems including mast and towers	In all cases	
Water supply		
Establishment of water supply infrastructure in environmentally sensitive areas or in a location that may result in mass displacement and hence resettlement action plant	In all cases	
Desalination plant for municipal water supply	In all cases	
Housing, urban development, and estates		
Establishment of housing estates (including apartment complexes, and condominiums)	Covering an area of two hectares or 50 housing units or more	Less than 2 ha or less than 50 housing units
Real estate development projects include the construction of shopping centers, car parks, sports stadiums, leisure centers, and multiplex cinemas	In all cases	
Hospitals All district, regional, central, and all referral hospitals	In all cases	
All levels of health care units (primary, secondary), clinics, nursing homes, and veterinary unity		In all cases
Construction of Boarding schools and academic institutions	In all cases	In all cases
Product and Processing Unit		
Production and processing of metals including manufacture and assembly of motor vehicles vehicle and engines, Shipyard and dry docks, construction, and repair of aircraft, etc.		
Mineral Industries		
Installations for the manufacture of cement Installations for the manufacture of glass and ceramic products by burning in particular	In all cases	

Sector	ESIA or Environmental Audit Applicable criteria	Environmental Report or pre-Audit Applicable criteria Or Direct clearance
roofing tiles, bricks, refractory bricks, tiles, stoneware, or porcelain		
Chemical Industries		
Production of chemicals, production of pesticides, and pharmaceutical products, and Storage facilities for petroleum, petrochemical, and chemical products.	In all cases	
Textile, leatherwood, and paper industries		
Textile industry		
Cotton and Synthetic fibers Dye for cloth Ginneries	In all cases	
Leather Industry Tanning Tanneries Dressing factories Other cloth factories	In all cases	
Electrical and electronics industry	In all cases	
Forestry- t0- Land Use Conversion	In all cases	
Degazetting a protected or conservation area into a land-use zone	In all cases	
Special Projects	Depends on the projects	Depends on the projects

Annex VII: Chance Find Procedures

Introduction

For the purposes of the IFC's Performance Standard and for the purpose of use in the TASFAM project, a cultural heritage refers to (i) tangible forms of cultural heritage, such as tangible moveable or immovable objects, property, sites, structures, or groups of structures, having archaeological (prehistoric), paleontological, historical, cultural, artistic, and religious values; (ii) unique natural features or tangible objects that embody cultural values, such as sacred groves, rocks, lakes, and waterfalls; and (iii) certain instances of intangible forms of culture that are proposed to be used for commercial purposes, such as cultural knowledge, innovations, and practices of communities embodying traditional lifestyles.

The client is responsible for siting and designing a project to avoid significant damage to cultural heritage. When the proposed location of a project is in areas where cultural heritage is expected to be found, either during construction or operations, the client will implement chance find procedures established through the Social and Environmental Assessment. The client will not disturb any chance finds further until an Assessment by a competent specialist is made and actions consistent with the requirements of this Performance Standard are identified.

Initial Identification and/or Exposure

Physical cultural heritage resources be identified during construction or accidently exposed. The initial procedure when such sites are found aim to avoid any further damage. The following steps and reporting structure must be observed in both instances:

- The person or group (identifier) who identified or exposed the burial ground must cease all activity in the immediate vicinity of the site; The find location will be recorded, and all remains will be left in place.
- The identifier must immediately inform his/her supervisor of the discovery;
- The supervisor must ensure that the site is secured and control access; and
- The supervisor must then inform the Client through the Consultant who will immediately inform relevant government authority responsible for physical cultural heritage.
- Potential significance of the remains will be assessed by the relevant government authority in collaboration with the Client, Consultant and Contractor and mitigation options will be identified.
- If the significance of the remains is judged to be sufficient to warrant further action and they cannot be avoided, then the relevant government authority will determine the appropriate course of action.
- In case the physical cultural heritage are of the nature of human remains they will be handled accordingly in accordance with the local and national laws and guidelines by the relevant government authority in collaboration with the Client and Consultant to ensure that there are no complaints at a later stage from the relatives of the deceased whose human remains were found.

