

THE 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)

> > **ADVANCED DRAFT**

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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		
EIA	Environmental 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
OP/BP	Operation Policy/ Bank Policy

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

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

The United Republic of Tanzania (URT) is a coastal state in the Western Indian Ocean (WIO) region situated in the Eastern part of Africa. It lies south of the Equator between 1.00° -11°45' S and 29°21' - 40°25' E. The country's size is 945,040 km², encompassing 942,800 km² of Mainland and 2,700 km² of Zanzibar. According to the World Bank, Tanzania's Gross National Income (GNI) per capita increased from TZS 2,225,099 (USD 1,022) in 2016 to TZS 2,577,967 (USD 1,080) in 2019, exceeding the lower threshold for middleincome status (USD 1,035), thus, qualifying as a lower-middle-income country. The country's gross per capita as of 2020 is US 1,157, and an estimated 28 % of Tanzanians live below the poverty line. 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 GDP1. According to the 2012 Population and Housing Census, the country's population was about 44.9 million and will reach nearly 80 million by 2030. The current coastal area's population is about 13.4 million, with a large fraction depending on marine resources, including fishing, for their livelihoods.

The fisheries sector contributes 1.8 and 4.8 %² to the Gross Domestic Product (GDP) of Tanzania mainland and Zanzibar, respectively. The industry of fisheries provides direct employment for about 400,000 fishers. In addition, the sector includes capture fisheries and 30,064 mariculture farmers. It also offers indirect employment in fisheries-related activities for over 4.5 million people.

The United Republic of Tanzania realized the importance of fisheries in the country's economy and livelihoods. Therefore, it has designed a project to improve fisheries management and the economic benefits of the fisheries and mariculture sectors. The envisaged project is the Tanzania Scaling up Sustainable Marine Fisheries and Aquaculture Management Project (TASFAM). The project targets to scale up activities conducted under the SWIOFish

¹ The Tanzanian Fisheries Sector - Challenges and opportunities (2016)

² Ministry of Livestock and Fisheries. Annual Budget Speech of 2021/22

Project, applying lessons learned in implementation. SWIOFish was a five-year project implemented from 2015 to 2022 and made significant conservation and management achievements in fisheries. It intends to use the technical assistance and funding from the World Bank to implement the project.

One of the World Bank funding requirements is the project's Environmental and Social Assessment (ESA). The overall objective of the Environmental and Social Assessment (ESA) is to evaluate the biophysical and socio-economic impacts of the TASFAM project and develop an Environmental and Social Management Framework and Involuntary Resettlement Process Framework to manage these impacts in a way that meets national requirements and World Bank Safeguard Policies. The Process Framework is presented in a separate document.

The TASFAM Project Development Objective (PDO) is to enhance the management of Tanzania's coastal and marine fisheries and aquaculture to strengthen livelihoods.

There are four project components in TASFAM: -

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 URT's blue economy. Activities under this component advance marine spatial planning, blue carbon development, marine ecosystem conservation and biodiversity, and marine fisheries management.

Component 2. Improving Management and Sustainability of Marine **Fisheries.** the component will support Improving Fisheries Data and Management Capacity at National Level, strengthening Management of Artisanal Fisheries in Territorial Waters, as well as management of fisheries in

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the Exclusive Economic Zone (EEZ) and Areas Beyond National Jurisdiction (ABJN). Meanwhile, the component will be improving fisheries value chain for reduced post-harvest losses and enhanced quality and value of marine products.

Component 3. Promoting Sustainable and Climate Resilient Marine Aquaculture: The component 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.

Component 4. Project Management and Coordination. The component 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.

The key Project beneficiaries in Tanzania Mainland and Zanzibar are the coastal artisanal fishing communities. These communities include small-scale and commercial fishers, fish and seaweed farmers, households where fishing makes up a substantial part of their livelihoods, and subsistence fishers. Women's engagement is roughly half of this labor force, working in processing and marketing, shore collecting marine organisms and seaweed farming, and managing household finances and savings.

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

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

The possible impacts emanating from the implementation of the project activities are those related to construction works such as Occupational Health and Safety (OHS) including Child labour, Forced/trafficked labor, transmission of communicable diseases (HIV/AIDS); Gender-Based Violence (GBV)/Sexual Exploitation and Abuse (SEA/SH); and Accidents.

Consistent with both WB's ESF and Tanzania's policy, legal, and institutional framework, this ESMF establishes a process of how to manage the adverse environmental and social impacts that may result from the implementation of the proposed TASFAM Project. It specifically establishes clear procedures and methodologies for screening subprojects, undertaking the required level of environmental and social assessment; preparation of appropriate Environmental and Social instruments {namely Environmental and Social Impact Assessments (ESIA), Environmental and Social Management Plans

(ESMPs), Health and Safety Management Plans (HSMPs), and Traffic Management Plans (TMPs)) etc. review, approval, and monitoring of implementation of subprojects to be financed under the Project. It also specifies appropriate roles and responsibilities to implementing agencies (MLF, MBEF, and DSFA), ESIA Consultants, Design Consultants, Supervision Engineers/Consultants, Contractors, and WB. This process of compliance with both WB's ESSs and Tanzania's policy, legal, and institutional framework is expected to drive the proposed TASFAM Project towards sustainable development.

1.0 INTRODUCTION

1.1 Background

The United Republic of Tanzania (Mainland Tanzania and Zanzibar) is located in Eastern Africa between 1.00° - '11°45' S and '9°21' - '0°25' 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 million³ 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 agua farmers, and indirect employment in fisheries-related activities for over 4.5 million people⁴. 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 postharvesting 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.

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

³ URT 2020 Tanzania in figures: National Bureau of Statistics (2021)

⁴ Ministry of Livestock and Fisheries. Annual Budget Speech of 2021/22

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.

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 precise locations of the sub-project interventions are known and detailed design have been developed. The World Bank's Environmental and Social Framework (ESF) and safeguards policies require a project of that nature to undertake an Environmental and Social Management Framework (ESMF) and site specific Environmental and Social Plan (ESMP) to illustrate the potential negative and positive environmental and social impacts and guide the management of the identified environmental and social impacts and risks.

1.2 Project Objective

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.

1.3 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 comanagement 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 postharvest 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 (EIA) 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.

1.4 Project Area

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 Sixteen (16) 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 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.

1.5 Project Beneficiaries

The primary project beneficiaries in Tanzania are the coastal artisanal fishing communities. These communities include small-scale commercial fishers, fish and seaweed farmers, households where fishing makes up a substantial part of their livelihoods, and subsistence fishers. Women make up roughly half of this labor force, working in processing and marketing, shore collection of marine organisms and seaweed farming, and managing household finances and savings.

In addition, there are producers (ALPHA KRUST, Bahari food, and Abajuko) and professional organizations (Tuna Alliance, WWF, Sea Sense, Mwambao, WCS, Blue Venture, etc.), industry or fisher organizations, and local comanagement institutions (including Beach Management Units (on Mainland) and Shehia Fishermen's Committees (SFCs, also known as Village Fishing Committees or VFCs) in Zanzibar targeted by this project.

1.6 Project Management and 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 crossfunctional 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.

1.7 Environmental and Social Management Framework

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

• Process Framework (PF);

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

Since some of the subprojects are yet identified/prioritized comprehensive identification and evaluation of the nature, magnitude, and extent of environmental and social impacts cannot be made at this preparatory stage of the TASFAM Project. However, these sub-projects are likely to have adverse environmental and social impacts which must be identified, and necessary measures to address them taken as part of the TASFAM Project approval process and implementation. Therefore, this ESMF has been prepared as an appropriate instrument that establishes an environmental and social management process and defines roles and responsibilities for addressing environmental and social issues for projects and sub-projects from preparation, through review and approval, to implementation consistent with National and World Bank's Environmental and Social requirements relevant to the TASFAM Project.

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

1.8 Project Budget

The proposed amount for the credit is US\$ 112 million as summarized in Table 1 below is the Project budget by components.

S/N	Project Component	Amount (US\$ million)
1.	Strengthening the Sustainable Blue Economy	17,300,000.00
2.	Improving Management and Sustainability of Marine Fisheries	50,300,000.00
3.	Supporting Sustainable and Climate Resilient Marine Aquaculture	20,000,000.00
4.	Improving Value Addition of Fisheries and Aquaculture Products Component (CERC)	11,300,000.00
5.	Project Management and Coordination	13,100,000.00
	Total	112,000,000.00

1.9 Objectives of the ESMF

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

The ESMF is designed to help implementing agencies manage the risks and impacts of a project and improve their environmental and social performance, through a risk and outcomes-based approach consistent with the World Bank's Environmental and Social Standards (ESSs) described in section 2.3.

The ESMF should also inform the designs of the subprojects and be used to identify mitigation measures and actions to improve decision-making and manage environmental and social risks and impacts of the subprojects throughout the subproject life cycle systematically, proportionate to the nature and scale of the subprojects and their respective potential risks and impacts in line with relevant National and World Bank Environmental and Social requirements.

Specific ESMF objectives are:

- To establish clear procedures and methodologies for screening subprojects, undertaking the required level of environmental and social assessment;
- ii. 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), etc.} review, approval and monitoring implementation of subprojects to be financed under the Project;
- iii. Describe the process for the preparation of various relevant environmental and social documents;
- iv. Provide procedures for filing grievances and resolving disputes associated with various subproject activities/phases;
- v. To specify appropriate roles and responsibilities, and outline the necessary reporting procedures, for managing and monitoring environmental and social concerns related to subprojects;
- vi. To determine the training, capacity building, and technical assistance needed to successfully implement the provisions of the ESMF; and
- vii.To establish the budget required to implement the ESMF requirements/E&S instruments.

1.10Technical Approach and Methodology for Preparation of Environmental and Social Management Framework (ESMF)

The study involved desk review, field visits, public consultations, and preparation of ESMF.

1.10.1 Desk review

The preparation of ESMF involved a review of findings and other lessons learned from experience with MACEMP and SWIOFish projects, existing baseline information, and literature materials. In addition, the desk review included a detailed review and analysis of the national relevant legislations and policies, World Bank Environmental and Social Framework (ESF), and other relevant documents.

1.10.2 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.

1.10.3 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 responsible for fisheries, Planning, (RAS) 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).

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 (Full list of issues/recommendation have been attached as Appendix...2)

1.10.4 Preparation of Environmental and Social Management Framework (ESMF)

Drafting the ESMF report for TASFAM consisted of holding a joint meeting between a team of experts (Environmental and Social specialists) with Facilitators. The draft ESMF was subjected to review by Facilitators and management of the Ministry of Livestock and Fisheries (MLF), Ministry of Blue Economy and Fisheries (MBEF), and Deep Sea Fishing Authority (DSFA).

2.0 INSTITUTIONAL, LEGAL AND POLICY FRAMEWORK

2.1 Institutional Framework

Mainland Tanzania and Zanzibar manage their inland and territorial sea separately, although the Exclusive Economic Zone is managed jointly as a union matter under the Deep-Sea Fishing Authority.

2.1.1 Mainland Tanzania

The Ministry of Livestock and Fisheries in Mainland Tanzania manages fisheries in Mainland Tanzania coastal zones. The Ministry has several divisions involved in fisheries management: the Fisheries Development Division, the Aquaculture Development Division, the Policy, and Planning Division, the Research, Training and Extension Division, and the Infrastructure Development Division. The Fisheries Development Division includes sections for Fisheries Marketing and Quality Control, Monitoring Control and Surveillance, and Fisheries Development. The Aquaculture Department consists of a unit focusing on marine and inland aquaculture. The Research, Training, and Extension Division has a section devoted to Fisheries Research and Training and a subsection to extension services. Finally, the Policy and Planning Division addresses fisheries policy and planning issues. In addition, there are several other fisheries-related units affiliated with the Ministry,

including the institutions; of the Marine Parks and Reserves Unit (MPRU), Tanzania Fisheries Research Institute (TAFIRI), and Tanzania Fishing Cooperation (TAFICO), and the Fisheries Education and Training Agency (FETA).

The National Environmental Management Council (NEMC) is the primary institutional player in Mainland Tanzania responsible for environmental matters. It is responsible for reviewing and approving project environmental impact assessment reports and ensuring compliance with the countries' environmental laws, regulations, and standards.

Local government authorities that may play a role in fisheries and environmental management relevant to the TASFAM Project include Regional Administrative Secretaries and Local Government Authorities (LGAs). In addition, LGA offices have District Fisheries Officers and District Environmental Officers, who are employees of the Ministry of Regional Administration and Local Government Authority (under the President's Office). These are experts/advisers to Regional and/or District Executives on the matters of their respective ministries.

2.1.2 Zanzibar

In Zanzibar, the fisheries sector is under the Ministry of Blue Economy and Fisheries (MBEF). It is structural and functional and is composed of four departments, including the Department of Fisheries Development and Marine Resources (DFD), the Department of Conservation of Marine Areas (DMC), the Department of Coordination of Blue Economy, and the Department of Planning, Policy, and Research. In addition, the Ministry is composed of Zanzibar Petroleum Regulatory Authority (ZPRA), Zanzibar Fishery Company (ZAFICO), Zanzibar Fisheries Research Institute (ZAFIRI), and Zanzibar Petroleum Development Company (ZPDC).

The DFD is further composed of a planning unit, a Processing, and Marketing unit, an Artisanal fisheries Unit, and a Mariculture unit. In contrast, DMC is composed of a Monitoring Control and Surveillance, a Co-Management Unit,

and a Conservation and Marine resources unit. The legal unit is working collaboratively within these two departments. Under the Zanzibar Environmental Management Act, No. 3 of 2015, the Zanzibar Environmental Management Authority (ZEMA) has been entrusted with several functions to help safeguard the environment. ZEMA can issue environmental certificates, permits, and approvals, undertake environmental monitoring, promote environmental awareness, and enforce regulations and standards. In addition, The Department of Environment was established in 1989 to assume national responsibility for sustainable environmental management and implement laws and regulations to protect and conserve our terrestrial, coastal zone, and marine resources. The Department is currently under the Office of the First Vice President of Zanzibar. Department of Environment plays a pivotal role in achieving sustainable development goals laid out in the National Development Vision 2020 and Zanzibar Poverty Reduction and Growth Strategy (MKUZA-II).

2.1.3 Deep Sea Fishing Authority (DSFA)

The Deep Sea Fishing Authority is governed jointly by the Ministry of Livestock and Fisheries in mainland Tanzania and the Ministry of Blue Economy and Fisheries Zanzibar under the director-general of the Deep Sea Fishing Authority. The DSFA is composed of an executive committee in which the permanent secretaries of ministries responsible for fisheries in Tanzania mainland and Zanzibar become the committee's chair. In addition, there is a technical committee whose functions are to consider technical aspects of fisheries, including scientific, biological, social, economic, and cultural, and to provide advice by the deep-sea fisheries management Act of 2020. The Deep Sea Fisheries Authority (DSFA) manages fisheries beyond the territorial sea in the Exclusive Economic Zone (EEZ) of the URT, including issuing tuna and tuna-like species fishing licenses to national and foreign fishing vessels.

2.2 Legal and Policy Framework

Key fisheries (and related environmental) laws, regulations, policies, and plans to govern fisheries, including environmental legislation and policy tools, include the following: -

2.2.1 Tanzania

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. 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).

2.2.2 Zanzibar

In Zanzibar, 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).

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).

2.2.3 EEZ Fisheries

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.

2.3 Environmental and Social Standards

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

The standards: (a) support Borrowers in achieving good international practice relating to environmental and social sustainability; (b) assist Borrowers in fulfilling their national and international environmental and social obligations; (c) enhance non-discrimination, transparency, participation, accountability, and governance; and (d) enhance the sustainable development outcomes of projects through ongoing stakeholder engagement.

The TASFAM Project will apply the ESF and Table 2 below describes the application of the ESSs to the Project.

ESSs Yes/No	Application	
ESS 1: Assessment Yes	• Maintain a PIUs with qualified staff and resources to support	
and Management of	the management of ESHS risks and impacts of the Project	
Environmental and	including 1 environmental and 1 social specialist.	
Social Risks and	• Adopt the ESIA and ESMP before the relevant contractors'	
Impacts	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 Yes	Adopt and implement the Labor Management Procedures	
Working Conditions	(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 (including relating to SEA and SH), forced labor,	
	child labor grievance arrangements for Project workers and	
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	applicable requirements for contractors, subcontractors, and	
	applicable requirements for contractors, subcontractors, and supervising firms.	

Table 2: Application of World Bank's ESSs to the TASFAM Project

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ESSs	Yes/No	Application
Resources		Project implementation.
ESS 7: Indigenous	No	Not relevant
People/Sub-		
Saharan African		
Historically		
Underserved		
Traditional Local		
Communities		
(IP/SSAHUTLC)		
ESS 8: Cultural	Yes	• Adopt and implement a Cultural Heritage Management Plan
Heritage		(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	No	This ESS is not relevant to the Project.
Intermediaries		
ESS 10:	Yes	• Establish, publicize, maintain, and operate an accessible
Stakeholder		grievance mechanism without retribution, including concerns
Engagement and		and grievances filed anonymously, in, to receive and facilitate
Information		the resolution of concerns and grievances about the Project,
Disclosure		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-centered manner.
		• Establish the grievance mechanism before project
		implementation and thereafter maintain and operate the
		mechanism throughout Project implementation.

2.4 Fisheries Policies and Legislation for Mainland Tanzania

List of the relevant fisheries and coastal and marine resource management policies and legislation applicable to Mainland Tanzania.

Mainland Tanzania			
Policy or	Function in Fisheries	Linkages with TASFAM	
Legislation	and Coastal Marine		
	Resource		
	Management		
National	Establishment of the	•Defines overall policy objectives concerning (among	
Environmental	Mainland Tanzania	others): the sustainable, secure, and equitable use of	
Policy	policy to protect and	resources; prevention and control of the degradation	
(2021)	manage environmental	of land, water, and vegetation; conservation and	
	assets.	enhancement of natural and human-made heritage;	
		improve the condition and productivity of degraded	
		areas and raising awareness and understanding of	
		the linkages between environment and development	
		and promote participation in environmental action.	
		Sets regulatory standards for noise, wastewater	
		discharges, potable water quality, and air emissions,	
		applicable to both the construction phase and	
		Operation & Maintenance (O&M) phase of TASFAM-	
		related activities, such as fish processing and market	
		operations.	
National	Policy and strategy	•Provides and advocates for public awareness on	
Fisheries	statement concerning	environmentally friendly fisheries and aquaculture	
Policy (2015)	the conservation,	practices, climate change issues, and sustainable	
	management, and	environmental conservation.	
	development of fish		
	resources.		
National	Describes overall	•Defines policy objectives for eco-tourism and cultural	
Tourism	environmental, social,	tourism, including general principles for development	
Policy (1999)	Economic and cultural	concerning development planning, environmental	
	objectives, as well as	protection, impact assessment, and community	
	specific policy	participation.	
	strategies, concerning	•Guidelines for Coastal Tourism Development in	
	tourism development in	Tanzania (2003), but unlikely to apply to TASFAM	

Table 3: Fisheries Policies and Legislation for Mainland TanzaniaFisheries and Coastal and Marine Resource Management Policies and Legislation for

Fisheries and Coastal and Marine Resource Management Policies and Legislation for		
Mainland Tanza	ania	
Policy or	Function in Fisheries	Linkages with TASFAM
Legislation	and Coastal Marine	
	Resource	
	Management	
	Mainland Tanzania,	activities.
	including coastal	
	tourism.	
National Land	• This is a policy	•The project shall comply with this policy as it
Policy (1995)	regarding land	emphasizes integrated planning and improved
revised in	tenure,	management of inland infrastructures, and the
1997	management and	designation of urban and land uses based on
	administration,	environmental impact considerations. Adheres to
		noise and waste standards and ensures sustainable
	• Promoting and	land use for project O&M.
	ensuring the	
	existence of a	•The policy recognizes the importance of protecting
	secure land tenure	existing public service utilities for environmental
	system in Tanzania	protection, the design and construction of the project
	and sustainably	has/will consider the restoration of public service
	fostering optimal	utilities and road infrastructure as well as during
	use of land.	project operation and also ensure that solid wastes do
		not accumulate and create nausea to the
		surroundings.
National	Describes the	•Defines strategies and implementing mechanisms,
Integrated	principles and	particularly concerning planning and integrated
Coastal	attributes of	management, conservation, research and monitoring,
Environment	Integrated coastal	stakeholder participation, and capacity-building for
Management	management, the	management.
Strategy	rationale for a national	
(2003)	strategy, and	
	statements of overall	
	vision, mission, goal,	
	and strategies.	
Environmental	Overall Management of	•Specifies Environmental Assessments (EA) such as
Management	the Potential impacts	Environmental Impact Assessment (EIA),
Act (2004) and	on the environment of	Environmental and Social Management Plan (ESMP),
related	coastal activities. Sets	and Environmental Audit for various projects, as

Fisheries and Coastal and Marine Resource Management Policies and Legislation for		
Mainland Tanz	ania	
Policy or	Function in Fisheries	Linkages with TASFAM
Legislation	and Coastal Marine	
	Resource	
	Management	
regulations,	noise, wastewater	applicable.
including	discharge, potable	•Review and approve environmental impact statements
those of 2009.	water, and air	for triggered activities.
	emissions standards,	•Identification of projects or types of projects for which
	with compliance	environmental auditing or monitoring is required, and
	required in both the	ensuring compliance with national environmental
	construction and O&M	quality standards, pollution control, and waste
	phases.	management
		•Prepare and coordinate the implementation of
		Environmental Action Plans, public awareness and
		education programs, and provision of environmental
		advice and technical support.
Fisheries Act	Provides for protection,	•Provides for government functions, marine
No. 22 (2003),	conservation, and	management approaches, and Institutional
and	regulation and control	arrangements that will support TASFAM activities.
Regulations	of fish, fish products,	Compliance with regulatory standards for wastewater
No. 133 (10)	and aquatic flora and	discharge, noise, and air emissions is required in fish
(2009)	its products.	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.
Marine Parks	Provides for the	•The consultative process was established for
and	establishment,	generating and modifying general management plans
Reserves Act	management, and	for each MPA.
(1994)	monitoring of marine	•The Act provides individual parks with powers to
()	park sand reserves.	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 Land Act	•These laws declare all	•Provides regulations covering land registration.
No. 4 of 1999	land in Tanzania to be	transfers and acquisition, and compensation
and the	"Public land" to be held	entitlements for those affected by the proposed
No. 22 (2003), and Regulations No. 133 (10) (2009) Marine Parks and Reserves Act (1994) The Land Act No. 4 of 1999 and the	conservation, and regulation and control of fish, fish products, and aquatic flora and its products. Provides for the establishment, management, and monitoring of marine park sand reserves. •These laws declare all land in Tanzania to be "Public land" to be held	 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 consultative process was established for generating and modifying general management plans for each MPA. The Act 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. Provides regulations covering land registration, transfers and acquisition, and compensation entitlements for those affected by the proposed

Fisheries and Coastal and Marine Resource Management Policies and Legislation for			
Mainland Tanzania			
Policy or	Function in Fisheries	Linkages with TASFAM	
Legislation	and Coastal Marine		
	Resource		
	Management		
Village Land	by the state for public	project.	
Act No. 5 of	purposes.		
(1999)	•The Acts empower the		
	President of the United		
	Republic of Tanzania,		
	to revoke the "Right of		
	Occupancy" of any		
	landholder for the		
	"public/national		
	interest" should the		
	need arise.		
The Local	The Act gives authority	•The Local government is responsible for the provision	
Government	to local governments to	of local services such as roads, water supply,	
Act (2002)	regulate local matters.	education, land use planning, licensing of local	
		businesses, and other enabling functions.	
		•The local government may opt to regulate the	
		extraction of minerals or building materials, through	
		their by-laws. Despite the authority of local	
		governments, the by-laws should not derogate any	
		principal legislation.	
Occupation	Safety Special Provision	Provisional of Protective Equipment	
Health Safety		•Contains regulations for working over water, such as	
Act (2003) and		life jacket requirements, guardrails, emergency	
its associated		rescue procedures, and safety protocols for fishing	
regulations		and other water-based activities, enhancing worker	
		safety during both construction and Operation &	
		Maintenance (O&M) phases in water-related projects	
		•Protection of eyes in certain process Safety or health	
		fisheries activities.	
		• Regulates safety standards for noise levels, air	
		emissions, and potable water quality in fisherv-	
		related workplaces.	
Forest Act	•Provides for the	•Describes the development and implementation of	

Fisheries and C	Fisheries and Coastal and Marine Resource Management Policies and Legislation for		
Mainland Tanzania			
Policy or	Function in Fisheries	Linkages with TASFAM	
Legislation	and Coastal Marine		
	Resource		
	Management		
(2002)	conservation and	Management plans, community-based forest	
	•Management of forests,	management (CBFM) – including both Village Land	
	including mangrove	Forest Reserves and Community Forest Reserves),	
	And other coastal	and the permitting and licensing of forest uses.	
	forests.		

Table 4: Specific details on the EHS regulatory standards for: Noise, Waste water discharges, Potable water, Air emissions in Mainland Tanzania and Zanzibar.

S/No	ENVIRONMENTAL	Parameter	Indicators	Method of	EHS regulatory standards
	IMPACT			measurement	
1.	Noise	Noise Level	Presence of noise	Sound level meter (decibels)	 55dBA day time and 45 dBA Night for residential, institutional and education area; and 70 day time and Night for commercial area as per W/Bank EHSGuidelines audible noise standards
2.	Waste water discharges	BOD5 at 20°C	Presence of nBOD5	TZS 861(Part 3):2006 – Five-day BOD Method	30 mg/l as per the Environmental Management (Water Quality Standards) Regulations, 2007
3.	Potable water	Oduor, Visual and Microbiological Requirements	E. Coli (faecal coliform) count per 100 ml at 44°C	Coliform count per 100 ml at 37°C	 0 Excellent 1 – 3 Satisfactory 4 – 10 Suspicious More 10 Unsatisfactory as per the Environmental Management (Water Quality Standards) Regulations, 2007
4.	Air emissions	Oduor and Visible suspended Particles/ dust	Oduor and Visible suspended Particles/ dust	EMC Promulgated Test Methods	Sulfur dioxide (SO2) 125 (Interim target-1) 50 (Interim target-2) 20 (guideline) 500 (guideline) Nitrogen dioxide (NO2) 40 (guideline) 200 (guideline) Minimum emission of particulate matter ≤0.01µm WHO standard or as per EHS guideline

2.5 Fisheries Policies and Legislation for Zanzibar

List of the relevant fisheries and coastal and marine resource management policies and legislation applicable to Zanzibar.

Fisheries and Zanzibar	Coastal and Marine Resour	ce Management Policies and Legislation for
Policy or	Function in Fisheries and	Linkages with TASFAM
Legislation	Coastal Marine	
	Resource	
Environmental	Overall management of the	• EIA screening and review and approval of
Management	potential	environmental impact statements for triggered
for	impacts on the environment	activities.
Sustainable	of coastal activities, including	
Development	ensuring the environmentally	• Establishment of national environmental
Act (2015),	sound and healthy quality of	standards, guidelines, and codes of good
and	life of the people of Zanzibar,	environmental practice.
Regulations	promoting the sustainable	• Ensure compliance with environmental
	use of renewable natural	standards, pollution control, and waste
	resources, preservation of	management.
	biological and	
	cultural diversity and	• Preparation of Environmental Action Plans,
	strengthening institutional	Community Environmental Management Plans,
	capabilities for protecting the	and Integrated Coastal Area Management Plans.
	environment.	
		• Establishment of a national protected areas
		system.
National	Establishment of the	• Defines overall policy objectives concerning
Environmental	Zanzibar policy to	(among others): the development of a program of
Policy for	protect and manage	integrated coastal zone management,
Zanzibar	environmental assets.	conservation of indigenous plants and animals,
(2013)		and conservation of cultural heritage.
Menai Bay	Establishment of a series of	• MCAs place limits on access to resources within
Conservation	marine conservation areas	their boundaries.
Area		
(Establishmen		• Coexistence with Village Fishermen's Councils
t) Order of		(VFCs/SFCs) to establish areas where fishing
1997;		may occur or where there are access controls

 Table 5: Fisheries Policies and Legislation for Zanzibar

Fisheries and Coastal and Marine Resource Management Policies and Legislation for		
Zanzibar		
Policy or	Function in Fisheries and	Linkages with TASFAM
Legislation	Coastal Marine	
	Resource	
Mnemba		may be introduced
Island Marine		
Conservation		• TASFAM activities with local fishers will be
Area Order of		concentrated in and around 5 MCAs (MBCA,
2002; Pemba		MIMCA, PECCA, TUMCA, and CHABAMCA)
Channel		
Conservation		
Order of 2005		
The	Establishment of the semi-	• Unit to manage nature conservation areas or
Establishment	autonomous body	national protected areas; to build the capacity
of	to conserve terrestrial,	for nature conservation and management of
Zanzibar	aquatic, or marine	nature conservation areas.
Nature	ecosystems by establishing	
Conservation	and managing nature	• To advise, educate, and promote the private
Areas	conservation areas.	sector, local communities, and government
Management		departments on issues concerning nature
Unit Act		conservation; and to educate the public on the
(1999)		importance of nature conservation.
Fisheries Act	Provides for protection,	• Provides for government functions and marine
(2010),	conservation, and	management approaches consistent with
	regulation and control of	TASFAM activities. Focuses on management and
	fish, fish products, and	enforcement of fishing, aquaculture
	aquatic flora.	development, and conservation of fish and fish
		habitats (including the establishment of parks
		and sanctuaries).
Fisheries	Policy and strategy statement	• Policy support for increasing the fish catch;
Policy	with respect	promoting fishers to fish offshore; ensuring the
(1985)	to the conservation,	availability of affordable fishing materials;
	management, and	exploiting offshore resources; increasing
	development of fish	aquaculture production; establishing adequate
	resources.	cold storage facilities; improving the economic
		condition of fishers; promoting conservation of
		the marine environment; promote integrated
		coastal zone management; promote efficient

Fisheries and Coastal and Marine Resource Management Policies and Legislation for			
Zanzibar			
Policy or	Function in Fisheries and	Linkages with TASFAM	
Legislation	Coastal Marine		
	Resource		
		marketing; and promote the production and	
		marketing of seaweed.	
Forest	Established to promote the	• Provides a means for managing coastal forest	
Resources	protection,	resource use.	
Management	conservation and		
and	development of forest	• Formation of Community Forest Management	
Conservation	resources for the social,	Areas involves the participation of local	
Act (1996)	economic, and environmental	communities in establishing management	
	benefits of the people of	agreements, management activities, the rules of	
	Zanzibar.	use, and the delegation of management	
		responsibilities to local community groups.	
Zanzibar	Describes the vision and	• Defines policy strategies concerning tourism the	
Tourism	mission of tourism	environment, and culture and traditions.	
Policy (2004)	development in Zanzibar,		
	which is highly dependent on	• Describes general approaches for achieving local	
	the use of the coastal zone.	benefits and community participation.	
	Supports Tourism Zoning		
	Plan to guide development		
	further.		
Land Tenure	Establishes all land as public	• Ownership of trees on a property is separate	
Act	land vested in	from the right of occupancy.	
(1992) and	the President and		
Land Tenure	administered by the Minister	• No person may destroy or misuse land.	
(Amendment)	responsible for land affairs. It		
Act (2003)	defines land occupancy	• Any person doing research or any activity	
	rights, granting, and leasing	affecting land in Zanzibar must provide the	
	of public land. Makes	Government with the requested information.	
	provision for the protection of		
	land resources.		
Blue Economy	Place great concern on high-	• Encouraging the artisanal fishers toward	
policy (2020)	quality and sustainable	offshore fishing	
	development of Zanzibar	• Effective coordination and management of the	
	including the particular	ocean for significant contribution to economic	
	focus on sustainable	prosperity	

Fisheries and Coastal and Marine Resource Management Policies and Legislation for					
Zanzibar					
Policy or	Function in Fisheries and	Linkages with TASFAM			
Legislation	Coastal Marine				
	Resource				
	development of oceanic				
	resources				
The Deep Sea	Recognize the existence of	• Effective controlling of the influx of International			
Fisheries	the Deep Sea Authority and	fisheries companies to balance local artisanal			
Development	provide the appropriate	fisheries			
Act, 2020	organ to coordinate activities				
	of EEZ				
Zanzibar Oil	Establish the overall	• Minimizing the negative impact on the			
and Gas	management of the upstream	environment, safety, and health.			
(Upstream)	oil and gas subsector for				
Act 2016	sustainable development				
	through broad participation				
	for maximum value				
	generation.				

2.6 Co-Management Mechanisms

Both national policies for Mainland Tanzania and Zanzibar and their legal frameworks include significant references to local co-management schemes whereby some aspects of fisheries management have been decentralized. Local fishing community groups, including Beach Management Units (BMUs) on Mainland Tanzania, and Shehia Fisherman's Committees (SHFCs), formerly known as Village Fisheries Committees (VFCs) in Zanzibar, have been given responsibility for managing local fishing activities, including issuing licenses, collecting landing fees and making decisions on access to local marine resources. In Marine Parks and Reserved Areas and Conservation areas, Village Liaison Committees (VLCs) perform the same functions as BMUs. In the Marine Conservation Areas in Zanzibar, both SHFCs collaborate with Conservation Committees to jointly manage resources within the Conservation areas. On Mainland Tanzania, the Fisheries Policy of 2015 and Fisheries Act No. 22 of 2003 enabled the establishment of Beach Management Units, initially on Lake Victoria but then along the coast in 2006. Coastal BMU creation began as a pilot project in Rufiji, Mafia, and Kilwa districts under MLF and the MACEMP program, collaborating with WWF Tanzania's Rufiji-Mafia-Kilwa (RUMAKI) Seascape Programme. Later on, MACEMP scaled up to other coastal districts in which, to date, there are different stages of implementation of co-management activities. Additionally, Regulations of 2009 No. 133(10) enabled the establishment of the Collaborative Fisheries Management Area (CFMA) whereby several neighboring Beach Management Units sharing a common fishing ground unite for fisheries planning, management, and development. Pilot CFMAs have been implemented by the SWIOFISH project, WWF, and Sea Sense in Kibiti, Mafia, Kilwa, Mkinga, Pangani Lindi, and Bagamoyo Districts, and the results are promising.

In Zanzibar, the Fisheries Act of 2005, which was built on the Fisheries Act No. 8 of 1988, had provisions for co-management that led to the creation of Village Fisheries Committees (VFCs).

Other fisheries and marine resource policy and planning instruments include:

- A National Fisheries Sector Policy and Strategy has been in place since 2007. The goal of the National Fisheries Policy is to promote conservation, development, and sustainable management of fisheries resources for the benefit of present and future generations.
- The Fisheries Sector Development Program (FSDP) for the Mainland was designed to support the objectives of Tanzania Development Vision 2025 and the National Fisheries Sector Policy within the framework of the second national poverty reduction strategy: National Strategy for Growth and Reduction of Poverty (MKUKUTA II) and CAADP to realize objectives of Tanzania Development Vision 2025 and National Fisheries Sector Policy (NFSP-2010)
- Several plans have been developed to focus on priority species, including
 - o Octopus Fisheries Management Plan 2012 (OFMP)
 - o Artisanal Pelagic Fishery Management Plan 2013 (APFMP)

• Prawn Fishery Management Plan 2012 (PFMP)

2.7 International Agreements

The United Republic of Tanzania is part of the East African Community (EAC) negotiating group for Economic Partnership Agreements (EPAs) with the EU. Still, it does not have Fisheries partnership agreements with the EU. Both Mainland and Zanzibar are also implementing the Sustainable development goals and the voluntary guidelines for securing small-scale fisheries in food security and poverty eradication.

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.

3.0 ENVIRONMENTAL AND SOCIAL CONDITIONS

3.1 Coastal and Marine Environment

Tanzania has a coastline of about 1,424 kilometers long, stretching from the Northern border with Kenya to the Southern border with Mozambique, which covers a Territorial Sea of 64,000 km², a continental shelf of 17,500 Km², and an Exclusive Economic Zone (EEZ) of about 223,000 km² (MLF, 2014). The country's total surface area is 945,040 km², with 942, 800 km², and 2,700 km² 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° C to $>30^{\circ}$ 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.

3.1.1 Important Species

The coastal fisheries of Tanzania are rich in nutrient-desirable habitats for numerous marine species. Such species are marine fishes, crustaceans, mollusks, 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.

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

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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.



Figure 2.1: Maps showing Tanzania and Zanzibar Coastlines

3.1.2 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 5 and 6.

SN	Marine Protected Areas	Year Gazette	Total Area	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	d 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	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	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	1981	2.6					
17.	Dar Es Salaam Marine	1975	26	Developed in 2005				

Table 6: Mainland Tanzania Marine Parks and Marine Reserves

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

Marine Protected Areas	Establish ment	Total Area (km²)	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		

 Table 7: Zanzibar Marine Conservation Areas

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

3.2 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.

3.2.1 Mainland Tanzania

3.2.1.1 Coastal Regions and Communities

Tanzania's Mainland coastal include Tanga, Pwani, Dar es Salaam, Lindi, and Mtwara. These five regions are further divided into 16 districts, as shown in Table 7 below: -

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), and Mikindani

 Table 8: Mainland Tanzania Coastal Regions and Districts

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, cellphone 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 %⁵ 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

⁵ National Intergrated Coastal Environment Management Strategy, 2003

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.

3.2.1.2 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.

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

 Table 9: Population Data for Coastal Mainland Tanzania

3.2.1.3 Mainland Tanzania Coastal Households

Mainland Tanzania has around 9.1 million⁶ 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 9 for information on access to essential services.

⁶ 2020 Tanzania in figures: National Bereau of Statitics 2021

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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	28.7	32.1	79.9	12.7	21.9	29.1
electricity grid				12.7		
Education	1	L				
% of adults without education	31	39	8	44	28	25
% of women without education	38	52	11	52	36	32
Primary education net enrollment	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	18.8	13.1	2.5	25.1	16.6	12.6
Health						
% of households within 6 km of a	62	74	98	67	87	75
dispensary or health center						
Water						
% of households with piped or	46	35	94	19	52	55
% of households within 1km of	41	56	84	47	41	55
drinking water (dry season)						
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

Table 10: Household Wellbeing Indicators in Mainland Coastal Regions (2017-18).

3.2.1.4 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 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.

3.2.1.5 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.

3.2.1.6 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

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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.

3.2.2 Zanzibar

3.2.2.1 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 km². 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).

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3.2.2.2 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 2.3).



Figure 2.3: The map showing the main islands of Zanzibar with districts



Figure 2.4: The map showing the main islands of Zanzibar with Marine Conservation Areas (MCAs)

3.2.2.3 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 10). 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.

2012 Topulation and mousing 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				

Table 11: Projected Population data for Zanzibar Regions based on the2012 Population and Housing Census

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.

3.2.2.4 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.

3.2.2.5 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 resourcebased 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

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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).

3.2.2.6 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 the dropping of the Zanzibar economy. It has been affected by the emergency of the COVID-19 pandemic, which led to the dropping 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. 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

4.0 APPLICABLE WORLD BANK ENVIRONMENTAL AND SOCIAL FRAMEWORK

The World Bank Environmental and Social Framework (ESF) sets out the World Bank's commitment to sustainable development through a Bank Policy and a set of Environmental and Social Standards that are designed to support the mechanism for addressing environmental and social issues in the project design, implementation, and operation, and they provide a framework for consultation with communities and public disclosure. Examples of these requirements include conducting environmental and social impact assessments, consulting with affected communities about potential project impacts, and restoring the livelihoods of displaced people. The Environmental and Social Framework (ESF) applies to all new World Bank investment project financing. Section 2 provides a summary of the Environmental and Social Standards (ESSs) that are relevant to this project, identifying specific standards to address environmental and social risks.

In addition, the World Bank Environment and Social Safeguard Policies aim to improve decision-making, to improve decision-making, ensure that project options under consideration are sound and sustainable and that potentially affected people have been properly consulted. For this project, the World Bank Environmental, Health, and Safety Guidelines (EHSGs) are applicable, specifically the General EHS Guidelines, the EHS Guidelines for Aquaculture, and the EHS Guidelines for Fish Processing.

5.0 IMPACT ASSESSMENT AND MITIGATION MEASURES

5.1 Impact Assessment

The Impact Assessment of the TASFAM Project is based on an analysis of the potential impacts of Project activities as proposed in the Project Appraisal Document (PAD) and other analyses carried out as part of project preparation studies, including the activities implemented by the SWIOFish project for Mainland Tanzania and Zanzibar. The team conducted field observation, interviews with key informants, consultations (Annex 2), and focus group discussions with various stakeholders in coastal areas in Mainland Tanzania and Zanzibar from 21^{st} April to 04^{th} May 2022 and reviewed from 19^{th} to 30^{th} August 2024. The field visits included Dar es Salaam, Tanga, Mtwara, Lindi, and Coastal Regions in Mainland Tanzania, covering only coastal districts and all districts in Pemba and Unguja islands. The impact assessment also involved a review of the SWIOFish program's safeguards documents, including the ESA and ESMF (2014) and safeguards implementation and monitoring reports of the SWIOFish project (2015 – 2022) as well as WBG EHSG General and Aquaculture and Fish Processing which are applicable to this project

The exercise involved the identification of potential environmental and social impacts and the prediction of negative and positive effects in terms of environmental and social parameters for the project The significance of effects was determined by combining the perceived frequency of occurrence of the source of the effect, the duration, severity, and spatial extent of the impact, and the sensitivity of the area upon impact. Since the specifics of subproject locations and designs are not know in this ESMF, the above estimates of frequency, duration, severity, etc. are only general and do not necessarily represent accurate estimates.