Consultation

Where a project may affect cultural heritage, the client will consult with affected communities within the host country who use, or have used within living memory, the cultural heritage for long-standing cultural purposes to identify cultural heritage of importance, and to incorporate into the client's decision-making process the views of the affected communities on such cultural heritage. Consultation will also involve the relevant national or local regulatory agencies that are entrusted with the protection of cultural heritage.
Since cultural heritage is not always documented, or protected by law, consultation is an important means of identifying it, documenting its presence and significance, assessing potential impacts, and exploring mitigation options.

For cultural heritage issues, the following groups may be relevant for consultation:

- Historical or traditional users and owners of cultural heritage
- Indigenous Peoples
- Traditional communities embodying traditional lifestyles
- Ministries of archaeology, culture or similar national or heritage institutions
- National and local museums, cultural institutes, and universities
- Civil society concerned with the cultural heritage or historical preservation, areas of environmental or scientific interest, affected indigenous peoples, and religious groups for whom the cultural heritage is traditionally sacred
- The client will make special efforts to consult with the historical or traditional users or owners of tangible cultural heritage, especially inhabitants of the area impacted by a project within the host country, since the interests of these users or owners may be different than the

Cultural Heritage desires expressed by experts or government officials
-The client will provide early notification and engage with such groups regarding possible public use, relocation of or other adverse impacts on significant cultural heritage resources
-The consultation process will actively seek to identify concerns of these users or owners of tangible cultural heritage, and, where possible, clients will take these concerns into account in the way their project deals with the cultural heritage.

Removal of Cultural Heritage
Most cultural heritage is best protected by preservation in its place, since removal is likely to result in irreparable damage or destruction of the cultural heritage. The client will not remove any cultural heritage, unless the following conditions are met: There are no technically or financially feasible alternatives to removal. The overall benefits of the project outweigh the anticipated cultural heritage loss from removal Any removal of cultural heritage is conducted by the best available technique

Critical Cultural Heritage
Critical cultural heritage consists of (i) the internationally recognized heritage of communities who use, or have used within living memory the cultural heritage for long-standing cultural purposes; and (ii) legally protected cultural heritage areas, including those proposed by host governments for such designation. The client will not significantly alter, damage, or remove any critical cultural heritage. In exceptional circumstances, where a project may significantly damage critical cultural

heritage, and its damage or loss may endanger the cultural or economic survival of communities within the host country who use the cultural heritage for long-standing cultural purposes, the client will: (i) meet the requirements of Paragraph 6 of the performance standard No. 8; and (ii) conduct a good faith negotiation with and document the informed participation of the affected communities and the successful outcome of the negotiation. In addition, any other impacts on critical cultural heritage must be appropriately mitigated with the informed participation of the affected communities. Legally protected cultural heritage areas are important for the protection and conservation of cultural heritage, and additional measures are needed for any projects that would be permitted under the applicable national laws in these areas. In circumstances where a proposed project is located within a legally protected area or a legally defined buffer zone, the client, in addition to the requirements for critical cultural heritage cited above in Paragraph 9, will meet the following requirements: Comply with defined national or local cultural heritage regulations or the protected area management plans Consult the protected area sponsors and managers, local communities and other key stakeholders on the proposed project Implement additional programs, as appropriate, to promote and enhance the conservation aims of the protected area

Project's Use of Cultural Heritage

Where a project proposes to use the cultural resources, knowledge, innovations, or practices of local communities embodying traditional lifestyles for commercial purposes, the client will inform these communities of: (i) their rights under national law; (ii) the scope and nature of the proposed commercial development; and (iii) the potential consequences of such development. The client will not proceed with such commercialization unless it: (i) enters into a good faith negotiation with the affected local communities embodying traditional lifestyles; (ii) documents their informed participation and the successful outcome of the negotiation; and (iii) provides for fair and equitable sharing of benefits from commercialization of such knowledge, innovation, or practice, consistent with their customs and traditions.