The scoping process for the impacts assessed for ESMF involved:

• A review of the project proposal submitted to the World Bank in 2021 as part of the preparatory phase.

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- A review of documents prepared for SWIOFish and other previous development projects in Mainland Tanzania and Zanzibar, and other fisheries projects.
- Stakeholder consultations with national and local government, MPAs managers, civil society, communities, etc.; and
- Observations of existing facilities concerning the TASFAM project.

The information gathered from the scoping exercise was a determinant of valued aspects for the impact assessment and ranked them as "high," "moderate," or "low" in value. Identified Valued Aspects and Areas of Potential Impacts from the project

Valued	Impacts	Priority (high,
Aspects		low)
Coastal and Mar	rine Aspects	
Coral Reefs	• Potential direct positive impact through management of fisheries and other coastal and marine resources increased research, and MCS under TASFAM Project – assess jointly with other coastal and marine aspects as "Coastal and Marine Ecosystems"	High
Mangroves Forest	 Mariculture, research, and management of fisheries and other coastal and marine resources under TASFAM could have a direct positive potential impact Management of or investment in mangrove forests is a priority for the TASFAM project 	High
Seagrass beds	 Seaweed farming, conservation activities for spawning and breeding areas, research, management of fisheries and other coastal and marine resources under TASFAM – Zonation/ marine spatial planning with other coastal and marine aspects as "Coastal and Marine Ecosystems" Conservation and seaweed farming investment in seagrass beds is a priority for the TASFAM project 	High
Offshore habitats and neritic Zone	• Potential direct positive impact through increased research, MCS, and management of fisheries and other coastal and marine resources under TASFAM – assess jointly with other coastal and marine aspects as "Coastal and Marine Ecosystems"	High
Sandy beaches	• Potential direct positive or negative impacts through biodiversity conservation (sea turtle breeding area), use of beaches for fishery or mariculture activities – Marine spatial planning with other coastal and marine aspects such as "Coastal and Marine Ecosystems"	High
Important bird areas	 Potential direct positive impact through tourist attraction and conservation activities Management of or investment in important bird areas is not a priority for the TASFAM project 	High
Socio-cultural A	spects	Γ
Social Capital	 Potential direct positive (long-term) and negative (short-term) impacts Capacity-building for co-management, other government, 	High

Valued Aspects	Impacts	Priority (high, moderate, or low)
	private, and community stakeholders	10
Human Capital	Potential direct positive impact	High
indinan capital	• Capacity-building for co-management other government	
	private, and community stakeholders	
Vulnerable	• Potential direct positive (long-term) and negative (short-	High
Groups	term) impact	0
-	• Access control of TASFAM Project activities and investment	
	may affect their livelihoods	
Cultural	• The potential direct or indirect negative impact, if new	Moderate
Property and	fisheries infrastructure or enterprises built near historical	
Antiquities	or cultural sites and old cemeteries of traditional	
	importance (e.g., dunes in Mtwara Mnazi Bay)	
	• Not a management or investment priority for the TASFAM	
	Project	
Human Health	Potential indirect positive impacts	Low
and Public	• Potential negative indirect impacts and risks due to	
Services	increase use, induced development	
	• Food and income security may be impacted through	
	investments in improved fisheries	
	• Human Health and public services are not targeted for	
17.1 J D	direct investment by the TASFAM Project	
Valued Econom		TT: -1-
Commercial	• Potential direct positive (long-term) and negative impacts	High
Fisheries	• Improved management of lisheries resources and increased	
1.121161162	economic benefits are priorities for the TASFAM Project	
Mariaultura	Targeted for investment under TASFAM Project	Uigh
Manculture	• Potential direct positive and negative impacts	nigii
	• Improved management of and increased economic benefits	
	Project	
	 Targeted for investment under the TASEAM Project 	
Tourism	Potential direct positive and pegative impacts	High
rounion	 Management of fisheries and coastal and marine resources 	111911
	on which eco-tourism is directly dependent is a priority for	
	the TASFAM Project	
	• Some investments in water/beach tourism are anticipated	
	under the TASFAM Project	
Small-scale	• Potential direct positive and negative impacts depending on	High
microenterprise	the enterprise, Improvement of livelihoods through	_
development	diversification of economic opportunities and activities	
Coastal Forest	Potential indirect positive or negative impacts	Moderate
Resource Use	Not a TASFAM Project investment priority	
Oil and gas	• Nearshore and offshore gas and oil development and	Low
exploration and	exploration and heavy industry (primarily in Dar es Salaam,	
Heavy Industry	Tanga, Zanzibar, Pemba, and Mtwara)	
	• Not a sector targeted for investment by the TASFAM Project	
	but has an indirect effect on the coastal communities and	
· · · ·	coastal resources	
Institutional As	pects	TT' 1
National and	• Potential direct positive and negative impacts - Improved	High
Local	capacity to deliver on institutional functions or restricted	
Governments	ability to participate effectively in TASFAM due to limited	
	numan resources	I Li colo
INGUS, CBUS,	• Potential positive impacts from involvement in TASFAM	пığlı

Valued Aspects	Impacts	Priority (high, moderate, or low)
and the Private sector	Project fisheries investments and increased engagement and collaboration with government institutions, or negative impacts from access restrictions, capacity to participate effectively in TASFAM Project and to monitor adequately	

5.2 Potential Impacts of the Project on Valued Aspects

Based on the results of the scoping process, an impact matrix was developed to identify potential impacts of Project Components 1, 2, and 3 on identified valued aspects. Each identified potential impact shown in Table 11 has been labeled P, representing potential interaction which is further defined as negative (-) or positive (+) and positive/negative (±).

Project interventions	Environmental and Social impacts/issues																		
	ESS1			ES	S2					ESS	3		ESS4	1	ESS5	ES	S6	ESS8	ESS10
	Disadvantaged/vulnerable	abor Influx	Occupational Health and Safety Hazards	3mployment	Gender-Based Violence	ivelihood	social Conflict	soil quality	Segment Quality	Vater Resources (Quality and Quantity)	Air Quality	Voise Level	Community Health and Safety	Fraffic and Transport	Land Acquisition, Resettlements on Land Use, and Involuntary Resettlement	rerrestrial Ecology	Aquatic Ecology	Physical Cultural Resources	Stakeholder Engagement and nformation Disclosure
Sustainable utilization and management of marine resources	P-	P+		P+	P-	P+	P-		•.							P±	P±		P+
Promote governance for responsible fisheries and aquaculture	P+	P+		P+	P+	P+	P+			P±								P+	P+
Strengthening Coastal and Marine Information System		P+		P+	P+	P+													P+
The improved working environment for effective training and service delivery	P+	P+	P-	P+	P+	P+	P±	P±		P±	P-	P-	P-	P-	Р-	P-			P+
Strengthening Institutional Reforms to realize Blue Economy development in Tanzania	P±	P±		P+	P+		P+											Р-	P+

Table 12: Activity-Impact Interaction Matrix for activities that will be implemented in the TASFAM Project

Strengthening Fisheries' institutional capacity	P+	P+	P+	P+	P+	P+	P±	P-	P-	P-	P-	P±	P-	P-	P-	P-	P±	P+
Support investment in fisheries and																		
aquaculture infrastructure and	P±	P+	P+	P+		P+	P+	P-	P±	P+								
facilities																		
Maintaining Quality and safety of fisheries products		P+	P+	V		P+		P-	P-	P-		P±	P-	P±	P-	P-		P+
Supporting private																		
sector engagement in fisheries and aquaculture trade and marketing	P+			P+		P+	P+										P+	P+
Facilitating coastal																		
communities' engagement in the protection and safeguarding of marine	P+			P+		P±	P-	P+	P+	P+					P+	P+		P+
Enhance resources																		
innovation on Climate change mitigations and adaptation						P+		P+	P+						P+	P+	P+	P+
Promote livelihood diversification for coastal communities	P+			P+													P±	P+
Strengthening Communication and Awareness Project																	P+	P+
Strengthening fisheries information systems, and information sharing at the national and regional level					P+		P+										P+	P+

5.2.1 Positive Environmental Impacts and Socioeconomic Benefits

As noted elsewhere, given the project objective to improve governance in the fisheries management sector, through better data collection which is used to inform decision and management measures, stronger enforcement of conservation measures, and renewed emphasis on co-management strategies to engage and enlist communities in the effort, it is expected that the positive impacts of SWIOFish will be enhanced while minimizing and where possible eliminating negative impacts.

Positive impacts are expected to include but are not limited to: -

- i) Better data, better knowledge of species, ecosystems, catch, and economic benefits.
- Better MCS compliance and licensing and other fee revenue collectionfinancing mechanisms, reduction of Illegal, Unreported, and Unregulated (IUU) fishing.
- iii) Engagement and investment in fishing fleets that target resources in the deep sea to increase socio-economic benefits.
- iv) Reduction of destructive fishing practices (dynamite fishing, beach seines, etc.).
- v) The strategic mechanism for dealing with large-scale, long-term impacts like climate change.
- vi) Establishment/strengthening of sustainable institutions for governance, monitoring, and compliance.
- vii) Strengthening of Co-management will improve fisheries practices, sustainable harvesting, improved livelihoods, and coping mechanisms to deal with access controls or other loss of access to fisheries.
- viii) Create a link between crucial actors in support of fisheries management.

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- ix) Research and financial support for value-added businesses.
- x) Establishment of an Apex institution to give the industry a stronger voice in policy and governance.
- xi) Market research for improved Mariculture investment opportunities.
- xii) Village Savings and Loans (VSL) schemes promote small business development, allow for diversification away from fisheries, and compensation for those forced to leave or reduce their traditional fishing activities.
- xiii) Improvement of fishers' operational services like post-harvest facilities like a grinder, drying plate, solar drier, and gas stove to avoid postharvest losses in small pelagic fisheries and seaweed farming.
- xiv) Reduce mangrove destruction through the introduction of Polyvinyl chloride (PVC) pegs as an alternative to wooden pegs commonly collected from mangrove forests.
- xv) Enhanced fish protection through conducting a survey on fish movement for temporal closure of breeders.
- xvi) Promote investment in fisheries through creating favorable environments, provision of training, and capital assistance;
- xvii) Excessive occurrence of sea urchins along the east coast sea of Zanzibar;
- xviii) Extension of public health services and social services access to the fisheries market and landing site area; and
- xix) Reduce gender inequality across the fishing communities.

5.2.2 Potential Negative Environmental and Social Impacts

The negative impacts are primarily localized and tied to access restrictions that may be implemented in certain fisheries or geographic locations: -

i) Impacts related to construction works supported by the project;

- Risk in Occupational Health and Safety (OHS) including Child labour, Forced/ trafficked labor, and SEA/SH;
- Labor influx into local communities, including the transmission of communicable diseases, such as HIV/AIDS related to interactions among project workers and between project workers and local communities
- Pressure on local amenities and resources;
- Risk of restrictions in access to natural resources in areas surrounding MPAs; particularly those expected to experience increased protection and expansion;
- Complains from project activities;
- Community Health and Safety Risk;
- Gender-Based Violence (GBV)/Sexual Exploitation and Abuse (SEA/SH); and
- Discrimination against women, persons with disabilities, and persons with serious illnesses, in work recruitment and employment.

ii) Impacts related to the operation and maintenance phase of project supported works and areas (fishing, aquaculture, landing sites, etc.);

- Worker exposure to chemicals and machinery (OHS) (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.
- Accident affecting the community and spread of diseases from aquaculture to wild fish populations (CHS);
- Poor working condition and Risks to workers from unhygienic environments;
- Communicable Disease (HIV/AIDS);

- Gender-Based Violence (GBV)/Sexual Exploitation and Abuse (SEA/SH);
- Risk associated with Use of antibiotics and chemicals in aquaculture;
- Discrimination against women, persons with disabilities, and persons with serious illnesses, in work recruitment and employment.
- Generation of wastewater from fish processing and marketing activities.
- The operation phase of the fish markets will have potential effects on the environment as well as health and safety risks and hazards associated with fish processing and storage facilities.
- Impacts such as physical hazards such as 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.
- 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.

iii) Impacts related to Technical Assistance activities of the Project

- Workplace injuries and accidents from tools, machinery, and equipment (Spade, concrete mixer, trucks, picks) and related occupational health and safety hazards (chemical, physical, Biological);
- Gender-Based Violence (GBV)/Sexual Exploitation and Abuse (SEA/SH);
- Communicable Disease (HIV/AIDS);
- Discrimination against women, persons with disabilities, and persons with serious illnesses, in work recruitment and employment;
- Potential stakeholder opposition to some activities supported by the Project, particularly those related to the enablement of policy reforms, especially if they involve subsidies for certain commercial

fishing or certain commercial fishing activities and not for others, as well as opportunity costs for the local population associated with greater private sector participation.

iv) Potential indirect/induced and cumulative negative impacts and risks.

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- Restoration of resources may trigger restrictions in access to fisheries resources which could reduce income for some fishers;
- Overfishing due to the promotion of small pelagic fisheries may result in ecological imbalance for predators;
- Extension of fisheries activities may lead to population rise associated with distinctive behavior leading to the introduction of alien cultures and traditions and locally perceived as immoral practices like prostitution, theft, and use of drugs;
- The success of priorities fisheries, especially octopus closure for restoration, may lead to fisheries resource users conflict with other fisheries (e.g., Line fishing);
- An increased number of fishing and transport vessels may cause environmental damage (anchoring may destroy coral reefs and seagrass beds);
- Promotion of seaweed farming may lead to excessive use of mangrove peg that may cause deforestation of mangroves;
- Implementation of the project activities may create many jobs that will attract an influx of people and ultimately spread communicable diseases such as HIV/AIDs;

5.3 Mitigation Measures

S/N	ESS	Potential Negative Impact	Likelihood	Risk	Consequences	Mitigation measures
i)	Impact	s related to construction works subt	orted by the	project		
1.	ESS 2	• Risk in Occupational Health and Safety (OHS) including Child labour, Forced/ trafficked labor, and SEA/SH;	Likely	moderate	substantial	Adopt and implement the LMP consistent with World Bank EHSGs, including health and safety training, regular audits, and grievance mechanisms before commencement of the civil works and thereafter implement the LMP throughout Project implementation, including regular training on OHS practices.
2.	ESS 4	• Labor influx into local communities, including the transmission of communicable diseases, such as HIV/AIDS;	Likely	moderate	substantial	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, behavior of project workers, risks of labor influx, etc, ensuring regular health screenings and awareness campaigns.
3.	ESS 2	• Complains from project activities;	Likely	Low	Moderate	Establish a grievance mechanism prior to engaging Project workers and thereafter maintain and operate it throughout Project implementation, ensuring accessibility and transparency in addressing complaints.
4.	ESS 1	• Environmental Risk;	Likely	moderate	substantial	Adopt the ESIA and ESMP before the relevant contractors' bidding phase and thereafter implement the ESIA and ESMP throughout project implementation, including monitoring compliance with environmental standards.

Table 13: Potential Project Negative impacts with associated mitigation measures

S/N	ESS	Potential Negative Impact	Likelihood	Risk	Consequences	Mitigation measures
5.	ESS 4	• Community Health and Safety Risk;	Likely	moderate	substantial	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, behavior of project workers, risks of labor influx, etc.
6.	ESS 4	• Gender-Based Violence (GBV)/Sexual Exploitation and Abuse (SEA/SH); and	Likely	moderate	substantial	Prepare, adopt, and implement the GBV/SEA/SH Action Plan before the commencement of civil works begin, thereafter implement the GBV/SEA/SH Action Plan throughout Project implementation.
7.	ESS 10	• Discrimination against women, persons with disabilities, and persons with serious illnesses, in work recruitment and employment.	Likely	moderate	substantial	Adopt the SEP before appraisal and thereafter implement the SEP throughout Project implementation, ensuring inclusive recruitment practices and ongoing monitoring of employment equity.
ii)	Impact sites,	s related to the operation and main etc.);	tenance pha	se of project s	supported works a	and areas (fishing, aquaculture, landing
8.	ESS 2	• Worker exposure to chemicals and machinery (OHS);	Likely	low	Moderate	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), aligned with the World Bank EHSGs.
9.	ESS 4	• Accident affecting the community and spread of diseases from	Likely	moderate	substantial	Incorporate measures to manage traffic and road safety risks as required in the ESMP, and conduct community

S/N	ESS	Potential Negative Impact	Likelihood	Risk	Consequences	Mitigation measures
		aquaculture to wild fish populations (CHS);				awareness programs on health risks associated with aquaculture.
10	ESS 2	 Poor working condition and Risks to workers from unhygienic environments; 	Likely	low	Moderate	Adopt the LMP before commencement of the civil works and thereafter implement the LMP throughout Project implementation, including provisions for sanitation and hygiene facilities at work sites.
11	ESS 4	• Communicable Disease (HIV/AIDS);	Likely	moderate	substantial	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, behavior of project workers, risks of labor influx, etc.
12	ESS 4	• Gender-Based Violence (GBV)/Sexual Exploitation and Abuse (SEA/SH);	Likely	moderate	substantial	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.
13	ESS 2	 Risk associated with Use of antibiotics and chemicals in aquaculture; 	Likely	low	Moderate	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),
14	ESS 10	 Discrimination against women, persons with disabilities, and persons with serious illnesses, in work recruitment and 	Likely	moderate	substantial	Adopt the SEP before appraisal and thereafter implement the SEP throughout Project implementation

S/N	ESS	Potential Negative Impact	Likelihood	Risk	Consequences	Mitigation measures
		employment;				
iii)	Impact	s related to Technical Assistance ac	tivities of the	e Project		
15	ESS 2	• Workplace injuries and accidents from tools, machinery, and equipment (Spade, concrete mixer, trucks, picks) and related occupational health and safety hazards (chemical, physical, Biological);	Likely	low	Moderate	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), according with the World Bank EHSGs.
16	ESS 4	• Gender-Based Violence (GBV)/Sexual Exploitation and Abuse (SEA/SH);	Likely	moderate	substantial	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.
17	ESS 4	• Communicable Disease (HIV/AIDS);	Likely	moderate	substantial	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, behavior of project workers, risks of labor influx, etc.
18	ESS 10	 Discrimination against women, persons with disabilities, and persons with serious illnesses, in work recruitment and employment; 	Likely	moderate	substantial	Adopt the SEP before appraisal and thereafter implement the SEP throughout Project implementation
iv)	Potent	ial indirect/induced and cumulative	negative imp	pacts and risks	5.	
19	ESS 1	• Restoration of resources may	Likely	Intermediate	Minor	Adopt and implement an Environmental and Social Impact

S/N	ESS	Potential Negative Impact	Likelihood	Risk	Consequences	Mitigation measures
		trigger restrictions in access to fisheries resources which could reduce income for some fishers;				Assessment (ESIA), and corresponding Environmental and Social Management Plan (ESMP)
20	ESS 6	Overfishing due to the promotion of small pelagic fisheries may result in ecological imbalance for predators;	Likely	Low	Substantial	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 as well as the World Bank guidelines, including monitoring fish populations and habitats and promoting sustainable fishing practices among the community.
21	ESS 2,4,8	• Extension of fisheries activities may lead to population rise associated with distinctive behavior leading to the introduction of alien cultures and traditions and immoral practices like prostitution, theft, and use of drugs;	Likely	Substantial	Moderate	 Adopt the LMP before commencement of the civil works and thereafter implement the LMP throughout Project implementation. 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, behavior of project workers, risks of labor influx, etc 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
22	ESS2	• The success of priorities fisheries, especially octopus closure for	Very likely	Substantial	Moderate	Adopt and implement the Labor Management Procedures (LMP) for the Project, including, inter alia, provisions

S/N	ESS	Potential Negative Impact	Likelihood	Risk	Consequences	Mitigation measures
		restoration, may lead to fisheries resource users conflict with other fisheries (e.g., Line fishing) ;				on working conditions, management of workers' relationships, occupational health and safety (including personal protective equipment, and emergency preparedness and response),
23	ESS6	• An increased number of fishing and transport vessels may cause environmental damage (anchoring may destroy coral reefs and seagrass beds);	Likely	Substantial	Substantial	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
24	ESS 6	 Promotion of seaweed farming may lead to excessive use of mangrove peg that may cause deforestation of mangroves; 	Likely	Intermediate	Moderate	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
25	ESS4	• Implementation of the project activities may create many jobs that will attract an influx of people and ultimately spread communicable diseases such as HIV/AIDs;	Very likely	Substantial	Substantial	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, behavior of project workers, risks of labor influx, etc.

6.0 PROJECT DESIGN IMPROVEMENT RECOMMENDATIONS

The TASFAM project is a follow-up to the fisheries management aspects of the SWIOFish project. The development of the TASFAM project has incorporated several lessons learned in the implementation of SWIOFish project activities to avoid some of the pitfalls and improve the successful aspects of the SWIOFish project. Key priorities are a renewed and early proactive effort at the capacity building at national and local levels of government and targeted early-stage efforts to strengthen the existing co-management systems in Mainland Tanzania and Zanzibar.