Appendix VIII: Code of Conduct

Contractors and workers will sign a code of conduct which will include provisions on the following issues:

- Interactions between contractors/workers and the community including students.
- Adhere to a zero alcohol and drug policy during work activities, and refrain from the use of illegal substances at all times.
- Treat women, children (persons under the age of 18), and men with respect regardless of race, colour, language, religion, political or other opinion, national, ethnic or social origin, property, disability, birth or other status.
- Not use language or behaviour towards women, children or men that is inappropriate, harassing, abusive, sexually provocative, demeaning or culturally inappropriate.
- Not participate in sexual contact or activity with children.
- Not engage in sexual harassment—for instance, making unwelcome sexual advances, requests for sexual favours, and other verbal or physical conduct, of a sexual nature, including subtle acts of such behaviour.
- Not engage in sexual favours—for instance, making promises or favourable treatment dependent on sexual acts—or other forms of humiliating, degrading or exploitative behaviour.
- Unless there is the full consent[8] by all parties involved, not have sexual interactions with members of the surrounding communities. This includes relationships involving the withholding or promise of actual provision of benefit (monetary or non-monetary) to community members in exchange for sex—such sexual activity is considered "non-consensual".
- Not interact with children (students) who are attending schools where rehabilitation activities are being undertaken.
- Contractors/Workers will not utilise student or teacher sanitation facilities at schools where rehabilitation activities are ongoing.

- Reporting through the GRM any suspected or actual GBV by a fellow worker, whether employed by my company or not, or any breaches of the Code of Conduct.
- Sanctions for any breaches in the code of conduct in line with national labour laws.

Community Health and Safety

Contractors and workers will participate in any and all training related to health and saving including but not limited to:

[8] Consent is defined as the informed choice underlying an individual's free and voluntary intention, acceptance or agreement to do something. No consent can be found when such acceptance or agreement is obtained through the use of threats, force or other forms of coercion, abduction, fraud, deception, or misrepresentation. In accordance with the United Nations Convention on the Rights of the Child, the World Bank considers that consent cannot be given by children under the age of 18, even in the event that national legislation of the country into which the Code of Conduct is introduced has a lower age. Mistaken belief regarding the age of the child and consent from the child is not a defense.

GBV, SEA and sexual harassment prior to working on the Project which will be provided by the Community Social Officers from the LGA and on the Child and Gender desk of the police. This will include information on the GBV reporting mechanisms.

Contractors will be provided with signage on issues such as HIV/AIDS, GBV etc which will be posted at worksites.

Contractors/workers will attend education sessions on disease transmission notably HIV/AIDS, malaria and will implement the control measures needed to protect public health.

Contractors / workers will ensure good housekeeping arrangements on site to avoid creating breeding grounds for rodents and insects which can spread diseases.

Contractors will ensure access to potable water for all workers.

Contractors will be required to abide by national law in relation to vehicle conditions and movements and behaviour of drivers.

Signage will be erected at construction sites to advise the community of the dangers of entering the site and appropriate barricades (fencing, tape etc) will be put in place especially around quarries, trenches etc.

Appendix IX: Terms of Reference for the Contracting of the Environmental Expert for the Environmental Management and Supervision of the Project investments

1. Introduction

The Government of the United Republic of Tanzania, through the Ministry of Livestock and Fisheries (MLF), Ministry of Blue Economy and Fisheries (MBEF), and Deep-Sea Fishing Authority (DSFA), in collaboration with the World Bank, are preparing the implementation of TASFAM project. The project focuses on countering the underlying challenges hindering the fisheries sector from achieving the development targets enshrined in the National Five-Year Development Plan III (FYDP III) and other national and international development agendas. In addition, the project intends to link existing national strategies to reducing food and income poverty and mitigate the impact of and/or increase the resilience of the coastal community to climate change.

The TASFAM Project is being prepared to further the achievement obtained under the Southwest Indian Ocean Fisheries Governance and Shared Growth (SWIOFish) Project. This project will be implemented by the Ministry of Livestock and Fisheries (MLF) – Fisheries Sector, Ministry of Blue Economy and Fisheries (MBEF), and Deep-Sea Fishing Authority (DSFA), and supported by the World Bank; is expected to run between 2025 and 2031. TASFAM project development objective (PDO) to enhance the management of marine fisheries and aquaculture, associated marine ecosystems, and the climate resilience of beneficiaries. The commercialization, increased technology, and innovation will help the country to move from comparative advantage to competitive advantages, stimulate industrial development, and become competitive in local, regional, and global markets. To achieve the PDO, the project is divided into four components: 1) Developing a Sustainable and Climate-resilient Blue Economy 2) Improving Management and Sustainability of Marine Fisheries, 3) Promoting Sustainable and Climate-resilient Marine Aquaculture, and 4) Project Management and Coordination.

2. Specific Tasks

The specific tasks of the Environmental Expert will be:

- Supervise the overall environmental management of the project and its subcomponents, specifically those related to Component 1 on the construction of works and installations. Provide guidance, support and orientation to increase environmental and social good practice and improve Environmental Management in school construction and operation in Tanzania.
- Coordinate closely with the Project Coordination teams at the Ministry of Livestock and Fisheries (MLF), Ministry of Blue Economy and Fisheries (MBEF), and Deep-Sea Fishing Authority (DSFA) on anything related to the environmental aspects of the project, supervision, monitoring, consultations, stakeholders involvement, participation in project development in order to reduce environmental and social impacts.
- Interact and coordinate closely with the Social Experts, hired or appointed by the project to co-lead the Environmental and Social Management of the Project.
- Interact and coordinate with other national agencies (NEMC, Ministry of Livestock and Fisheries (MLF), Ministry of Blue Economy and Fisheries (MBEF), and Deep-Sea Fishing Authority (DSFA), Ministry of Environment and other stakeholders to maintain a clear dialogue between the project, National institutions and the local stakeholders.

- Provide support in preparation/review of the Environmental Section of the Operations Manual based on the Project's established ESF instruments (ESMF, SEP, ESCP, and other approved instruments) and the World Bank's environment health and Safety guidelines.
- Prepare and review terms of reference for contracting environmental evaluations, training, capacity building activities as described in the ESMF and the ESCP to increase national, and agency/institution capacities in environmental management (ESMP, waste and pollution management, Laboratory guidelines, waste management plan and manuals, feasibility studies, etc.).
- Participate in training workshops for use of Operations Manual under the programme.
- Provide support in reviewing the Project bidding Documents, Direct Contracts, etc. to ensure the proper environmental and social management of the project by contractors.
- Maintain dialogue and report about the project advances and overall development to the community, local stakeholders, national agencies, collaborators, etc.
- Supervise contractors during construction and rehabilitation works and monitor compliance to the ESIA, ESMP and ESMF, National Legislation and the World Bank Environmental and Social Standards.
- Monitor timely environmental and social performance of the project, contractors and subcontracts and other parties.
- Develop capacity building activities to increase environmental management capacity of contractors and counterparts.
- Track and verify performance of the project in the application of the in achieving the PDO outcomes and the intermediate results.

3. Qualifications

The Environmental specialist will have the following qualifications:

(a) A Master degree in Environmental Management, Environmental Engineering, Biology, Ecology or related field;
(b) At least five years of experience in Environmental impact assessment of civil works and working as environmental supervision, inspection, monitoring and or coordinator of environmental management plan;
(c) The experience in the World Bank Safeguards Policies will be an added advantage;
(d) The professional will be registered in NEMC and be active to present NEMC documentation;
(e) Must have knowledge and experience in the country environmental regulations and permitting processes (civil works, water, waste management, etc.)
(f) Demonstrated ability to work in teams and have leadership skills.
(g) Fluency in English and good communication and writing skills.
(h) Must be an organized person to keep track of many different project activities