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 artisanal fishing, smallholder farming, subsistence forestry, lime and salt production, seaweed farming, livestock husbandry, and smallscale 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. The daily struggle for food and household income keeps people from improving their well-being.

The coastal area is of critical importance to the development of the country. These are industries, coastal tourism, mariculture development, and natural gas exploitation, which are becoming increasingly important in promoting national economic development. However, these economic opportunities need to be developed to benefit the nation and coastal people in a manner that links growth to wise management and protection of the resource base. Unless this happens, coastal people's quality of life, which is inextricably tied to the resource base, will continue to decline.

The coast is a uniquely productive and fragile part of the environment and social issues, where land meets with the sea, where an assortment of human activities occur, and where integrated decision-making is essential. Based on the conducted Environmental and Social Assessment study and issues raised by various stakeholders consulted (Annex 2) the following are recommendations for improvement:-

- i. The use of spatial planning in making decisions on subproject investments is of paramount importance;
- Major investments, e.g., construction activities (for both the construction phase and subsequent operation and maintenance phase), should be subjected to ESIA and ESMP;
- iii. New and review of policies, plans, acts, and the program should be subjected to Strategic Environmental Assessment (SEA);
- iv. Subproject design should be participatory and involve key personnel adhering to the Local Government Authority's institutional setup for accessible communication and project activities monitoring;
- v. Empower women and girls in gender mainstreaming, economic aspects, and fisheries management;
- vi. Communities should be well informed and purposely prepared to benefit from employment generated by project activities such as construction works. The project should institute a mechanism for ensuring fair recruitment of available job opportunities (e.g., only on merit). Give priority to local community personnel for low-cadre/blue-collar job opportunities;
- vii. High post-harvest losses are associated with artisan fisheries due to poor handling practices and a lack of absolute handling facilities. Thus supposed to go to the nearby market that incurs transport costs or sells at low prices. The forthcoming projects must emphasize reducing postharvest losses with a focus on introducing cold chain systems and value additional facilities within fish landing sites and creating awareness among fishers;
- viii. There is an insufficient entrepreneurial skill in the fisher's community. The TASFAM projects must set aside sufficient funds to deal with entrepreneurial development skills to enhance commercialization, increase

technology, and help the sector move from a comparative to a competitive advantage;

- ix. The licensing system should be flexible and updated from time to time according to regional situations concerning the licensing business;
- x. Support to BMUs/SFC should be geared towards self-sustenance through the establishment of fundraising mechanisms including involvement in income-generating sub-projects such as revenue collection; and
- xi. Integrate the TASFAM project with related goals to other projects in the same areas.

7.0 CAPACITY ASSESSMENT

During the preparation of the SWIOfish project, the capacity assessments highlighted insufficient human and institutional capacity. The deficiency was in the lead government agencies at the national, local government, and comanagement levels, across a broad range of management and technical expertise, to carry out their duties to implement environmental and social measures. The SWIOFish training programs focused on building capacity for institutions and government agencies at the national level, local government, and co-management across a broad range of management and technical expertise. The SWIOFish project managed to conduct a Training Needs Assessment (TNA) on safeguards. One of the major challenges during SWIOFish implementation was the absence of funds allocated to build capacity on Environmental and Social issues. Therefore, the TASFAM project should allocate funds to implement the TNA report to rectify a capacity gap in th E&S issues.

However, the SWIOFish Project has been a success at the local level, where comanagement has been implemented. The success ranges from revenue collection, where BMUs/SFCs retain some funds for their daily operations, and the management of fisheries resources has been networked together through Collaborative Fisheries Management Areas (CFMAs). However, the TASFAM project should scale up co-management activities in other coastal districts to enhance a coastal network as a forum. In addition, office accommodation for BMUs has improved communities' capacity to manage fisheries resources within their area of jurisdiction.

Staffing in government ministries appears to lean heavily towards those with technical expertise in fisheries or related disciplines. There is a wide range of expertise in fisheries and associated disciplines in local governments. Generally, the capacity to deal with environmental and social issues is inadequate, with perhaps only a few people within the lead ministries being assigned responsibility for these areas. At the District level, responsibilities for managing these issues appear to fall between District Fisheries Officers and

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District Environmental Officers (or Subject Matter Specialists for Environment in Zanzibar), with perhaps not enough coordination between the two to cover issues that cross both of their areas of responsibility.

There appears to be little environmental and social expertise or capacity at the community level, including in the co-management units. Planned capacity-building efforts seem to focus on improving basic leadership and financial management skills, which are priority issues. However, BMUs' function is constrained by a lack of equipment such as patrol/rescue boats and their accessories, data collection, and reef closure to perform their daily responsibilities.

Given the TASFAM project's early focus on research of fish stocks and capacity building in policy and management capabilities, the critical need for environmental and social expertise to review subprojects and other environmental and social aspects of the project may not occur until several years into the program. This allows time for a proactive effort in years 1 and 2 to recruit and train those responsible for environmental and social oversight on the overall project, at local government levels, in co-management settings, and the management of individual subprojects. Therefore, training should be provided to PIU staff, contractors, consultants, laborers, project workers, communities, and vulnerable women groups include but not limited to:- the World Bank ESF; Implementation of ESMF; ESIA and Strategic Environmental Assessment (SEA); Climate Change Mitigation and Adaptation; Waste Management; Stakeholder mapping and engagement; Operational Aspects of Grievance Management; Specific aspects of environmental and social assessment and management; Community health and safety; GBV/SEA/SH risk management; and Occupational health and safety. The training should be conducted as part of Project preparation and on a biannual basis during project implementation.

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8.0 ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK

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. The proper World Bank E&S instrument to use in this case is the Environmental and Social Management Framework (ESMF). An ESMF is called for when an instrument is needed 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 ESMF 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 ESMF 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), etc.} 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.
- •

8.1 Sub-Project Preparation, Review, and Approval

This section outlines the suggested screening review and approval process for possible subprojects to be financed under TASFAM in Tanzania. As specific projects and locations have been identified, this section provides a process for screening, assessing, managing and monitoring of potential subproject EHS direct, indirect and cumulative impacts and risks such projects if and when they are 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.

Possible Types of Sub-Projects

Several sub-projects may be developed based on research and capacitybuilding efforts undertaken by TASFAM, possibly including the following:

Project Sub-	Possible Subproject	Comments
component		
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 infrastructres that must undertake ESIAs and ESMP
1.2.4. Strengthening Seaweed production systems for increased production 1.3.2. Promote Eco-tourism in MPAs	Construct five seaweed warehouses in Mtwara DC, Kilwa, Lindi MC, Mafia, and Mkinga Construct ten seaweed drying facilities in Mtwara DC, Lindi DC, Lindi MC, Kilwa, Mkuranga, Mafia, Bagamoyo, Pangani, Tanga, and Mkinga. Construction of natural steps at Hamahama Pond (Mlola Forest), Blue Lagoon (Juani), boardwalk at Ras Kisimani, and natural trails	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. The subproject involves construction activities that must undertake
0	at Mlola Forest at MIMP for improving tourist attraction site Construction of (MIMP).	ESIAs and ESMP
Component 2		
2.3.1. Fisheries	Facilitate the establishment of TAFIRI Marine	The subproject involves

Table 14: Possible Types of Subprojects

Project Sub-	Possible Subproject	Comments
component		
and aquaculture	Research Substations in Mtwara	the construction of
value chain	Construction and facilitation of TAFIRI Dar	infrastructures that
enabling	Centre Administration Block	must undertake ESIAs
environnent m	Construction and facilitation of TAFIRI Dar	and ESMP
the growth of the	Centre Conference Centre	
sector and the	Construct and facilitate the operation of the	
people that use	Construction of Fisherica Passuras Control	
aquatic resource	(BMUs) in 6 I GAs in coastal Districts	
Construction,	Construct 3 jetties at DMRS MBREMP &	
Extension, and	TACMP	
rehabilitation of	Construct 4 visitor centers and 3	
Fisheries sector	accommodation centers in 4 MPAs: MIMP.	
institutions	MBREMP, TACMP, and DMRS	
(Hatchery, ZAFIRI,	Construct 8 tented camps in 4 MPAs	
Nyangumi House)	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	Construction and facilitation of fish landing	The subproject involves
post-harvest losses	Sites at Somanga, Sahare, Bagamoyo and	the construction of
of fish and	Kisiju,	intrastructures that
through bost	Construction of Fish Market and Cold Storage	must undertake ESIAs
nractices	Construct pilot processing technologies of degree	and ESMF
practices	using alternative energy source –MAFIA	
	Dromoto invostment in smell and modium	
	fisheries processing centers	
	institutes processing centers.	
2.5.1. Enabling	Construction of Government - Private Operated	The subproject involves
environment for	Ice Making Plant at Bagamoyo.	the construction of
public/private	Construction of Government - Private Operated	infrastructures that
partnerships	Ice Making Plant at Kisiju, Mkuranga.	must undertake ESIAs
created	Construction of Government - Private Operated	and ESMP
	Ice Making Plant at Ferry market in Dar es	
	Salaam.	
	Miguouri Kigomboni Dor og Salaam	
	Republication Engineering Workshop and small	
	vessel Slipway at Ras Mkwayi Docking area	
Component 3		1
3.3.3. Extension	Construction of Fisheries and Aquaculture	The subproject involves
Services	Coordination Centres at Tawalani Tanga and	the construction of
	Lindi Regions	infrastructures that
		must undertake ESIAs
		and ESMP

8.2 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.

The following are some possible exclusion criteria for different types of subprojects:

- 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.

8.3 Proposed Screening Review and Appraisal Process

Table 15: Subproject Screening and Review Process

- The Project implementing agency completed the environmental screening checklist (Annex 3), 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 (TASFAM Form C) or Limited Environmental Assessment (TASFAM Form D) 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;
 - 1. Suppose checklist completion indicates an Environmental Impact Assessment (ESIA) is needed. In that case, the proponent will need to consult with NEMC (Mainland Tanzania) or the Zanzibar Environmental Management Authority (ZEMA) for the proper procedures to follow. In line with the requirements outlined in Table 13 for 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; and
 - 2. 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.

8.3.1 Screening

When a subproject is identified, the implementing agency should complete a subproject screening form (see Annex 3 for a Subproject Screening Checklist) to identify potential environmental and socioeconomic consequences. The screening procedure will establish the level or Category of environmental and social risk posed by the subproject, which will define the sorts of studies or permits necessary by national law and the World Bank's Environmental and Social Framework (ESF) based on a preliminary environmental and social assessment.

8.3.2 Scoping and Field Appraisal

The reviewer will evaluate if the subproject requires a more extensive examination of potential consequences through a field appraisal based on the information recorded on the screening form. The field appraisal should include a visit to the project site and interviews with local stakeholders who can provide important advice on social and environmental implications. All relevant stakeholders, including potentially affected people (PAPs), should be identified, and the evaluation report should include a list of PAPs.

8.3.3 Assessment and Classification of Impacts

The impacts are classified based on their risk/risk category level using the screening template and field appraisal (if necessary). Mainland Tanzania outlines which projects require an ESIA and which projects may or may not require an ESIA (see Annexes 5), while Zanzibar identifies which projects require an ESIA certificate and which ones do not require an ESIA (see Annex 6). 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 project has been rated as substantial.

8.4 Appraisal and Approval of Subprojects

As previously stated, most subprojects scheduled to be performed will have environmental or social impact and are rated substantial. The Proponent will submit an ESIA that meets all Tanzanian Mainland or Zanzibar criteria.

Usually, this would include an environmental and social management plan, environmental contract provisions, and a summary of the Project Proponent's public consultation efforts (see below for Consultation requirements).

8.5 Public Consultation and Disclosure of Subproject Information

Before a subproject is approved, it must be revealed publicly and made available for public review at a location accessible to local people, such as a district council office, BMU office, etc., under World Bank Guidelines and Tanzanian ESIA requirements. Public discussions with local communities and other interested or impacted parties should be performed during the screening and impact assessment processes. The purpose of these meetings is to enlighten stakeholders and identify major challenges and possible solutions. Before the consultations, the project proponent must offer relevant materials and information regarding the subprojects to the parties being consulted in an easily accessible and comprehensible format to those groups. Public hearings may be required for some subprojects if there is widespread public interest in potential subproject implications.

8.6 Environmental and Social Management Plans for Subprojects

When a subproject necessitates the preparation of an ESMP, the project proponent should choose a consultant or environmental expert with significant environmental and social experience relevant to the type of project being proposed and familiarity with relevant national ESIA and ESMP requirements.

8.6.1 Environmental and Social Management Plan Requirements

All projects with documented consequences must have an Environmental and Social Management Plan (ESMP).

The ESMP should include information on the environmental and social impacts, suggested mitigation measures, management, and monitoring plans, including responsibilities, costs, and timelines, and information on how mitigation measures will be managed and monitored. Issues and measures that may be required at various stages of the project should be addressed in the ESMP (pre-construction, construction, and operation)

The ESMP should (at a minimum) contain the following topics and sections (See an ESMP Template in Annex 3E of this ESMF):-

- Short description of sub-project
- Analysis of positive and negative environmental and social impacts
- Mitigation measures for any negative impacts
- Results of consultations with the community, including any sub-project-affected persons

- ESMP Performance monitoring plan, including a description of management roles and
- Responsibilities, budget, and timing for management and monitoring activities

8.6.2 Implementing and Monitoring of Subproject ESMPs

The PIU shall prepare and submit to the World Bank monthly monitoring reports on the environmental, social, health, and safety (ESHS) performance of the Project, including but not limited to the implementation of the ESCP, the status of preparation and implementation of E&S instruments required under the ESCP, stakeholder engagement activities, and functioning of the grievance mechanism(s), and incidences of Gender Based Violence (GBV). The report should be submitted to the World Bank no later than 14 days after the end of each reporting period.

The PIUs will notify the World Bank of any incident or accident related to the Project that has, or is likely to have, a significant adverse effect on the environment, the affected communities, the public, or workers, including, inter alia, cases of sexual exploitation and abuse (SEA), sexual harassment (SH), and accidents that result in death, serious or multiple injury. Provide sufficient detail regarding the scope, severity, and possible causes of the incident or accident, indicating immediate measures taken or that are planned to be taken to address it, and any information provided by any contractor and/or supervising firm, as appropriate. Subsequently, at the World Bank's request, prepare a report on the incident or accident and propose any measures to address it and prevent its recurrence. Furthermore, the PIUs should notify the World Bank no later than 48 hours after learning of the incident or accident and provide subsequent reports to the World Bank within a timeframe acceptable to the World Bank.

The Contractors and supervising firms will provide monthly monitoring reports on ESHS performance in accordance with the metrics specified in the respective bidding documents and contracts, and submit such reports to the World Bank through the implementing agencies (PIUs).

8.6.3 Grievance mechanisms for subprojects

A Grievance Redress Mechanism is a system by which queries or clarifications about the sub-projects are responded to, problems that arise out of implementation are resolved and grievances are addressed efficiently and effectively. This includes infrastructures development, conservation restriction sub-projects etc. While pre-project meetings are meant to lessen the likelihood of conflicts once subprojects are completed, grievances may occur as a result of project consequences.

In general, the goal of conflict or grievance resolution is to resolve the issue as quickly as possible and at the lowest feasible level, ideally within the local community and using widely accepted techniques. Both formal and informal approaches can be used to address conflicts that may occur as a result of project operations. Such issues should be resolved at the local level, using existing community-level grievance or complaint systems and including community leaders or local authorities.

Local leaders or authorities should create a forum for offended parties to air their grievances and propose informal remedies. If these steps fail to remedy the problem, more official methods might be employed, such as filing a verbal or written complaint with the Village Council. If the dispute cannot be settled at the village level, or if the complainant is unhappy with the outcome, the matter can be referred to the District Commission.

At this time, a TASFAM implementing partner may be involved. If a projectrelated problem cannot be solved at this level, the problem should be submitted to the TASFAM PIU.

If there are issues with external stakeholders outside of a community, such as disputes with other fishing communities or entrepreneurs who start businesses within a community that employs local labor or uses local resources, the issue may need to be presented to local authorities for transmission to district-level or higher authorities.

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The GRM Procedure outlined in the TASFAM Stakeholders Engagement Plan (SEP) is primarily intended for Project Affected Persons who may lose access to fisheries resources, but it can also be used for any project-related complaints that may arise in communities where TASFAM --initiated activities are taking place.

Enough time should be set aside to allow participants to thoroughly discuss and address the problem. If it is beneficial to the process, the implementing partner can function as an intermediate or facilitator. If decisions are made that do not have a majority or equal support throughout the community, this mediating function may be required.

All subproject proponents and other community people who were consulted during the project's development should be educated about the grievance process and how to file concerns. They should also be educated about the conflict resolution procedures, including the Project's goal of resolving complaints quickly and fairly.

8.7 Capacity Assessment for ESMF Implementation Institutional Framework of Implementation for ESMF and subproject approval and oversight

As noted earlier in this report, human and institutional capacity is lacking across many of the key disciplines needed to provide successful outcomes, and more so than in the area of environmental and social expertise and management.

Because the bulk of decision-making, stakeholder engagement, and management and monitoring of the ESMF process and subprojects financed under it will fall to the local level, including district fisheries officers and comanagement units, these groups must receive training and ongoing support for implementing the ESMF process.

This means that in addition to capacity building and training that national and local government and co-management staff with project management
responsibilities may receive regarding fisheries management, record-keeping, and general management skills, they will also need specific training related to participatory decision-making processes, environmental and social impact assessment and monitoring, and conflict resolution. This will supplement general project planning and management techniques and enable them to assess and manage the environmental and social dimensions of overall TASFAM activities and local subprojects. An illustrative capacity-building work plan and budget are shown in Table 15 below:-

Activity	Yr 1	2	3	4	5	6	Total	Notes
Training								Implementing partners or other independent consultants
Training Needs Assessment for PIUs and local government officials in the management of safeguards and environmental & social issues	50						50	Follow-up on recommendation by TAFAM Final Safeguard Report, for Mainland and Zanzibar
Development of training plan and materials, training of trainers	40		20			15	75	Initial training package in Yr 1, refresh & additional TOT in Yr 3 based on results of initial training
Training for local Environment Officers (District, Village, Shehia, etc.) in ESIA, screening and environmental & social monitoring capacity	20		15		15	20	70	2 X 5-day workshop on Mainland and 1 X 5-day on Zanzibar in year 1, refresher workshops in Year 3 and 5 (to address staff turnover)
Training for co-management units – awareness of environmental and social issues	50	25	25	25	25	10	160	5 workshops/yr X 2-days (3 on mainland, 2 on Zanzibar)
Communication, Training on Conflict Resolution, Safeguard Awareness	30	30	30	30	30	15	165	4 days/mo X \$300/plus expenses
Training on ESIA and EMSP prep and review, M&E	40	20	20	20	20	25	145	Training for PIUs Staff, Contractors
Annual Reviews of ESMF and ESMP Performance (decision- makers and projects)		20	20	20	20	10	90	Annual Retreats for PIU staff to review the performance of ESMF and ESMP
TOTAL	230	95	130	95	110	95	755	

Table 16: Illustrative ESMF Capacity Building Budget for five years period (US\$000)

8.8 Institutional Framework of Implementation for ESMF and subproject approval and oversight

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.

8.8.1 Responsibilities in Environmental and Social Management of the Project

i) Environmental Specialist

- 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.
- Assist the implementing agency in review and approval of the various documents prepared by the contractor such as C-ESMP, code of conduct, labour procedures, job hazard analysis and monitoring reports.
- 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.
- 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
- hese incidents.
- Provide regular training programs to the contractor's labour on environmental, social, health and safety aspects associated with the construction activities.
- Carry out regular consultations with the stakeholders following Stakeholder Engagement Plan.
- Assist the implementing agency in implementing its Environmental Social Commitment Plan (ESCP).
- Prepare quarterly progress reports on the implementation of the ESMP for submission to the World Bank throughout the project lifecycle.

ii) EHS responsible person in the construction contractor

• Preparation of Construction Environmental Action Plan with site-specific management plans on waste management, pollution prevention and control, labour influx, water supply and sanitation of the work areas, traffic

management, occupational health and safety and emergency response. The Plan will be submitted for PIU for approval.

- Monitor, report and coordinate with supervisor to ensure that the contractors Implement all mitigation measures to address potential environmental and social risks and impacts as d
- scribed in the ESMP and Contractor's site-specific management plans.
- Implement the environmental monitoring plan of the ESMP.
- Carry out a job hazard assessment for each worksite to assess the potential hazards and implement mitigation measures to minimize risks.
- Conduct weekly or ad-hoc toolbox training to the labourers on health and safety risks of the construction works.
- Prepare monthly reports on ESMP implementation.

iii) EHS person in construction supervision contractor

- Supervise the construction works, ensuring compliance with the EHS requirements of the Contractor.
- Support the Environmental and Social Specialist of the PIUs in the collection of the field data.
- Monitor the Contractor's EHS person responsible in the construction and ensure implementation of environmental and social safeguards for their workers.

iv) EHS person for subproject O&M phase

- Ensure Safe Work Environment:2 Workers must use Personal Protective Equipment (PPE) and follow all safety protocols during maintenance and operation of equipment and machinery.
- Emergency Preparedness: They are responsible for understanding and executing emergency response procedures for incidents like fires, spills, and equipment failures.
- Hazard Identification and Reporting: Workers need to identify potential hazards, report them, and participate in regular risk assessments.
- Training: Engaged in continuous training related to handling equipment, working at heights, and exposure to hazardous materials.