4. Reporting

The Environmental expert will report to the Ministry of Livestock and Fisheries (MLF), Ministry of Blue Economy and Fisheries (MBEF), and Deep-Sea Fishing Authority (DSFA). He/She will be required to submit the following reports:

- Monthly progress report on the overall work of the portfolio in preparation, construction and operation to Implementing Agents
- Half year Report to Implementing Agents
- Annual Report to Implementing Agents
- Midterm Review Report to Implementing Agents

All reports will be required to highlight project application of the ESMF, SEP, ESCP and other instruments approved for the Project by the World Bank and in the application of national regulations. Reports will be share with the Bank when requested.

5. Duration.

The assignment will be for the duration of Project Implementation expected to last 5 years.

Appendix X: Terms of Reference for the contracting of the Social Expert for the Social Management and Supervision of the Project Investments

1. Introduction

The Government of the United Republic of Tanzania, through the Ministry of Livestock and Fisheries (MLF), Ministry of Blue Economy and Fisheries (MBEF), and Deep-Sea Fishing Authority (DSFA), in collaboration with the World Bank, are preparing the implementation of TASFAM project. The project focuses on countering the underlying challenges hindering the fisheries sector from achieving the development targets enshrined in the National Five-Year Development Plan III (FYDP III) and other national and international development agendas. In addition, the project intends to link existing national strategies to reducing food and income poverty and mitigate the impact of and/or increase the resilience of the coastal community to climate change.

The TASFAM Project is being prepared to further the achievement obtained under the Southwest Indian Ocean Fisheries Governance and Shared Growth (SWIOFish) Project. This project will be implemented by the Ministry of Livestock and Fisheries (MLF) – Fisheries Sector, Ministry of Blue Economy and Fisheries (MBEF), and Deep-Sea Fishing Authority (DSFA), and supported by the World Bank; is expected to run between 2025 and 2031. TASFAM project development objective (PDO) to enhance the management of marine fisheries and aquaculture, associated marine ecosystems, and the climate resilience of beneficiaries. The commercialization, increased technology, and innovation will help the country to move from comparative advantage to competitive advantages, stimulate industrial development, and become competitive in local, regional, and global markets. To achieve the PDO, the project is divided into four components: 1) Developing a Sustainable and Climate-resilient Blue Economy 2) Improving Management and Sustainability of Marine Fisheries, 3) Promoting Sustainable and Climate-resilient Marine Aquaculture, and 4) Project Management and Coordination.

2. Specific Tasks

The specific tasks of the Social Expert will be:

- Supervise the overall social management of the project and its subcomponents, especially those related to Component 3 associated with the construction of new schools and the rehabilitation of existing schools. This will include providing guidance and support to improve social management in school construction and operation in Tanzania.
- Coordinate closely with the TASFAM Coordination Team (Ministry of Livestock and Fisheries, Ministry of Blue Economy And Fisheries, Deep Sea Fishing Authority) in order to identify and manage social risks and impacts and ensure that these are given the required management attention.
- Interact and coordinate closely with the Environmental counterparts hired or appointed by the project to co-lead the Environmental and Social Management of the Project at the Universities and Agencies.
- Interact and coordinate with other national agencies (NEMC, Ministry of Land, Ministry of Labor etc.) and other stakeholders to maintain a clear dialogue Between the Project, National institutions and the local stakeholders in collaboration with the environmental

counterparts

- Provide support in preparation/review of the social section of the Project Operations Manual based on the Project's established ESF instruments (ESMF, SEP, ESCP, RF and VGPF) and the World Bank's Environmental, Health and Safety Guidelines as well as national legislation.
- Prepare and review terms of reference for contracting social evaluations, training, capacity building activities as described in the ESMF and the ESCP to increase national, regional, district and local capacities in social management (resettlement, labor and working conditions, community health (e.g. HIV/AIDS), vulnerable groups etc.)
- Participate in training workshops for use of Operations Manual under the programme.
- Provide support to participating universities and agencies in reviewing the Project bidding documents, direct contracts, etc. to ensure the proper environmental and social management of the project by contractors.
- Provide support to participating universities and agencies to undertake engagement in line with the requirements of the Stakeholder Engagement Plan (SEP).
- Provide support to participating universities and agencies to supervise contractors and monitor compliance with Project and national requirements related to environmental and social management.
- Develop and implement capacity building activities to increase knowledge and Awareness of social management, and track and verify performance of the project in achieving the PDO outcomes and the intermediate results.