Subprojec			
Project Subcomponent	Subproject Type	Proponent or beneficiary	Project Preparation & Approval Authority
1.1SustainableUtilizationandResources	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

Table 17: Pro	oject Preparation	Assistance a	and Approv	vals by '	Туре с) f
Su	bproject					

2.3 Supporting	The fisheries and Aquaculture	TAFIRI,	Preparation
investment in Fisheries	value chain enables the	DAQLGAs,	Assistance:
and Aquaculture	environment in place to	BMUs,	PIU
infrastructure and	support the growth of the	MPRU,FETA and	Approval: PIU
facilities	sector and the people who use	DRTE	
	Aquatic resources.		
3.1 Facilitating coastal	Strengthen co-management	BMUs, CFMAs,	Preparation
community's	structure and intra and	MLF, PO-RALG	Assistance:
engagement in the	interagency collaboration		PIU
protection and			Approval: PIU
safeguarding of marine			
and coastal resources			

Table 18: 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 EIAs 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/Loca 1	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- managemen t	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

9.0 PROCESS FRAMEWORK

A process framework is prepared when World Bank-supported projects may cause restrictions in access to natural resources in legally designated parks and protected areas. For TASFAM project under the ESF, – *"Environment and Social Standards 5 (ESS5) on Land Acquisition, Restrictions on Land Use and Involuntary Resettlement*" is applicable. This is because possible TASFAM project implementation of restrictions on marine resource use could lead to a loss of access to natural resources assets and related income for some fishers and their communities. In such cases, ESS5 requires the development of a Process Framework to accompany the Project. The purpose of a Process Framework is to establish a process by which members of potentially affected communities participate in the design of project components, determination of measures necessary to achieve livelihood restoration, and implement and monitor relevant project activities. The Process Framework for this project is contained in a separate accompanying document.

10.0STAKEHOLDER INPUT FROM CONSULTATIONS

The key stakeholders were identified based on their roles, relevance, and potential to be involved in this project's activities. Consultations with various stakeholders such as government officials at the national level including the Ministry of Livestock and Fisheries (MLF); Ministry of Blue Economy and Fisheries (MBEF); Deep Sea Fishing Authority (DSFA); Marine Park and Reserve Unit (MPRU); Tanzania Fisheries Research Institute (TAFIRI); Fisheries Education Training Agency (FETA); the National Environment Management Council (NEMC); Vice President's Office and other Ministries related to fisheries activities were undertaken before preparation of the ESA and ESMF. Other stakeholders consulted included the Regional Administrative Secretary (RAS) for Tanga, Pwani, Dar es Salaam, Lindi, and Mtwara (Mainland Tanzania) and Kusini Unguja, Kaskazini Unguja, Mjini Magharibi, Kaskazini Pemba, and Kusini Pemba (Zanzibar); District Executive Directors and their district experts of Tanga City, Pangani, Bagamoyo, Mkuranga, Kibiti, Kilwa, Lindi, Urban, Mtama, Mtwara Urban, and Mtwara rural. Other stakeholders consulted were Local communities (BMUs & SFCs) and Village leaders; Non-Governmental Organizations (WWF, Sea Sense, Swiss Aid, and Mwambao); Community-Based Organizations-CBO (TAWFA/COWOFO); Faith-Based Organization; and Private Sector (M&P Gas Exploration and Production, and ALPHA Co.Ltd).

The focus of the consultation among others was on environmental and social risks and impacts on the community, proposed mitigation measures for the proposed TASFAM project, main livelihood activities, incidences of illegal fishing, access to microfinance/microcredit, threats to sustainable fisheries management, the status of loss of biodiversity and ecosystem services, and identification of capacity gaps.

10.1 Site visit

Site visits were undertaken to obtain a broader perspective and covered five Mainland Tanzania regions and five regions in Zanzibar which form coastal regions of Tanzania. At this development stage of the TASFAM, the exact location, size, and extent of the sub-projects are unknown, so it was not possible to visit the potential sites for assessment of the existing environmental and social setups. Due to that, the visits were made to some activities that are being financed by the SWIOFish project, and learned from them what are the potential impacts associated with those activities/sub-projects. Key parameters assessed include general biophysical characteristics, socio-economic characteristics different categories of people likely to be impacted by the project, etc. The consultation reports (Mainland Tanzania and Zanzibar) to prepare this ESA, ESMF, and PF have been presented in the annexes of this report (Annex 2.1 and 2.2).

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ANNEXES

Annex 1: TASFAM ESA and ESMF Terms of Reference (TOR)

United Republic of Tanzania

Tanzania Scaling-up Sustainable Marine Fisheries and Aquaculture Management Project (TASFAM)

Terms of Reference (ToR) for the development of

Environmental and Social Management Framework (ESMF)

June 30, 2022

1. Background

Between 2015 and 2022 the World Bank financed the South West Indian Ocean Marine Fisheries Governance and Shared Growth (SWIOFish1), amounting to US\$ 36 million. The SWIOFish project was an extension of the Marine and Coastal Environment Management Project (MACEMP), implemented between 2005 and 2013 to the tune of US\$ 65 million. MACEMP and SWIOFish I managed to substantially control illegal fishing practices such as dynamite fishing. There has been a reduction in the mining of live corals and the exploitation of high-valued stocks such as octopus, sea cucumber, and lobsters. In addition to the participatory processes, MACEMP and SWIOFish1 have also made significant achievements in fisheries conservation and management, promotion of the role of women, and improving environmental awareness. It now calls for follow-up initiatives to ensure sustainability in achieving national and global goals and targets.

Therefore, the three partner implementing agencies: - the Ministry of Livestock and Fisheries (MLF)-Mainland, the Ministry of Blue Economy and Fisheries (MBEF)-Zanzibar, and the Deep Sea Fishing Authority (DFSA), have developed the "Tanzania Scaling-up Sustainable Marine Fisheries and Aquaculture Management Project (TASFAM)" for World Bank funding. The proposed project would counter the underlying causes hindering the sector from achieving the development targets enshrined in the FYDP III, and other national and international development agendas. The project is set 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 fisheries sector in Tanzania does not have a single governance regime, hence the involvement of three different agencies in implementing the TASFAM project. In line with the political governance structure of the United Republic of Tanzania, as the fisheries sector is not a union matter, Mainland Tanzania and Zanzibar manage their fisheries sectors separately under their respective ministries. The Deep Sea Fishing Authority, responsible for the EEZ beyond the 12 nautical mile boundary of territorial waters, is overseen jointly by the two respective ministries in mainland Tanzania and Zanzibar.

Significant management functions related to fisheries management are devolved to local government authorities (district and municipalities) and marine conservation areas (MCAs) in Zanzibar. In both mainland Tanzania and Zanzibar, there exist overarching national policies and legislation that emphasize fisheries co-management approaches. Under these, national and local authorities collaborate with fisheries management institutions at the community level, called Beach Management Units (BMUs) on the mainland and Shehia Fisher Committees (SFCs) in Zanzibar.

Fishing along the coast of Tanzania stretches from Mkinga District in the north to Mtwara in the south. Fishing is small-scale and has employed coastal communities for centuries. In addition, fishing has been a source of income, food, and foreign exchange. Therefore, the importance of Tanzanian marine resources to the economy cannot be understated. These resources have made a significant contribution to the Gross Domestic Product (GDP). They have provided relatively cheap protein to these coastal populations for a long time. These benefits are now threatened by fishing at levels beyond sustainability. Therefore, the coastal communities are likely to lose their important source of animal protein. It is unknown how much they would need to pay to obtain substitutes with similar caloric content. Moreover, the importance of these fisheries is often misunderstood, leading to their undervaluation.

Given the importance of sound fisheries management to livelihoods and economic growth, the Government of Tanzania has requested to implement the Tanzania Scaling-up Sustainable Marine Fisheries and Aquaculture Management Project (TASFAM). To sustain the long list of benefits that the TASFAM project will generate, it is important to undertake environmental and Social Assessment (ESA) and Environmental and Social Management Framework (ESMF) to aid effective decision-making in support of the sustainable implementation of the project activities. This assignment aims at developing an Environmental and Social Assessment (ESA) and Environmental and Social Assessment (ESA) that will identify environmental and social impacts at an early stage of project development

manage the risks and impacts of a project, and improve their environmental and social performance, through risk and outcomes-based approach.

2. Program Objectives and Components

The TASFAM project will target coastal and marine ecosystems. Its main purpose is to transform the Fisheries sector towards a blue growth concept. The objective is to enhance commercialization, increase technology, and innovate to help the sector move from a comparative to a competitive advantage sector and stimulate industrial development. To achieve the intended goal, the project focuses on the 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. The project activities will be implemented over six years from 2023 to 2029 using the IDA fund. The project also will support regional integration of fisheries management.

The overall Project Development Objective is to transform the fisheries sector towards higher productivity, commercialization level, increased small fishers' income, and environmental resilience for improved livelihood, food security, and nutrition.

The overall approach proposed by this project is built from the structure, achievements, research findings, and other scalable activities from SWIOFish I and sectoral recommendations in FYDP III and other global and regional development frameworks, including the (i) World Bank Country Partnership Framework for the United Republic of Tanzania for the Period FY18-FY22, (ii) FAO (2018) Achieving Blue Growth Building Vibrant Fisheries and Aquaculture Communities, (iii) The State of the Climate in Africa 2020 by World Meteorological Organization, (iv) Africa's Blue Economy: A policy handbook (2016) by the Economic Commission for Africa, (v) High-Level Panel for a Sustainable Ocean Economy (Ocean Panel), Technology, Data, and New Models for Sustainably Managing Ocean Resources, and (vi) FAO Blue Growth Initiative: Strategy for the Development of Fisheries and Aquaculture In Eastern Africa (2018).

The Program will have four operational components namely: (i) Strengthening management of coastal and marine resources for sustainable utilization; (ii) Improving Institutional Capacity and Infrastructures for realizing the inclusive and competitive blue economy and (iii) Strengthening resilience and adaptive capacity to coastal communities for improved livelihood; and (iv) project management and Coordination.

The proposed Terms of Reference for the Facilitator will work closely with the Task Team to prepare the Project Environmental and Social Assessment (ESA) and Environmental and Social Management Framework (ESMF) for TASFAM.

3. The Rationale for the Assignment

As the project will be financed with World Bank funds, provisions must be in place to ensure the project meets the requirements of World Bank Environment and Social Safeguards Policies and applicable national standards.

4. The objective of the Assignment

The overall objective of the ESA is to evaluate the potential biophysical and socio-economic impacts of the proposed TASFAM Project and develop an Environmental and Social Management Framework (ESMF) outlining the procedures to be followed to manage these impacts.

The ESA will ensure consistency with the provisions of the Environmental Management Act (EMA) Cap.191 of Tanzania, which requires environmental and social impact assessment to be undertaken for any new projects that may cause adverse environmental and social impacts. The ESA will also meet

World Bank Safeguards Policies - Environmental and Social Standards (ESSs), of which the Project has triggered the following three policies:

- ESS 1: Assessment and Management of Environmental and Social Risks and Impacts;
- ESS 2: Labour 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 8: Cultural Heritage;
- ESS 10: Stakeholder Engagement and Information Disclosure.

5. Scope of Work

The facilitator will work closely with the ESA & ESMF Task Team to undertake the following tasks:

- a. Building upon information provided in the 2014 SWIOFish1 ESA describes the general environmental and social context for the Project area;
- b. Describe the proposed project from an environmental and social perspective, including potential locations and scope of project activities, and outline a typology of project activities from an environmental and social perspective;
- c. Assess and succinctly describe the institutional, legal, and policy framework for environmental and social management relevant to project implementation;
- d. Assess which World Bank Safeguard Policies apply in the proposed Project;
- e. Identify any inconsistencies between National Laws and World Bank Safeguards Policies;
- f. Taking into account the safeguards work done under SWIOFish, the 2014 ESA, and discussion with key stakeholders and the findings from the proceeding tasks the Facilitator shall:
 - i) Identify and assess potential impacts both positive and negative, direct and indirect, short and long term and/or cumulative of TASFAM activities; and
 - ii) Design measures to. a) avoid, minimize, mitigate, or compensate for potential adverse impacts; and b) enhance positive activities. Such measures build upon lessons learned during the implementation of SWIOFish;
- g. Make recommendations as to how to improve project design to enhance environmental and social outcomes;
- h. Assess the existing capacity of the implementing agencies to manage environmental and social management issues, and develop a Capacity Enhancement Plan;
- i. Based on the impacts and issues identified in the previous steps above, develop an Environmental and Social Management Framework (ESMF) outlining specific procedures to:
 - a) Avoid, minimize, mitigate, or compensate for potential adverse impacts and to enhance positive activities;
 - b) Comply with all relevant safeguard policies;
 - c) Monitor the project's environmental and social performance; and
 - d) Ensure necessary capacity is in place within the implementing agencies to ensure sound environmental and social management of project activities (including implementation of the ESMF). For each element, including details as to what will be implemented, what methodology (including frequency) and baseline will be used, who will be responsible for its implementation, and the necessary budget requirements;

- j. Participate in two back-to-back workshops (one in Tanzania Mainland and one in Zanzibar). The objective of these workshops is to present draft findings of this assignment to relevant stakeholders and receive their comments; and
- k. Incorporate comments received from the two stakeholder workshops into the final report, including an executive summary and stakeholder comments.

6. Methodology

To complete this assignment the following method will be deployed:-

- i) Review of relevant documents;
- ii) Identification of stakeholders to be consulted and preparation of Questionnaires;
- iii) Stakeholders consultations (MDA's, LGA's, Communities, Groups (NGO's & CBO, Individuals, and other interested parties);
- iv) Environmental and Social Assessment (ESA);
- v) Impact mitigation and enhancement measures;
- vi) Preparation/submission of ESA & ESMF report to World Bank;
- vii) Review of the report; and
- viii) Upon satisfaction of ESA & ESMF report, issuance of no objection by the World Bank.

7. Expected outputs of the assignment

The expected outputs of the assignment are the following:

- 1. An inception report containing a short description of the proposed methodology, data collection, and work plan for completing the assignment;
- 2. A draft report containing a summary of tasks 1-11 described in section 4, with emphasis on the preparation of a simple, implementable ESA & ESMF and PF including all relevant safeguards requirements (e.g. likely to include EA, physical resettlement, and Process Framework provisions);
- 3. A presentation summarizing the draft report;
- 4. Participation in two stakeholder workshops; and
- 5. A final report incorporating comments received from key stakeholders.

8. Timing and Reporting

The assignment is expected to be completed within Twenty-eight (28) working days after signing the contract. The schedule for delivery of the expected outputs described in section 5 will be the following:

Activity	Timing / Deadline	Venue
Review of relevant documents;	19 th April, 2022	Dar es Salaam
Identification of stakeholders to be	-	
consulted and preparation of		
Questionnaires.		
Field Visit (Stakeholders	20 th – 30 th April 2022	Tanga, Pwani, Dar es Salaam,
consultations; Environmental and		Lindi, Mtwara, Mjini Magharibi,
Social Context; Environmental and		Kusini Unguja, Kaskazini
Social Assessment - ESA; Impact		Unguja, Kusini Pemba and
mitigation and enhancement		Kaskazini Pemba.
measures);		
Field Data analysis and compilation	5 th – 9 th May 2022	Morogoro
of Stakeholders' consultation inputs		
(Mainland Tanzania and Zanzibar)		
Preparation of ESA & ESMF, and PF	$10^{\text{th}} - 24^{\text{nd}}$ May 2022	Morogoro

reports (Reports writing).		
Submission and presentation of a	23 rd - 25 th May 2022	Dodoma
draft to the Ministry for approval	5	
Incorporation comments from	26th 27th May 2022	Dodoma
Directors	20 ²¹ - 27 ²¹ May 2022	
Presentation of the ESA & ESMF,		Dar es Salaam
and PF reports to the Stakeholders	1 - 2 June 2022	
Workshop in Mainland Tanzania		
Presentation of the ESA & ESMF,		Zanzibar
and PF reports to the Stakeholders	6 th – 7 th June 2022	
Workshop in Zanzibar		
Incorporating comments from		Zanzibar
Stakeholders' workshops into the	$8^{th} - 10^{th}$ June 2022	
documents.		
Submission of the ESA & ESMF, and	13 th June 2022	Dar es Salaam
PF to the World Bank	15° Julie 2022	

9. Supervision Responsibility

The facilitator will work under the supervision of the PIUs (MLF, MBEF, and DSFA) for project development. And will receive support from the respective Ministries.

10. Facilitator Qualifications

The specific qualifications of the Facilitator should be the following:

- National Expert, with documented experience in the development of large-scale, cross-sectoral projects;
- Advanced degree in environmental or natural resource management, anthropology, social science, or related field;
- At least 15 years of experience in assessing environmental and social management aspects of development projects, preferably in the natural resource management sector;
- Demonstrated experience with World Bank safeguard policies;
- Extra credit for experience in Tanzania.

Annex 1 – Relevant literature

- 2014 Environmental and Social Assessment and ESMF of the South West Indian Ocean Fisheries Governance and Shared Growth Program (SWIOFish)
- 2014 Review of the Implementation of SWIOFish Environmental and Social Safeguards Instruments
- 2017 World Bank's Environmental and Social Framework (ESF)

Annex 2: List of People Consulted

Annex 2.1: TASFAM ESA Stakeholder Consultation Field Report - Mainland Tanzania



June 30, 2022

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1.0 INTRODUCTION

1.1 Background

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. 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 focus group discussions. Information was also collected through direct observation.

1.2 Objective of the consultation

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.

1.3 Organization of the Field Visit

The stakeholder consultations exercise was conducted by a Six Team of Experts (Daniel Nkondola, Ambakisye Simtoe, Lilian Ibengwe, Upendo Hamidu, Hyasinata Magesa, and Amina Kiaratu) from the Ministry of Livestock and Fisheries (MLF). Different stakeholders were consulted including Government agencies; the Coastal Regional Administrative Secretariat (RAS) responsible for fisheries, Planning, Environment, and Social Development; Coastal District Executive Directors and their council management team; Coastal Local communities (Village Chairperson, Village Executive Officer, Ward Executive Officer, and members of Beach Management Units - BMU's); Non-Governmental Organizations – NGOs (WWF, Sea Sense, Mwambao, and SwissAid); Community-Based Organization – CBOs (COWOFO/TAWFA and WAMABA); Faith-Based Organizations (FBOs); and Private Sector (M & P Gas exploration and production, and ALPHAKrust).

The Team visited Mtwara region (Mtwara Municipal and Mtwara DC); Lindi region (Lindi Municipal, Mtama DC, and Kilwa DC); Pwani region (Kibiti DC, Mkuranga DC, and Bagamoyo DC); and Tanga region (Tanga city, and Pangani DC).

1.4 Stakeholder's views and concerns regarding the proposed project

The following are the stakeholder's concerns/views and expectations that the TASFAM project will consider during the implementation of the project. The main issues covered 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. The resulting details of issues and concerns that arose during various meetings and discussions with individuals, groups, and institutions consulted have been summarized in the following section.

2.0 MTWARA REGION

2.1 Regional Administrative Secretariat

- They appreciated the work done by the SWIOFish project on the elimination of blast fishing in the country;
- Best practices of the SWIOFish project should be captured and replicated in coastal areas;
- Salt production in the Mtwara region is a promising business, that can contribute to the income earnings of the coastal communities, therefore, they recommended shifting salt production from the custody of the Ministry of Minerals to the Ministry of Agriculture since salt is a food-related commodity. Additionally, they recommended improving salt production technology by using water pumps and block-designed salt pans for better performance salt production; and
- Fishers and other fisheries-related businesses should be capacitated in terms of skills and equipment so that they improve their business and change from fishing in shallow water to venturing into the deep sea.

2.2 Mnazi Bay-Ruvuma Estuary Marine Park (MBREMP)

- The TASFAM project should consider building the capacity of MBREMP in terms of skills and surveillance equipment;
- Fishers are using unsustainable fishing gear, for instance, the use of ring nets in shallow water, the use of monofilament, which can cause ghost fishing (Unintended fishing); and
- Alternative Income-generating Activities should be implemented to avoid overdependence on Marine resources by communities which affects conservation activities and sustainability of the resources;

2.4 Local community at Msimbati Village

- The use of illegal fishing gear affects fisheries management e.g. Beach seine nets (haitoki), ring nets in shallow water, use of herbicides (Ulimbo /Kirumba) in the rivers which cause mass killing of fish;
- Climate change (bad weather conditions and river floods) affects fishing activities in the village;
- There is a cultural belief that leguminous species (Njugu mawe) are not allowed to be cultivated in the village, because they are believed to attract thunderstorms in the village; and
- There is an opportunity for ecotourism from the dune which is believed to be the biggest in Tanzania

2.5 Community-Based Organization of WAMABA at Sinde village – Msanga Mkuu

- Climate change affects fishing activities; and
- It was highlighted that fishing activities share the same space with seaweed farmers, which results in conflict and competition between seaweed farmers and fishers.