3. Qualifications

The social specialist will have the following qualifications:

(a) A Master degree in Sociology, Anthropology or related field.
(b) At least five years of experience in managing social impacts including Resettlement planning and implementation, stakeholder engagement, information and education campaigns etc. on civil works site.
(c) The experience in international standards for social management ideally the World Bank Safeguards Policies will be added advantage
(d) Must have knowledge and experience in Tanzanian regulations and permitting processes related to social risk management
(e) Demonstrated ability to work in teams and have leadership skills.
(f) Fluency in Kiswahili and English and good communication and writing skills.
(g) Must be an organized person to keep track of many different project activities.

4. Reporting

The Social Expert will report to the coordinator at the implementing entities and will work closely with participating universities and agencies who will implement the Project. He/She will be required to submit the following reports.

- Monthly progress report to the implementing entities on the overall work of the portfolio in preparation, construction and operation

- Half year Report to implementing entities and shared to World Bank
- Annual Report to implementing entities and shared to World Bank
- Midterm Review Report to implementing entities and share to World Bank

All reports will be required to highlight project application of the ESMF, SEP, ESCP, RF and VGPF and other instruments approved for the Project by the World Bank and the application of national regulations. Reports will be share with the Bank.

5. Duration

The assignment will last for the duration of the Project (expected to be 5 years).

Appendix XI: ESIA procedures as per Environmental Management Act of 2004, ESIA and Audit Regulations of 2005 and its Amendment of 2018

Steps for conducting environmental impact assessment

Steps 1: Project Registration and Screening

1. Developer or proponent submits a dully filled registration form and Project Brief or Scoping Report to the Council as per regulation 4A.
2. Council shall examine or screen of the Project Brief or Scoping Report in accordance with regulation 7, 9 and 10.
3. Council shall undertake the screening of the proposed project in accordance with regulation 9 and any guidelines that the Minister may issue for this purpose.

Steps 2: Scoping

The developer, proponent, environmental experts or firm of experts shall undertake a scoping exercise in order to:

(a) Identify the main stakeholders that will be negatively or positively impacted by the proposed project;

(b) Identify stockholder's main concerns regarding the proposed project,

(c) Identify main project alternatives;

(d) Identify likely impacts, data requirements, tool and techniques for impact identification, prediction and evaluation;

(e) Identify project boundaries in terms of spatial, temporal and institutional aspects;

(f) Environmental experts or firm of experts shall ensure that there is adequate stakeholder participation in this and all the other stages of the Environmental Impact Assessment; and

(g) The developer or the environmental experts or firm of experts shall prepare a Scoping Report and terms of reference for the Environmental Impact Assessment of a proposed project and submits to the Council for approval.

Steps 3: Baseline Study

(a) The environmental experts or firm of experts shall undertake detailed survey of the existing social, economic, physical, ecological, social-cultural and institutional environment within the project boundary area; and

(b) The consultant shall ensure that adequate stakeholder participation is engaged.

Steps 4: Impact Assessment

(a) The consultant undertakes impact identification, impact prediction and evaluation of impact significance following a variety of appropriate techniques and approaches as specified in the guidelines issued under these Regulations;

(b) The environmental experts or firm of experts shall ensure that concerns and views from stakeholders are fully taken into account during the assessment of impacts;

(c) The environmental experts or firm of experts assesses all possible alternatives and their impacts and recommends most appropriate options.