2.6 Local community of Namela Village – Msanga Mkuu

• They congratulated efforts done by the SWIOfish project in the elimination of blast fishing. Before the SWIOFish project blast fishing was rampant up to 70 incidences per day but now has been reduced to zero;

- Climate change has changed the pattern of fishing of some species e.g. Kibua macho; and
- They requested the TASFAM project to reduce poor fishing gear and vessels, and poor fish market and conservation facilities are among the issues that hinder fisheries development in the area.

2.7 Local community of Mtepwezi Village

- They mentioned problems that hinder fisheries development in their area including: the use of poor fishing gear and vessels; lack of financial support for fisheries activities; unsustainable village community bank saving groups and Inadequate skills for sustainable fisheries; hence requested the new TASFAM project to solve some of these problems; and
- Some fish species that were sought to disappear in the past such as Mikupi, Kikuyu, Crabs, and Kibunda are now appearing and are being caught in a large amount. This is due to the elimination of blast fishing done by the SWIOFish project.

3.0 LINDI REGION

3.1 Lindi Regional Administrative Secretariat (RAS)

- It was reported that the Incidences of illegal fishing in the region have been reduced by more than 90%;
- Climate change has caused adverse conditions such as heavy rainfall, strong wind, use of destructive and unsuitable fishing gear, and coastal pollution from land-sourced activities that affect fisheries development and management in the region;
- One impact of climate change in the Lindi region is the submerging of Lushingi village due to sea-level rise and the Islands of Nyuni, Ukuza, and Simaya are about to submerge.

3.2 Local community of Sudi Village

- The community appreciated efforts done by the SWIOFish project to eliminate blast fishing, as the main fishing gear in this village was blast fishing, and currently, blast fishing has been reduced by 100%;
- The community is ready to cooperate with the new project in the conservation of fisheries resources. They mentioned problems that hinder aquaculture development are inadequate availability of quality seeds and feeds;
- Other problems that hinder fisheries development are the use of poor fishing gears and vessels and they requested the project to assist them in eliminating those problems.

3.3 SwissAid (Non-Governmental Organization)

- The main activities of the SwissAid are to improve the livelihood of people through fish farming, currently, 87 ponds have been established and about 28 hectares of mangrove rehabilitation have been planted in Lindi;
- Also, they provide training on financial management, leadership skills, tools, and skills as well as sensitize development of VICOBA
- The main challenges encountered are theft of fish in fish ponds, predators (Sea Otter), post-harvest loss due to lack of handling and storage facilities, lack of

quality fish seeds and feeds, and sea-level rise due to climate change which harms pond management and fish production; and

• They requested the new TASFAM project consider solving some of the identified challenges above.

3.4 Lindi Municipal District Executive Director

- The Director acknowledged the work done by the SWIOFish project and urged that best practices of SWIOFish project activities be replicated in other areas;
- He further noted that the district has potential areas for fisheries investment; and
- Awareness of the project activities should be extended to decision-makers at various levels from local levels, and councilors to district and regional leaders to create a sense of project ownership, cooperation, and collaboration.

3.5 Local community of Bank Kanisa

- The fishing community commended the exemplary work that has been done by the SWIOFish project in combating illegal fishing, though there are very few incidences of ring nets in shallow water;
- Noted that there is conflict among fishers and seaweed farmers for fishing grounds. Handline fishing at Mwamba wa Mwitingi competes with sardine fishers and seaweed farmers in Popo and Malazi Islands;
- The community mentioned unsustainable modes of fishing, use of poor fishing gears and modes, inadequate fisheries and aquaculture skills, inadequate fishing and aquaculture extension services, and lack of fish storage facilities, are hindering fisheries development; and
- They requested that the TASFAM project consider capacity building on fisheries and aquaculture skills, modern fishing gears and vessels, boat and rescue services, and marine spatial planning.

3.6 WWF-Kilwa (Non-Governmental Organization)

- The activities of the WWF marine program are to support/promote districts of Rufiji, Mafia, and Kilwa (RUMAKI) conservation and livelihood. To achieve this, they conduct training in village loans and savings to the communities, capacity building in Co-management of MPRU. Under RUMAKI Plus (2013) the coverage was extended to Mtwara (Namela) and Dar es Salaam (Kigamboni). The number of BMUs in Kilwa under the support of WWF is 14, (Songo Mnara, Kilwa Kisiwani, Songosongo, Njia nne, Kivinje, Namatungutungu, Mtu kwao, Tingi, Matapatapa, and Mtandango). In 2006 there were 72 VICOBA established, and in 2013 about 78 VICOBA were established making a total of 146 VICOBA. The communities have now replicated the VICOBA to 423.
- They called upon to join the force in supporting livelihoods and impart skills on livelihood intervention for instance beekeeping, seaweed farming, etc.

3.7 Local community of Kilwa Kivinje

• The community appreciated the efforts done by the SWIOFish project in eliminating blast fishing. Previously blast fishing was dominant (100 blasts per day) but now has been reduced to zero;

- Challenges in aquaculture include predators (Lizards), quality fish seed and feeds, and aquaculture technical skills;
- Other challenges include: the high cost of seaweed farming compared with the selling price (low price); climate change which fishing and marketing activities; poor fishing gears and vessels; lack of quality standards and packaging materials; lack of landing sites; fishing insecurity (no fisheries rescues mechanism) and post-harvest loss of fish due to lack of storage facilities;
- Recovering of some species that disappeared in the past such as Kelea and Skuli baba species (Sharif); and
- They requested the TASFAM project to consider imparting skills in fisheries and aquaculture development, fish drying, modern fishing gears and vessels for small-scale fishers, and capacity building in seaweed value addition.

3.8 Local country of Somanga, Kilwa

- They appreciated the efforts done by the SWIOFish project as by now no illegal fishing was observed in the area;
- The community mentioned several challenges involving: lack of education on sustainable fisheries management; poor fishing gears and vessels; inadequate financial /loan support; lack of life-saving equipment at sea; and post-harvest loss due to lack of storage facilities.
- Other challenges are climate change caused by the loss of some mangrove species, especially on wetlands which affect breeding sites of most endangered species such as Sea cucumber, Dugongs, and Sea tortoise; and
- They requested a new TASFAM project to provide capacity building in fisheries management skills, fishing gears, and vessels. They also requested to set the indicative market price of fish by establishing an authority dealing with fisheries business.

4.0 PWANI REGION

4.1 Pwani Regional Administrative Secretariat

- The secretariat was not aware of the existence of the project since they were not involved in the early stage of project development. This was attributed to the institutionalization setup of the project, as it did not take into consideration the RAS offices as one of the important levels of administration in the LGA's setup;
- Project coordination did not involve a regional secretariat, a system that caused delays in the implementation of some of the project activities. District Fisheries Officers are administratively supervised by Regional Fisheries officers. There was no clear reporting system between district fisheries officers and the regional secretariat concerning the project;
- It has been proposed that, during the TASFAM project design, the institutional setup should integrate RAS Offices to improve the supervision and monitoring of project activities;

4.2 Local community of Nyamisati, Kibiti

- They congratulated the SWIOFish project for eliminating blast fishing in the area from 15 incidences per day to almost 0;
- The village has 10 Village Saving and Loan (VSL) groups financed by Kibiti District Council;

- The community mentioned some challenges including inadequate modern fishing skills and poor fishing gear and vessels, lifesaving skills at sea, boat and rescue services and equipment; and
- They requested the new TASFAM project to build capacity in project monitoring, marketing, storage facilities, fishing gears, fishing vessels, and financial management.

4.3 Local community at Kisiju, Mkuranga

- The community mentioned some challenges including a Lack of storage facilities; and
- They welcomed and requested the new TASFAM project to build their capacity in fish marketing, storage facilities, modern fishing gear, fishing vessels, and financial management.

4.4 Bagamoyo Local Government Authority

- Officials at Bagamoyo LGA were very pleased with the SWIOFish Project, and they appreciated the Ministry's efforts toward improving fisheries management in the District. They mentioned that strengthening co-management at the local level has resulted in bringing about a sense of ownership to the communities where through their BMUs they collect fisheries data, conduct patrols, conduct beach cleaning once a month, etc. Most importantly SWIOFish project planned a BMUs study tour to Pangani to learn about revenue collection. When they came back, they were granted a tender to collect fisheries revenues on behalf of the LGA and they retain some money (10%) that enables them to support their daily BMUs activities;
- They were also very pleased by the support provided by the SWIOFish Project to construct the BMU office at Dunda. The office is accommodating both Fisheries Officers and BMU leaders.

4.5 Local community of Dunda, Bagamoyo

- Dunda has a developed fish market, however, the landing site infrastructure is underdeveloped;
- The SWIOFish Project is well understood among the fishers' community due to various activities being implemented at the site with the support of the SWIOFish Project. Fisheries data collection, beach cleaning, and patrols to deter illegal fishing practices are among the activities implemented;
- Fish landings at Dunda range from small pelagic, medium and large pelagic, therefore they requested a heavyweight weighing balance that will suit the different weight sizes of their catches;
- They requested the search and rescue boat for people who encountered drowning.
- Various VICOBA were established to address issues about lack of capital, however, they are not financially strong; and
- BMUs requested to be supported with fishing vessels, mariculture activities, and revolving funds for fisher communities.

4.6 Fisheries Education and Training Agency (FETA)

• SWIOFish project supported a range of activities mostly geared towards building FETA capacity in delivering professional training in fisheries technologies and Monitoring Surveillance and Control.

4.7 Chalinze Local Government Authority

- Officials at Chalinze LGA were very pleased with the SWIOFish Project, and they acknowledged the Ministry's efforts toward improving fisheries management in the District. They mentioned that even though they were separated from Bagamoyo District, yet SWIOFish project continued supporting them in data collection and co-management in general;
- Chalinze District Leadership was pleased with the support provided by the SWIOFish Project to construct the BMU office at Saadani. Previously, they didn't have office accommodation, now they are glad to have it and promised to take care of it. The office is accommodating both Fisheries Officers and BMU leaders; and
- Saadani BMU Office recorded no negative environmental and social impacts during the construction phase.

4.8 Local Community of Saadani

- The Saadan village is situated in Saadani National Park, it has an undeveloped fish landing site;
- BMUs have a good relationship with the village government in the management of the natural resources;
- The Project is well understood among the fishers' community due to various activities being implemented at the site with the support of the SWIOFish Project. Fisheries data collection, beach cleaning, and patrols to deter illegal fishing practices are among the activities implemented by BMUs who have been trained by the SWIOFish Project;
- Communities appreciated the SWIOFish Project for supporting the construction of the office for BMUs. There were no negative environmental and social impacts observed during office construction. BMUs lack a patrol boat for enforcement in combating illegal fishing practices;
- There is a high level of mangrove deforestation, Illegal poachers collect mangrove logs and transport them to Zanzibar and the problem needs immediate action;
- They requested the search and rescue boat for people who encounter drowning and other sea accidents;
- Women participate in post-harvest activities, men go out fishing, and both men and women perform various activities including petty business, salt pans, fishing, and other fish-related activities;
- BMUs requested to be supported to start an ecotourism business and also the Park Managers should be advised by the government to stop barriers imposed on communities to participate in ecotourism; and
- BMUs requested support from the government to establish a fish market at Saadani which will have ice-making facilities as by now they importing from Zanzibar.

5.0 TANGA REGION

5.1 Regional Administrative Secretary

- The RAS pointed out the lack of project activities awareness at the beginning of the project. They urged that awareness could create of sense of ownership at all management levels making the project more effective;
- It was reported that most coastal dwellers in the region do not use toilets; they use coastal areas as their toilets as a result of polluting the marine environment. Hence, future interventions may include awareness and campaigns on the use of toilets for healthy communities.

5.2 Mkinga Local Government Authority

- The project should build synergy with other projects taking place in the same villages; and
- It should not take a long time to implement the project activities in villages after initialization.

5.3 Local Community of Zingibari

- Local communities generally rated the SWIOFish project as the most successful among projects implemented in the villages recently. However, requested future temporal employment generated by the project activities such as construction works to benefit more locals;
- Though the village benefited from VSL through VICOBA some were threatened by unfaithful members leading to the loss of members' servings. Observed most VICOBA are dominated by men differing from other project villages in the region.
- SWIOFish Project supported a range of fisheries management initiatives to include strong CFMAs and BMU functioning which led to reduced dynamite fishing and other illegal fishing practices hence improving the catch at sea. However, the village experienced high post-harvest losses due to a lack of proper storage and handling facilities
- The TASFAM project should consider supporting fish storage and value additional facilities for fish and seaweeds; and
- Mangrove protection programs conducted in the village may be supported by the new project to enhance conservation and create a sense of environmental stewardship.

5.4 Local Community of Boma Subutuni

- The village successfully conducted Octopus closures as one of the initiatives supported by the SWIOFish project through BMU;
- It was reported that women did not participate in the Octopus opening due to the event being conducted during the Holy Month of Ramadan whereas women had to remain at home preparing iftar. Rescheduling in the future is proposed to allow women to participate; and
- TASFAM project may support preliminary studies and mapping of suitable areas for closing. May also support small patrol boats and safety equipment.

5.5 Tanga City Council

- The SWIOFish project set a data collection system however there was no data sharing system across different management levels;
- The SWIOFish project supported interventions on access to coastal waters while rich fishing grounds in Tanga region are offshore. TASFAM project should consider supporting fishers to access offshore resources; and
- The nature of support should consider the entire respective fishery value chain. The project should also support alternative income-generating activities e.g. beekeeping, ecotourism, etc. in mangroves and coral reefs respectively as an alternative source of livelihood.

5.6 Local Community of Mwambani Tanga

• The village reported conflicts over fishers and seaweed farmers regarding the expansion of seaweed farms into fishers' navigations ways;

- Seaweed farms have played a role as nursery and feeding grounds for different fish species attracting beach seine fishers to fish illegally, therefore causing seaweed destruction; and
- The TASFAM project should support the development of land use plans for seaweed farming villages.

5.6 Wildlife Conservation Society (WCS) – Tanga

- WCS took over some of the SWIOFish project activities in Mkinga District which involved the establishment and capacity building for CFMAs and the development of CFMAs management plans and BMUs action plans in the same district;
- It was reported that WCS has initiated a range of subprojects to include support for Octopus closures, Energy Serving Stoves for boiling sardines, and Solar tent driers to reduce high post-harvest losses associated with sardines' fishery during the rainy season and losses of nutrients by boiling this will reduce the use of firewood by about 70%;
- The Blue Carbon Trade initiative provides opportunities for the communities to participate in the conservation of seagrasses and mangroves whereby they are being paid for any additional biomass produced from the baseline; and
- The TASFAM project may support some of the interventions in other coastal districts apart from Mkinga.

5.7 Mwambao Project – Tanga

- The organization is implementing a range of activities related to some of the activities implemented under the SWIOFish project;
- Climate change has impacted some of the project activities especially those implemented on the nearshore waters;
- They are suggesting to change from BMU/village-based initiatives to CFMA-based initiatives because most of the fishing grounds are shared by different BMUs/villages;
- One of the success stories from Mwambao that the TASFAM project can buy is to create market systems where key stakeholders plan prices before the octopus' closure opening; and
- Future initiatives should consider, increasing women's participation in closures, providing financial assistance in return for conservation, creating a link between VSL and conservation activities, and increasing women and youth participation in conservation programs.

5.8 Local Community of Deep Sea Landing Site

- The SWIOFish project supported two activities, data collection and Potential Fishing Zones (PFZ). The TASFAM project should support fishers to access distant (offshore) fisheries resources; and
- The requested landing site is to be supported with safety equipment and a cold chain to reduce post-harvest losses experienced in high fishing seasons.

5.9 The local community of Kasela/Sahale Landing Site

- The site has basic infrastructure which serves as the landing site, in the SWIOfish project they implemented PFZ.
- The fishers requested the TASFAM project to construct a landing site and/or a fish market because the landing site is serving as a regional market for dried sardines exporting most of her consignment to DR Congo and Rwanda.

- It was reported that no women are participating in fishing but few own fishing vessels and many others participate in other points of the value chain apart from fishing
- Fishers requested the TASFAM project to support sea safety by providing rescue boats, safety equipment, and training.
- It was suggested that the TASFAM project may also support Shallow/Deep Sea Interphase Fish Aggregating Devices (FAD) for attracting migratory tuna in the deep sea to move close to areas fishers can access.

5.10 Muheza Local Government Authority

• The DED requested communities to be involved in more project activities, the district has a feeling that they deserve to be involved in more other activities apart from data collection for cephalopods and reef fishes only.

5.11 Local Community of Kigombe

- The SWIOFish project conducted a successful data collection activity. However, the system of excluding villages within the MPRU areas should be reviewed;
- Communities requested to benefit more from tourism opportunities offered by the presence of Tanga Coelacanth Marine Park (TACMP) in the village.
- They requested to be treated as BMU in TASFAM project management to be able to benefit from the project.
- It was further advised that there should be a close follow-up of project activities implementation to curb any emerging challenges in the course of implementation.
- It was further observed that none of the women participate in direct fishing activities but they are dominating the fish value chain in the village.

5.12 Marine Parks and Reserves Unit– Kigombe

- The project supported a range of activities targeting to improve park management. One of the activities supported in the construction of staff houses;
- Reported on impacts of climate change to coastal areas whereas mangroves are dying in big numbers. There is a need to make a comprehensive study on this and future interventions may include restoration programs for resilient species. There is evidence of coral reef breeching and shoreline soil erosion; and

5.13 Pangani Local Government Authority

- They express sincere thanks to the ministry for choosing Pangani among the districts implementing the SWIOFish project; and
- The DED appealed for the integration of different projects taking place in the same area with related objectives/activities. Appealed also for communities to be prepared for project interventions.

5.14 Local Community of Matakani

• This is the group of crab fattening in Pangani district mainly dominated by women. They received a loan from the district of 10% which is set for disadvantaged groups, women, and youth. They started farming after attending training supported by the SWIOFish project. They produce up to 120 kg of crabs per week which does not suffice for the market. The need for expansion is paramount to meeting market demands and the economic viability of the project. They requested the TASFAM project to support them with the construction of more ponds and to purchase equipment so that they can expand their production; and

• TASFAM project may consider supporting several other groups of this nature to provide alternative livelihoods to fishing communities.

5.16 Local Community of Kipumbwi

- The SWIOFish project implemented several activities in these villages including the construction of an Office building for BMU which is also serving as an office for CFMA. The village also benefited from temporal employment during construction, with most of the materials being sourced within the same villages;
- Despite the landing site accommodating thousands of fishers and fish processors and traders, it was observed that the BMU does not have a rescue boat or personnel trained on safety and survival at sea. The TASFAM project may support safety equipment and training; and
- The BMU requested the TASFAM project to support, sardine processing infrastructures such as efficient energy stoves, boiling cans, and drying racks. They also requested support for mariculture infrastructure for seaweed, crab, and sea cucumber

5.17 Local Community of Mkwaja

- The village is farming seaweeds however they are constrained by the market. For prices to be better they need to produce large quantities exceeding twenty tones, current production is below that amount offering low prices due to costs incurred by buyers to transport small quantities to Zanzibar. Expansion of farms is hindered by the availability of seeds and other inputs (ropes). The market problem may be solved by training them on value addition so that they can produce different commodities out of raw seaweed;
- Seaweed was reported to form a buffer between polluted coastal areas and unpolluted coral reef areas. The areas serve as a nursery ground for different types of fish, playing a role in restoring degraded environments; and
- It was reported that though the SWIOFish project through the VSL sub-project improved the capital of many community members to the extend that the business in the village grew faster, this led to the influx of traders from different areas coming for dried sardines business. As a result, the living standard in the village changed and accompanies by the introduction of alien traditions and theft. The local community had not prepared enough for abrupt change. This raises the need to prepare local communities for any change that may result from project interventions before project implementation.

6.0 DAR ES SALAAM REGION

6.1 Kigamboni Municipal Council

- They are familiar with the SWIOFish Project and they have participated in fisheries production data collection (CAS and Fisheries sensors);
- They also appreciate the work done by the SWIOFish project on combating blast fishing, although few incidences exist; and
- They requested the Ministry to consider Kigamboni in the TASFAM project in all aspects including Co-Management.