Steps 5: Impact mitigation and enhancement measures

(a) Environmental experts or firm of experts shall prepare impact mitigation measures for all negative significant impacts, either by elimination, reduction or to remedy them;

(b) Environmental experts or firm of experts shall prepare enhancement measures for all significant positive effects arising from the project so as to increase the contribution from the project to social development and environmental conservation;
(c) Environmental experts or firm of experts shall prepare Mitigation and enhancement Plan for all significant negative impacts and positive effects, with details about institutional responsibilities and costs were appropriate; and
(d) Environmental experts or firm of experts shall prepare a Monitoring Plan and Environmental and Social Management Plan with details about institutional responsibilities, monitoring framework, parameters, indicators for monitoring, and costs of monitoring were appropriate.

Steps 6: Preparation of Environmental Impact Statement

(a) Environmental expert (s) or firm of experts shall prepare an Environmental
Impact Statement adhering to contents outlined in these Regulations;
(b) Environmental impact statement shall be accompanied with a stand-alone nontechnical summary in Both Kiswahili and English languages; and
(c) All technical details, including assessment methodologies, list of consulted stakeholders and their signatures, drawings and terms of references are put in the appendix.

Steps 7: Review of Environmental Impact Statement

(a) The Council that conducts reviews of the Environmental Impact Statement shall adhere to the review criteria and any guidelines that may be issued under these Regulations;
(b) The Council may call for a public hearing and public review of the Environmental Impact Statement in accordance with conditions and procedures stipulated under these Regulations;
(c) The Council shall submit review report to the Minister with its recommendations and all documents used in the review, for approval or disapproval.

Steps 8: Environmental Monitoring and Auditing

The Council shall conduct environmental monitoring in order to evaluate the performance of the mitigation measures following the prepared Environmental and Social Management Plan as well as Monitoring Plan, thus:
(a) Monitoring include the verification of impacts, adherence to approved plans, environmental standards and general compliance of terms and conditions set out in the Environmental Impact Assessment certificate;
(b) Developer should also undertake monitoring of the implementation of the project to ensure if mitigation measures are effective;
(c) Both the developer and the Council shall collect data that may be used in future projects and for environmental management;
(d) The Council and the developer undertake environmental audits for the project;
(e) Mechanisms for stakeholder participation during the monitoring and auditing process must be defined and followed through;
(f) The auditing exercise may focus in the following areas:
(i) Implementation/enforcement audit, which takes place when the Council verifies if the mitigation measures and levels of pollution are within limits;
(ii) Performance/regulatory audit that entails identification of compliance to relevant legislation or safety standards;

(iii) Impact prediction audits checks the accuracy and efficacy of the impact prediction by comparing them with monitored impacts;
(iv) The Council collects and compiles information arising from auditing for future use; and
(v) Developer collects data from the auditing and compiles information for project management and also for submission to the Council.

Steps 9: Decommissioning

This shall be the end of the project life. The decommissioning report shall be prepared either as part of the Environmental Impact Statement or separately, indicating how impacts will be dealt with, including costs of mitigation measures:
(a) Developer undertakes the decommissioning of the project as per the proposals stipulated in the Environmental Impact Statement;
(b) The Council shall continue to monitor implementation of the decommissioning plan, including rehabilitation of the land and other resources that were affected by the project; and
(c) The decommissioning report shall ensure issues such as welfare of workers, resource users as well as their general livelihoods are not worse off as a result of the decommissioning.

Appendix XII: Indicative outline of ESIA report as per Environmental Management Act of 2004, ESIA and Audit Regulations of 2005 and its Amendment of 2018 and the WB ESF specifically ESS 1.

(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.
• 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

Appendix XIII: Template for the Environmental and Social Management Plan (ESMP), Biodiversity Management Plan (BMP), and other plans which can adopt the same template

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 document47 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:

(i) identifies and summarizes all anticipated adverse environmental and social impacts (including those involving indigenous people or involuntary resettlement);

(ii) 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;

(iii) estimates any potential environmental and social impacts of these measures; and

(iv) 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.