6.2 Local community of Buyuni, Kigamboni MC

- Buying is among the largest fish landing sites in the Dar es Salaam Region. It is not well developed though there is a considerably small developed fish market;
- BMUs collect catch assessment data for fisheries management, and they land both small pelagic, medium, and large pelagic, therefore they request heavyweight weighing balance for easy work;
- They requested the search and rescue boat for people who encounter drowning;
- Women participate in post-harvest activities, men go out fishing;
- Some years back, they were collecting fisheries revenue on behalf of the LGA, and they were able to retain some funds to run their daily activities. BMUs are concerned with revenue losses and wish to be given collection tasks. BMUs are more efficient in revenue collection because they know all fishers landing fish through their sites making it difficult to escape.

6.3 Local Community – Kunduchi Kinondoni MC

- SWIOFish project supported a range of activities at this landing site including VSL, PFZ, and Data collection. Fishers from this landing site benefited from PFZ information, reports show all PFZ shared had a positive outcome in terms of catch. However, fishers requested the system to be automated so that fishers may access using mobile phones upon request. Moreover, it was observed that VSLs were performing well most groups being dominated by women.
- TASFAM project requested support for data collection facilities such as measuring boards, weighing balance, and mobile phones. The project may further support training on safety issues and associated equipment.

7.0 Tanzania Fisheries Research Institute

- The SWIOFish project supported a range of research works, construction, and retooling of state of the art laboratories. However, none of the research works conducted has been published though findings have been shared through policy briefs to responsible ministries in Tanzania Mainland and Zanzibar.
- The TASFAM project can support further research works in areas that were not included in the SWIOFish project such as setting reference points and elasmobranchs. The support may be extended to the construction of a mariculture research center which will cater to both research and extension services.

8.0 Tanzania Fishing Company (TAFICO)

• In contacting TAFICO, they said they were not the beneficiaries of the SWIOFish Project, and they would love to be considered in the TASFAM project, especially in the areas of skills capacity building.

9.1 World Wildlife Fund for Nature (WWF)

- WWF is a non-governmental organization implementing conservation activities in the Country. Its, Marine Program has been implementing similar activities in the coastal marine. While SWIOFish implemented co-management activities in five selected coastal districts, WWF as well as implemented the same in other coastal districts in the RUMAKI seascape.
- WWF acknowledged the collaboration in executing co-management activities together with the ministry through the SWIOFish Project in its areas of operation.
- WWF pointed out that, the Ministry should work on the BMU by-laws to implement FMPs to enable networking.

9.2 Sea Sense

- Sea-sense is implementing co-management activities in areas where WWF is not operating through support from WWF and Blue Venture (Blue Action Fund).
- They acknowledged the involvement of NGOs in SWIOFish co-management activities implemented in selected LGAs.
- They pointed out that, 10 BMUs in Lindi District were trained in co-management but some aspects were not well accomplished, in that regard, they are building from the work done by the SWIOFish Project. They are also implementing similar activities and closure schemes for octopus fishery in 10 BMUs in Southern Kilwa.
- Sea Sense is currently reviewing Fisheries Management Plan and BMUs bylaws in 20 BMUs. Therefore, it has been recommended that TASFAM should take into consideration the work done by NGOs and build from where they end.
- It has been recommended that, before the formation of CFMAs, BMUs need to be strengthened at the village level so that we can have strong Networks.
- There is a need to review BMUs and CFMAs guidelines to take into consideration new emerging issues.
- They recommended having a meeting to harmonize and synthesize fisheries data collected by various Institutions including the Non Governmental organizations.

Appendix 1 – Some Field Events In Photos



BMU member in Kipumbwi Pangani Posing for a group photo with the Assessment Team in front of the BMU office constructed by SWIOFish Project



Women carrying Sardines (Nicknamed Bodaboda) in Kipumbwi, where the role of women in the value chain begins



Group photo of VSL Members with the Assessment Team at Kigombe



A fish processing banda at Deep Sea Landing Site



Focus group discussion in progress with BMU and Community leaders at Kipumbwi



Inefficient use of energy in sardines boiling, The TASFAM project is targeting to solve this challenge through the introduction of improved efficient technology and appropriate materials for processing sardines
Annex 2.2: TASFAM ESA – Zanzibar Stakeholder Consultations Field Report

1. Introduction

This part of the report presents the likely environmental and social impacts that may arise as a result of the implementation of the TASFAM program. The report presents the following issues:

- Social and environmental impacts related to making fisheries sustainable
- Other activities that fishers could or would want to do if fishing is limited
- Potential conflicts among stakeholders and their resolution mechanisms
- Gender and climate change

The information regarding the above issues was collected through consultations with relevant stakeholders (Table 1) including; some members from representativess of Shehia Fishermen Committees (SFCs), individual fishers from both Unguja and Pemba and staff from the Pemba Channel Conservation Area (PECCA), staff s from Tumbatu Marine Conservation Area (TUMCA), Menai Bay Marine Conservation Area (MBCA), Mnemba Island Marine Conservation Area (MIMCA), Changuu Bawe Marine Conservation Area (CHABAMCA). Marine and Coastal Conservation Community (MCCC), Zanzibar Climate Change Alliance (ZACCA), DSFA, staff from ZAFIRI, ZEMA, and staff from the Department of Fisheries Development and Department of Marine Conservation.

2. Findings

Possible Environmental and Social Issues as a result of the project

Consideration of local content

In most of the visited areas especially where there is a construction of physical structures like buildings, the surrounding communities were blamed for their involvement in the particular project example is found at Tumbe Fish Market where the communities seemed not well informed. However, it is observed that the communities lack the operational capacity to manage the project like the fish market and ice making. During the implementation of SWIOFish, many fishers and other related communities enriched their knowledge since SWIOFish is largely based on capacity building, therefore, it is a compliment to the SWIOFish project as most of the sea users received different training for sea and ocean conservation. It is proposed the upcoming project put more effort into enabling the local communities with financial and equipment support by providing grants and other forms of financial assistance for gear exchange to control IUU fishing.

Health and wellbeing

The swiofish project improved the health status by supporting and creating of a conducive environment. For example, some of the toilets are renovated while new ones have been built in some places. Still, there is a challenge with the usage of toilets in some of the villages (this should be well addressed) but in some places, the number of toilets is not enough to accommodate a large number of users. The fishing sector has a

large interaction with the people which results from the production of a high number of waste. Most of the visited areas such as Pungume and Misali have no appropriate technology for waste management. It is proposed to equip the communities with waste management capacity. On the other side, the fishing market falls into the same trap of how to control the waste and remains of fish products.

Challenges of seaweed farming

Seaweed farming is a common livelihood activity of the coastal communities in Zanzibar. The sector employs many women and youth. The swiofish project support seaweed farmers by providing small boats (vihori) however, vihori are not enough to compare with the seaweed harvested. This field visit communicated with many community groups that engaged in seaweed farming such as Tusijisahau (Chwale), and Kinamama Tunaweza (Mjini Kiuyu). Another challenge in seaweed farming was reported to be the market price which is relatively low price and unreliable market. To overcome this problem our field visit suggests two measures to be taken

- i. To conduct a market survey for seaweed
- ii. To provide a facility for seaweed processing and value addition

Currently, the mangrove pegs are mostly used for seaweed farming on both Unguja and Pemba islands, this creates a hazard for these essential marine resources and results in clearing out of mangrove forests. Polyvinyl chloride (PVC) pegs are suggested however there is a need to study its side effects.

Biodiversity disturbance

Over-exploitation of marine species resulting disturbance in the marine natural system. There is a mutual relationship between the species in certain geographical areas. For example, overfishing especially anchovies may result in the reduction of marcels stock which in turn may result in the disappearance of Tuna and Tuna like fish. The sea cucumbers collection narrated by Bwejuu chair of SFC as the cause of increasing the number of

Observation for Marine Conservation Areas

There are five MCA in Zanzibar, but the implementation of GMP, MCS, and DP Still has some challenges. The implementation of these plans is very difficult due to low budget allocation. For example installation of a permanent buoy for good demarcation of the MCAs. Another challenge on the MCA related to species-specific closure and establishment of the no-take zone where community groups have contradicting knowledge which raises the interest base conflict. The issue is very critical and needs a conflict resolution mechanism. Ferexalpe currently, there is a misunderstanding between Michamvi and Uroa, Tumbatu, and Kivunge. The first is the case of two MCAs (MBCA and MIMCA) but the letter is about a single MCA (TUMCA). Some areas especially the eastern part of Pemba island need consideration in the establishment of MCA, accidentally SFCs of this region are associated with PECCA which operates in the eastern part of Pemba island.

Nearly, all fishing markets are not equipped with emergency facilities such as fire extinguishers, rescue boats, and medical centers which are very crucial for the interaction of a large population. Fishing is the primary livelihood activity for the coastal communities where any stress to fishing activities results in negative consequences to socio-economic prosperity for the fishers. Therefore these fishers need to be seconded with alternative livelihood activities such as beekeeping, carbon marketing mechanisms by encouraging the planting of trees, etc. Also there is a need for improving coconut rope (locally known as Usumba) industries as it employs many women in South region Unguja. The ropes are used in many tourist hotels to make and decorate furniture.

Many landing sites have a poor infrastructure where fishers drag the fish which reduces fishes quality and may expose them to contamination. There is a need to improve the landing site by constructing convenient infrastructure.

Anchovies processing and Marketing

The team visited Fungurefu (Mkokotoni) to observe processing and other related activities for anchovy production. Despite the important role played by the anchovy fishing industry and the benefits that people gain in supporting the livelihood of coastal people in Zanzibar, the industry is associated with many constraints. These constraints include poor storage facilities, poor use of technology, and a shortage of knowledge on adding value. Others include poor enforcement of existing regulations and poor fish processing.

Among the most sensitive issues of the area is the shortage of toilet facilities including the small number of toilets compared to the users, shortage of water, and absence of health and security centers for emergences issues. In addition, there is increasing confidence in abuse and drug usage which stimulate uncontrolled and unsafe sexual practices.

ZEMA has a strong suggestion and long-term observation of missed involvement in the project that has direct and indirect effects on the environment. Monitoring and evaluation need to be well involved. However, due to changes in World Bank safeguards policy, there is a need for training in such policies to understand how they work on social and environmental content.

Gender mainstreaming

The number of women in fishing and related activities is very large. Most of the women were involved in bivalve collection and seaweed farming. Their concern is about climate changes which result in shifting the seaweed farms from low-water to highwater areas. They proposed to the government to equip them with appropriate infrastructure to continue with their activities. However, most of them are not going to fish due to cultural boundaries but the high number of women recorded as a fishmonger in the local market.

Climate change effects

Zanzibar coastal area experiencing the sea water rising in many places. Different measures have been taken to minimize, reduce, or mitigate the problem. Thanks to the SWIOfish project where there is much consideration of the safeguarding policy by constructing the returning walls on its project around the coastal area. However, the effects of seawater rising, intrusion, and erosion are very high in many places therefore the project needs to continue considering the consequences of sea water rising. Among the areas observed with SWR are Nungwi, Jambia, Paje, and Bwejuu in Unguja and almost most of the area of Pemba island including Kiuyu and Tumbe (which need more consideration for the construction of the returning wall).

What fishers could or would want to do if fishing is limited

Apart from strengthening community patrol, the interviewed stakeholders recommended a livelihood boost to those who may be affected by the interventions. Almost all said fishers especially small fishers (those who use small vessels without engines and small gears) who fish around near-shore areas (where many productive reefs and seagrasses are found) where certain fishing areas might be proposed for closures (either seasonally or permanently) should be assisted. The following interventions/activities were proposed;

- Alternative livelihood activities should be provided to the ones targeted who are fishers, communities were complaining alternative livelihood activities were provided to other groups, not real fishers. Activities to be provided should be researched to see if they fit in the area (suitability and profitability) and should be the ones that the communities have chosen not just given. For instance, in those areas where agriculture is possible, fishers should be assisted in the improvement of agricultural practices with the supply of farm implements including the establishment of irrigation infrastructure, etc., and the like for other activities.
- Local fishers should be assisted in fishing in the deep sea by being provided with appropriate fishing equipment, this was a very important point mentioned by all. They said fishers should be assisted with modern fishing gear and vessels to fish in the deep sea. Of course, technical expertise and training should be considered. They added that vessels should be installed with freezers and radio calls because in far areas there is no access to mobile phones and they may spend many days offshore. Market infrastructure such as market buildings with various fish processing facilities like fish driers and freezers should be in place to avoid post-harvest losses that may lead to unprofitable business. It was also observed that almost all fishers who are fishing with big boats and machines do not own that fishing equipment, they are owned by rich people. One caution is that before local fishers are capacitated in carrying out deep-sea fishery a study on carrying capacity should be done to avoid overcrowding and overfishing.
- Small businesses were also mentioned as an alternative to fishing. These businesses are those involving travel to town or mainland Tanzania and bringing back some goods which are scarce in the villages. For instance, at Bumbwini Shehia they said fruit business like mangoes from the Town to the village pays. These businesses may keep fishers busy when there will be closing seasons in some areas.

Potential conflicts among stakeholders

Several conflicts related to fisheries have been listed. However, many conflicts are the result of illegal fishing practices in the areas. The list of conflicts mentioned by fishers/SFCs and staff from MCAs and Fisheries Development staff:

- Sea closure conflict as reported earlier in this report
- Seaweed growers, fishers, and hotel investors have a conflict with the utilization of common areas for different activities. At Misali the fishers compete with tourists for the same area with different interests (fishing and snorkeling)
- Seine net fishing and basket trap fishery. Fishers/SFCs reported that during their operations seine nets drift basket traps and destroy them.
- Small pelagic fishery (using ring-nets) and large pelagic fishery (using gillnets). Even if the 2 fishing practices are legal, fishers that fish for large fish, especially those using gillnets, are complaining to those fishing sardines using ring-net (light fishery) that when they fish for small fish, big fish are chased away. However, their complaint has reached the government people and now they are thinking about the best way to reduce this misunderstanding.
- Illegal fishers who fish at night in prohibited areas against legal fishers/SFCs. This is a common conflict in many areas where some marine areas have been set aside for conservation purposes. Illegal fishers come during the night and fish in those prohibited areas.
- Ships versus fishers. This was especially reported in Pemba, where large ships (for research, passengers, or luggage) are destroying/cutting their fishing gear (nets) when set in the deep water.

Fishers reported that when they place their gears they put buoys/marks but it seems many ship captains are not aware of the signs or they just ignore the signs.

- Seaweed farmers and fishers. This happens when fishers pass their vessels on seaweed farms. By doing so they cut the ropes and destroy the seaweed.
- Diving for octopus and basket trap fishery. There are some instances where divers steal fish from the basket traps. Although, this was mentioned not to be very common.
- Tourist operators/tourists versus fishers. There is a misunderstanding about where should the tourists dive and where should the fishers fish. Although there are set areas for the two activities, it seems most of them are not aware of the demarcation because there are no indications or marks set on sites.

Conflict resolution mechanisms

It was reported that conflict resolution starts at the local level through SFCs, fishers first report their cases/issues to their SFCs then the case may proceed upward when the resolution fails at the low levels. It was observed that when the SFCs fail to resolve then the issue goes to the SFCs at the District level, to the Department of Fisheries Development, and the District Authority. However, it was observed that the modes of conflict resolution depend on the nature of the conflict happened.

It was indicated that procedures for conflict resolutions are very participatory and it is the bottom-up approach. This means they start from SFC at the Shehia level and that not only SFCs are participating in resolving the issues but Shehia leaders, Marine Conservation Areas (MCA) officers, and Fisheries Department staff are also participating. Village elders are also been involved especially at the Shehia level.

This bottom-up approach seems to work well in the villages because the communities are very homogeneous and are related to each other. Therefore many conflicts especially those involving people from the same Shehia end up at the Shehia level. The hard-to-resolve conflicts mentioned are those between different shehias.

Appendix 3A: 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 NPIU 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: YesNo......

ii. National Parks: YesNo.....

lii. Rivers: Yes No

iv. Lakes: Yes No

v. Wetlands (swamps, seasonally inundated areas)

YesNo

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.....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 sheet if necessary).

14. Did the consultation and part	ticipatory process d	escribed 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 3B: 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 NPIU for review and clearance.

Impost	Check	Description	
Impact	(√) if yes		
Significant, diverse, unprecedented negative environmental and/or social impacts?		If checked, the project is a Category A as per the Tanzania 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 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 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

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 tick all World Bank Environmental and Social Standard to be complied

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

Appendix 3C: 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		
lf pr	NO is the answer to all of the questions above, please proceed with approval of the oject component with World Bank		

Annex 4: NEMC Schedule 1 Projects that require an EIA

1. Agricultural

- o 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;
- o 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);
 - o Intensive livestock-raising units; and
 - Livestock routes.
- 3. Forest Activities
 - Timber logging and processing;
 - o Forest plantation and forestation and introduction of new species;
 - o Selective removal of single commercial tree species; and
 - Pest management.
- 4. Fisheries activities
 - Medium to large scale fisheries;
 - o Artificial fisheries (Aqua-culture for fish, algae, crustaceans shrimps, lobster, or crabs); and
 - \circ $\;$ 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
 - o 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
 - o 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;
 - o Construction and expansion of fishing harbors; and
 - \circ 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;
 - \circ Quarrying;
 - Coal mining; and
 - Sand dredging.
- 16. Non-metallic industries (products)
 - Manufacture of cement, asbestos, glass, glass fiber, and glass wood;
 - Processing of rubber;
 - o 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;
 - o Boiler making and manufacture of reeser4voirs, tanks, and other sheet containers;
 - Foundry and forging;
 - Manufacture of nonferrous products;
 - \circ $\;$ Iron and steel; and
 - o Electroplating.
- 18. Waste treatment and disposal
- (a) Toxic and Hazardous waste
 - o 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;
 - o Construction of waste depots; and
 - $\circ \quad \mbox{Collection and transportation.}$
- (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;
 - $\circ \quad \text{Diversion of normal flow of water;} \\$
 - Water transfers scheme;
 - \circ $\;$ 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
 - o Decisions of policies and programs on environmental and development;
 - Decisions to change designated status;
 - Family planning;
 - o Technical assistance; and
 - Urban and rural land use development plans eg. Master plans, etc.

Annex 5: NEMC Schedule 2: Projects that May/May not require an EIA

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

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

- 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 6: Activities Which Do Not Require EIA Certificate And Which Do Require An EIA 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 EIA, Environmental Report or no assessment is required.

From Environmental Act, No. 3 2015,40(a) to (f)

Criteria for determining activities that require an EIA certificate.

- 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 amount of resources, either living or nonliving:
 - 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 EIA or Environmental Clearance for any other activity deemed necessary.

Sector	EIA or Environmental Audit Applicable criteria	Environmental Report or pre-Audit Applicable criteria Or Direct clearance
Agriculture, irrigation, livestock, and fish far	ming	cicurunce
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	
Introduction of Genetically Modified organisms (GMOs)	In all cases	
Large-scale application of agrochemicals for disease and pest control.	In all cases	

Sector	EIA or Environmental Audit Applicable criteria	Environmental Report or pre-Audit Applicable criteria Or Direct clearance
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	
Ouarrying of non-renewable natural resources	Where the exceeds 0.5	Where the area is 0.5 hectares and
(Sand, stone, gravel, lime, or limestone brick,	hectares (including existing	below
coral reef, moorum, rock, and rock aggregate)	small-scale plots expanding)	
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:		
1. Construction of petroleum refineries.		
II. Construction of petroleum separation,		
processing, conversion, and nandling		
III Transmission of chamicals		
netroleum and petroleum products		
IV Storage facilities for petroleum and		
netroleum products (e.g. LNG		
depots).		
V. Construction of facilities, including		
pipelines and camps.		
(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		1
Installation, production, and transmission of	In some cases	In some cases
power lines and other means of electrification,		
including submarine cables from conventional		
sources from		
conventional sources of energy.		
Installation of wind now or solar photo voltain	In some cases	In some cases
sea wave biogas and waste-to-energy system		
Petrol filling/petrol/fuel stations and LPG gas	In some cases	In some cases
station		
Tourism establishment		
Beach Resort,	In cases where the project	40 rooms and below
Condominiums,	- is located in a	
Apartments, complexes, and associated	conservation area	
development projects	and its buffer zone	
	or near	
	Sensitive areas such as	
	beaches, mangrove	
	waterways, lagoons, remote	
	islands, and sandbanks.	

Sector	EIA or Environmental Audit Applicable criteria	Environmental Report or pre-Audit Applicable criteria Or Direct clearance
	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	In all cases	
activities diving activities and game fishing		
Food and beverage industry		
Packaging and canning of animal and	In all cases In all cases	
vegetable products		
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,		1
Construction expansion or rehabilitation of	In all cases	In all cases
roads		
Construction, expansion major rehabilitation		
of airports, heliports, airstrips, and their	In all cases	
ancillary facilities		
Construction of new, or expansion of		
shipyards, ports, and harbor facilities	In all cases	
including marinas, piers, land reclamation		
maintenance dredging Extension of jetties, an		
extension of the slipway for the shipyard		
development for loading and unloading		
Container word	In all acces	In all cases
Elood control schemes, such as consideration	In an cases	
and other flood-relief work on land	In all cases	In all cases
Coastal work to combat erosion and maritime	in an eases	
works canable of altering the coastal zone		
through the construction for example dykes		
and walls.		
Waste disposal		
Wastewater treatment plants		
Solid waste disposals facilities such as	In all cases	In all cases
incinerators, composting areas, recycling, and		
refurbishment units, and transfer stations.		
Landfills	In all cases	
Municipal sewer lines, stormwater drainage,	In all cases	
and sea outfall		
Storage of scrap metal items and plastic		In all cases
materials		
Communications		
Installation of wired and wireless	In all cases	
telecommunication, internet, and broadcasting		
systems including mast and towers		
Water supply		T
Establishment of water supply infrastructure in	In all cases	
environmentally sensitive areas or in a		
location that may result in mass displacement		
and hence resettlement action plant		
Desalination plant for municipal water supply	In all cases	
Housing, urban development, and estates		

Sector	EIA or Environmental	Environmental Report or pre-Audit
	Audit Applicable criteria	Applicable criteria Or Direct clearance
Establishment of housing estates (including	Covering an area of two	Less than 2 ha or less than 50 housing
apartment complexes, and condominiums)	hectares or 50 housing units	units
	or more	
Real estate development projects include the	In all cases	
construction of shopping centers, car parks,		
sports stadiums, leisure centers, and multiplex		
cinemas	x 11	
Hospitals	In all cases	
All district, regional, central, and all referral		
All layels of health care units (primary		In all anges
an levels of health care units (primary,		III all cases
veterinary unity		
Construction of Boarding schools and	In all cases	In all cases
academic institutions	in an eases	in an eases
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	In all cases	
Installations for the manufacture of glass and		
ceramic products by burning in particular		
roofing tiles, bricks, refractory bricks, tiles,		
stoneware, or porcelain		
Chemical Industries		
Production of chemicals, production of	In all cases	
pesticides, and pharmaceutical products, and		
Storage facilities for petroleum,		
petrochemical, and chemical products.		
Textile, leatherwood, and paper industries		
Textile industry	x 11	
Cotton and Synthetic fibers	In all cases	
Dye for cloth		
Gillielles	In all cases	
Tanning	In an cases	
Tanneries		
Dressing factories		
Other cloth factories		
Electrical and electronics	In all cases	
industry		
Forestry- t0- Land Use Conversion	In all cases	
Degazetting a protected or conservation	In all cases	
area into a land-use zone		
Special Projects	Depends on the	Depends on the
	projects	projects

Annex 7: Indicative outline of ESMP as per the ESS1

An ESMP consists of the set of mitigation, monitoring, and institutional measures to be taken during implementation and operation of a project to eliminate adverse environmental and social risks and impacts, offset them, or reduce them to acceptable levels. The ESMP also includes the measures and actions needed to implement these measures. The Borrower will (a) identify the set of responses to potentially adverse impacts; (b) determine requirements for ensuring that those responses are made effectively and in a timely manner; and (c) describe the means for meeting those requirements. Depending on the project, an ESMP may be prepared as a stand-alone document, or the content may be incorporated directly into the ESCP. The content of the ESMP will include the following

(a) Mitigation

The ESMP identifies measures and actions in accordance with the mitigation hierarchy that reduce potentially adverse environmental and social impacts to acceptable levels. The plan will include compensatory measures, if applicable. Specifically, the ESMP:

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

Annex 8: Mainland Tanzania TASFAM - List of participants on ESMF Final Stakeholder Validation Workshop

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Annex 9: Zanzibar TASFAM – List of participants in ESMF Final Stakeholder Validation Workshop



THE UNITED REPUBLIC OF TANZANIA MINISTRY OF LIVESTOCK AND FISHERIES MINISTRY OF BLUE ECONOMY AND FISHERIES DEEP SEA FISHING AUTHORITY

REGISTRATION FORM

Validation Workshop on Environmental and Social Assessment (ESA), Environmental and Social Management Fran Stakeholder Engagement Plan (SEP) for the proposed project "Tanzania Scaling-Up Sustainable Marine Fisheries and A (TASFAM)" held at Old Baraza la Wawakilishi hall - Zanzibar

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Annex 9: E&S Specifications for Contractors⁷

AIM OF THIS DOCUMENT

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

GENERAL

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

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

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

SUBPROJECTS CONSTRUCTION ACTIVITIES

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

Workforce and Site Installation Management Plan

Workforce

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

⁷ The Contractor will have to follow the World Bank Group General Environmental, Health and Safety Guidelines as well as applicable laws of Tanzania. List of OHS legislation can be taken from <u>https://www.osha.go.tz/page/laws-and-regulations</u>

- Announcement for the position that local labor could participate in the works to every street/village/Shehia around the subproject area;
- Provide equal employment opportunities for youth, women, men, and people with disability;
- Provide work safety/environmental awareness training to those local laborers upon their hiring.

Code of Conduct

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

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

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

Prohibitions

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

- Cutting of trees for any reason outside the approved project area;
- Hunting, fishing, wildlife capture, or plant collection;
- Buying of wild animals for food;
- Feeding of wild animals;
- Use of unapproved toxic materials, including lead-based paints, asbestos, etc.;
- Disturbance to anything with architectural or historical value;
- Building of fires;
- Use of firearms;
- Use of alcohol by workers during office hours;
- Washing cars or machinery in streams or creeks;
- Doing maintenance (change of oils and filters) of cars and equipment outside authorized areas:
- Disposing of trash in unauthorized places;
- Driving in an unsafe manner on local roads;

- Having caged wild animals (especially birds) in camps;
- Working without safety equipment (including boots and helmets);
- Creating nuisances and disturbances in or near communities;
- The use of rivers and streams for washing clothes;
- Indiscriminate disposal of rubbish or rehabilitation wastes or rubble;
- Littering the site;
- Spillage of potential pollutants, such as petroleum products;
- Collection of firewood;
- Poaching of any description;
- Explosive and chemical fishing;
- Latrine outside the designated facilities;
- Burning of wastes and/or cleared vegetation;
- Engaging in any form of sexual harassment including unwelcome sexual advances, requests for sexual favours, and other unwanted verbal or physical conduct of a sexual nature with other Contractor's or Employer's Personnel;
- Engaging in sexual exploitation, rape, or sexual abuse;
- Engaging in any form of sexual activity with individuals under the age of 18, except in the case of pre-existing marriage.

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

Camp and Site Facilities

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

- The construction, layout, and extent of the construction site and its components, i.e. all offices, accommodation facilities, testing facilities/laboratories, batching areas, storage & stockpiling areas, workshops, vehicle washing areas, and all other areas/facilities required for completion of the project shall be planned, designed and managed in such a manner that environmental and social impacts are minimized;
- The Contractor shall establish worker's camps, offices, workshops, testing facilities, stockpiling areas, staff accommodation, etc. in a manner that does not adversely affect the environment.
- Observe applicable national (if any) and international standards⁸ on how many workers are allowed in one room, what minimum space is required per person, type of beds, cooking arrangements, etc.
- Site offices, camps, depots, asphalt plants, mixing stations, and workshops shall be located in appropriate areas as agreed by the local village and approved by the Supervision engineer/Consultant and not within 500 meters of existing residential settlements and not within 1,000 meters of asphalt plants;
- Site offices, camps, depots, and particularly storage areas for fuel, lubricants, bitumen, and asphalt plants shall not be located within 500 meters of watercourses, and be operated so that no pollutants enter watercourses, either overland or through groundwater seepage, especially during periods of rain.

⁸ Like Workers' accommodation: processes and standards A guidance note by IFC and the EBRD and <u>https://www.ebrd.com/downloads/about/sustainability/Workers_accomodation.pdf</u>

This will require lubricants to be recycled and a ditch to be constructed around the area with an approved settling pond/oil trap at the outlet;

- Areas for the storage of fuel or lubricants and a maintenance workshop shall be fenced and have a compacted/impervious floor to prevent the escape of accidental spillage of fuel and or lubricants from the site. Surface water drainage from fenced areas shall be discharged through purpose-designed and constructed oil traps. Empty fuel or oil drums may not be stored on-site.
- Fuel wood shall not be used as a means of heating during the processing or preparation of any materials forming part of the Works;
- The Contractor shall restrict all his activities, materials, equipment, and personnel to the area specified. Entry into restricted areas by any person, vehicle, or equipment without the Supervision Engineer's/Consultant's permission can result in penalties;
- Potable water safe for human consumption shall be provided for at camps, site offices, and other working areas;
- Camp areas shall be located to allow effective natural drainage;
- A method shall be established for storing and disposing of all solid wastes generated by the labor camp. If applicable, kitchen wastes shall be disposed of into soak pits;
- Solid wastes generated in the labor site shall be reused, recyclable, or disposed of in landfill sites;
- If water is stored on-site, drinking water and multi-purposed water storage facilities shall be distinguished and demarcated.
- Sanitary arrangements, latrines, and urinals shall be provided in every campsite/work front.

First Aid Facilities

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

Sanitary Facilities

- In every campsite, separate and adequate lavatory facilities (toilets and washing areas) shall be provided for the use of male and female workers. Toilet facilities should also be provided with adequate supplies of running water, soap, and toilet paper. Such facilities shall be conveniently accessible and shall be kept in clean and hygienic conditions:
 - Where female workers are employed, there shall be at least one latrine for every 25 females or part thereof.
 - Where males are employed, there shall be at least one latrine for every 25 males or part thereof.
 - Every latrinee shall be under cover and so partitioned off as to secure privacy and shall have a proper door and fastenings.
 - Where workers of both sexes are employed, each latrine or urinal must be lockable from inside, and outside of each block there must be a notice in the language understood by the majority of the workers "For Men" or "For Women" as the case may be.
 - The latrines and urinals shall be adequately lighted and shall be maintained in a clean sanitary condition at all times and

- $\circ~$ Water shall be provided in or near the latrines and urinals by storage in drums
- A temporary septic tank system shall be installed for the disposal of domestic wastes and excreta without causing pollution of nearby watercourses. Wastewater should not be disposed into water bodies without treatment.

Eating areas

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

Security

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

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

Impact Management Plan

Erosion and Sedimentation

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

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

- Spray water as needed on dirt roads, cuts, fill material, and stockpiled soil to reduce wind-induced erosion;
- Traffic and movement over stabilized areas shall be restricted and controlled, and damage to stabilized areas shall be repaired and maintained to the satisfaction of the Supervision engineer/Consultant.

Stockpiles and Borrow Pits

In general terms, the Contractor shall:

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

Disposal of Debris

The Contractor shall carry out the following activities:

- Establish and enforce daily site clean-up procedures, including maintenance of adequate disposal facilities for debris;
- Debris generated due to the dismantling of existing structures shall be suitably • reused, to the extent feasible, in the proposed rehabilitation program (e.g. as fill materials for embankments). The disposal of remaining debris shall be carried out only at sites identified and approved bv the Supervision Engineer/Consultant. The contractor should ensure that these sites (a) are not located within designated forest areas; (b) do not impact natural drainage courses; and (c) do not impact endangered/rare flora. Under no circumstances shall the contractor dispose of any material in environmentally sensitive areas.
- In the event any debris or silt from the sites is deposited on adjacent land, the Contractor shall immediately remove such, debris or silt and restore the affected area to its original state to the satisfaction of the Supervision Engineer/Consultant.
- Watercourses shall be cleared of debris and drains and culverts checked for clear flow paths;

- Include provisions for incorporating the most appropriate stabilization techniques for each disposal site and determine that the selected spoil disposal sites do not cause unwanted surface drainage;
- Assess the risk of any potential impact regarding the leaching of spoil material on surface water;
- Once the job is completed, all rehabilitation-generated debris should be removed from the site.

Demolition of Existing Infrastructures

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

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

Dust Control

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

Noise Control

- The Contractor shall be responsible for compliance with the relevant legislation concerning noise;
- The Contractor shall try to keep noise-generating activities to a minimum;
- The Contractor shall restrict all operations that result in undue noise disturbance to local communities and/or dwellings (e.g. blasting, crushing, etc.) to daylight hours on weekdays or as agreed with the Supervision Engineer/Consultant;
- The Contractor shall warn any local communities and/or residents that could be disturbed by noise-generating activities such as blasting well in advance and shall keep such activities to a minimum;
- In sensitive areas (including residential neighborhoods, hospitals, rest homes, schools, etc.) more strict measures may need to be implemented to prevent undesirable noise levels;
- To the extent possible, nighttime operations shall be kept to a minimum and banned near sensitive receptors;
- No blasting shall be allowed during nighttime unless prior approval is obtained from the government authority and the Supervision Engineer/Consultant;

• The Contractor shall maintain the construction equipment in its best operating conditions and lowest noise levels possible.

Re-vegetation and site restoration

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

Waste Management Plan

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

Solid waste

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

on-site from other waste sources. Collected recyclable material shall be re-used for other projects or sold to waste collectors for recycling.

Domestic waste

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

Wastewater

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

Hazardous and Chemical waste

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

Materials Handling, Use, and Storage Management Plan

General

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

Transportation

- The Contractor shall ensure that all suppliers and their delivery drivers are aware of procedures and restrictions (e.g. restricted areas);
- Material shall be appropriately secured to ensure safe passage between destinations during transportation;
- Loads shall have appropriate cover to prevent them from spilling from the vehicle during transit;
- The Contractor shall be responsible for any clean-up resulting from the failure of his employees or suppliers to properly secure transported materials.
- Transport vehicles e.g. dumper, book truck, and any equipment that may be required for offloading heavy objects should have safety equipment like cones, first aid kit, fire extinguisher, etc. as per the requirements of part 8 of *The Occupational Safety and Health (Building and Construction Industry) Rules*, 2015⁹.

Hazardous and Chemical Substances

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

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

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

Cement and Concrete Batching

- Concrete mixing directly on the ground shall not be allowed and shall take place on impermeable surfaces to the satisfaction of the Supervision Engineer/Consultant;
- All runoff from batching areas shall be strictly controlled, and cementcontaminated water shall be collected, stored, and disposed of at a site approved by the Supervision Engineer/Consultant;

⁹ <u>https://www.osha.go.tz/storage/publications/LawsRegulations/sw1496149205-</u> BUILDING%20AND%20CONSTRUCTION%20RULES,%202015.pdf
- Unused cement bags shall be stored out of the rain where runoff won't affect them;
- Used (empty) cement bags shall be collected and stored in weatherproof containers to prevent windblown cement dust and water contamination. Used cement bags shall not be used for any other purpose and shall be disposed of regularly via the solid waste management system (see Waste Management Plan);
- All excess concrete shall be removed from the site on completion of concrete works and disposed of. Washing of the excess into the ground is not allowed. All excess aggregate shall also be removed.

Ecological Considerations

Protection of Natural Vegetation

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

Protection of Fauna

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

Safety during Construction

Construction Site Safety

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

- Provide personal protective equipment and clothing (goggles, gloves, respirators, dust masks, hard hats, steel-toed boots, etc.,) for construction/rehabilitation workers and enforce their use;
- During heavy rains or emergencies of any kind, suspend all work;
- Brace electrical and mechanical equipment to withstand seismic events during the construction;
- Present details regarding maximum permissible vehicular speed on each section of the road;

- Establish safe sight distance in both construction areas and construction campsites;
- Place signs around the rehabilitation areas to facilitate traffic movement, provide directions to various components of the works, and provide safety advice and warnings. All signs shall be in English and Swahili language and be constructed according to Tanzanian specifications.

Measures on blasting (if applicable)

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

Fire Control

- The Contractor shall submit a fire control and fire emergency method statement to the Supervision Engineer/Consultant for approval. The method statement shall detail the procedures to be followed in the event of fire;
- The contractor shall take all reasonable steps to avoid increasing the risk of fire through activities on-site;
- The contractor shall ensure that basic fire-fighting equipment is available at all camp areas and facilities;
- The contractor shall appoint a fire officer who shall be responsible for ensuring immediate and appropriate action in the event of a fire;
- The contractor shall ensure that all site personnel are aware of the procedure to be followed in the event of a fire;
- Any work that requires the use of fire may only take place at a designated area approved by the Supervision Engineer/Consultant and must be supervised at all times. Fire-fighting equipment shall be available.

Traffic Management

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

Other Requirements

Contractors will be required to include in their HSMPs safety measures in different activities including the following:

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

Protection of Heritage and Cultural Property

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

Grievance Redress Mechanism (GRM)

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

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

Community Relations

To enhance community relations the Contractor shall:

- Inform the local communities about construction and work schedules, blasting schedules, interruption of services, traffic detour routes provisional bus routes, and demolition, as appropriate.
- Limit construction activities at night. When necessary ensure that night work is carefully scheduled and the community is properly informed so they can take necessary measures.
- Inform the local community as early as possible and repeat at least one day in advance of any service interruption (including water, electricity, telephone, and bus routes) the community must be advised through postings at the project site, at bus stops, and in affected homes/businesses.
- All community infrastructures such as roads, bridges, water supply systems, micro-power generators, boat landings, irrigation systems, etc. affected during construction must be restored to the satisfaction of the communities and approved by the Supervision Engineer.

- All local roads used or bypassed by the Contractor will need to be rehabilitated to their original conditions.
- Establish and maintain a unit to receive, process, and reach a resolution on community complaints arising from construction activities (Grievance Redress Mechanism). Records of such complaints and their resolution must be kept and available for review by the Supervision Engineer/Consultant and PIU.

Health Services, HIV/AIDS

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

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

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

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

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

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

Environmental Emergency Procedures

Environmental emergencies of an unforeseen nature can occur during the construction and operational phases of the project;

- By definition, the nature of such emergencies cannot be known. Therefore, the Contractor shall respond on a case-by-case basis to such emergencies and shall initiate event-specific measures in terms of notifications and reactions;
- The Contractor shall prepare a report on the incident detailing the accident, clean-up actions taken, any pollution problems, and suggested measures to prevent similar accidents from happening again in the future. The incident report shall then be submitted to the Supervision Engineer/Consultant and PIU for review and records.

Environmental Training and Awareness

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

Remedial Actions

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

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

Annex 11: TOR for E&S Supervision Engineer/Consultant

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

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

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

1. The objective of the Assignment

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

- Inspect, monitor, and audit construction activities¹⁰ to ensure that Environmental and Social Specifications established in the Site Specific Environmental and Social Management Plan (SSESMP) of the Project and E&S Specifications for contractors are implemented effectively;
- Ensure that Contractors comply with the laws and regulations of a country and the contractual requirements;
- Ensure that the negative impacts are minimized;
- Provide environmental training to all actors involved in the construction activities.

2. Scope of Services

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

Initiation of the Supervision Works and Review of Project Documents

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

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

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

¹⁰The term 'construction activities' in this TOR pertains to all aspects related to the construction phase of the Project, including but not limited to, all construction sites, permanent and temporary camps, off-site activities (disposal sites, borrow pits), all associated facilities (crushing plants, asphalt plants, maintenance yards), access roads, traffic and disturbances (dust, noise) in local roads, and areas of impact away from the project site.

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

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

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

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

Blasting (If applicable)

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

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

- **ESMP:** The requirements of the ESMP and E&S specifications. Particular attention will be paid to the specific provisions in each contract's technical specifications indicating how the ESMP is to be complied with.
- **Health and Safety:** The health and safety requirements of the project shall be identified and communicated (included in environmental specifications for contractors).
- **Laws and regulations:** explanation of the relevant environmental requirements as stipulated in the environmental legislation, standards and regulations of Tanzania, and the contract specifications.
- **Code of Conduct:** All construction workers (permanent or temporary) will have to sign and should be educated on the following issues but not limited to them: firearm possession, traffic regulations, illegal logging and collection of non-timber forestry products, non-disturbance of communities, hunting and fishing

restrictions, waste management, protection of surface water, erosion control, all prohibited activities, the Code of Conduct requirements and disciplinary procedures, general information on the environment in which they will be working and living; and establishment of penalties for those who violate the rules.

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

After the training, all attendees shall sign a statement acknowledging their understanding of the environmental regulations, the ESMP, the health and safety obligations, and the Code of Conduct. The Supervision Engineer/Consultant shall sign a similar statement confirming their understanding of the supervision responsibilities.

Supervision of Construction Activities

The Supervision Engineer/Consultant shall:

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

<u>Review of Site Plans</u>: The Supervision Engineer/Consultant shall review and finally clear all site plans that may affect the environment. The Supervision Engineer/Consultant shall review and approve the Contractor's E&S management

plans. Where these plans are found not to comply with the ESMP, the Supervision Engineer/Consultant shall work with the PIU and Contractors to find a solution.

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

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

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

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

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

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

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

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

Unforeseen Impacts: If an incident arises that was not foreseen in the ESMP, the Supervision Engineer/Consultant shall work closely with the Contractors and the PIU to reach a satisfactory resolution to the incident. The Supervision

Engineer/Consultant shall then update the ESMP, and the implementation guidelines and train the Contractors' staff accordingly.

Site restoration and Landscaping

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

Staffing

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

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

Equipment

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

Reporting

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

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

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