



**THE REVOLUTIONARY GOVERNMENT OF ZANZIBAR  
MINISTRY OF AGRICULTURE, IRRIGATION, NATURAL  
RESOURCE AND LIVESTOCK**

**FINAL**

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

**FOR**

**TANZANIA FOOD SYSTEMS RESILIENCE PROGRAM  
(TFSRP) ZANZIBAR**

**APRIL, 2023**

## Executive summary

- A. Agriculture sector is the main economic stay accounting for more than 70 percent of merchandise export earnings in Zanzibar. The sector is characterized by smallholder farmers – majority being women (with a per capita land holding of 0.25 ha), highly depends on seasonal precipitation and low productivity. Food insecurity malnutrition, insufficient food access; both are driven by structural factors exacerbated by recent global crises. To address the existing challenges, the Revolutionary Government of Zanzibar (RGoZ), through the Ministry of Agriculture, Irrigation, Natural Resources and Livestock (MAINL) under the financial support of the World Bank have designed the Tanzania Food Security Resilience Program (TFSRP). The proposed TFSRP builds on the success and lessons from the Zanzibar Expanding Rice Production Project (ERPP) which was phased out in 2021. The proposed TFSRP will operate for five years as from financial year 2023/24 to the 2029/2029. The Project will have three main components, result for **Component 1** is to strengthening delivery systems in research, extension, and seed; the **results for Component 2** is to reinforce the delivery of resilient rural infrastructure, specifically irrigation and postharvest storage, which will increase crop and vegetable value chain commercialization, stable and diversified food supply. **Results for Component 3** is to strengthen the institutions to enable agri-food public services to be delivered and support the needed transformation of the agri-food sector, improved access to key services to enable farmers (particularly women) to build more resilient and productive farming systems.
- B. The TFSRP embraces rehabilitation activities such as structural designs, site clearance, excavation, and transportation of materials from the sources to the project sites. These types of activities are likely to cause environmental and social risks according to the World Bank environmental and Social Standards and Zanzibar Environment Management Act No. 3 of 2015. Thus, an Environmental and Social Management Framework (ESMF) sets out the principles, rules, guidelines and procedures for assessment and management of environmental and social risks and impacts. This ESMF applies to Investment Policy Financing (IPF) only as opposed to PforR components, which will be handled under the ESSA. The ESMF examines the IPF project components and provides procedures for environmental and social impact assessment. It contains measures and plans to avoid, reduce, mitigate, and/or offset adverse negative risks and impacts, as well as enhancement measures in case of positive impacts. It makes provisions for estimating and budgeting the costs for implementation of

such measures, and the capacity of the agency to manage environmental and social risks and impacts. It takes into account adequate information on the area in which project is expected to operate, including environmental and social vulnerabilities of the area, and on the potential impacts that may occur, and mitigation measures effected.

- C. Preparation of this ESMF was intermingled with the fieldwork/scoping; this step involved baseline studies; identification of receptors; and impact assessment stakeholder consultation. The fieldwork was conducted through rapid physical survey, investigation, and social-economic survey. This facilitated the acquisition of information and data on physical, biological, cultural, and social-economic aspects of the project areas. Thereafter, the stakeholders' engagement took place in two phases. First phase dealt with institutional engagement at national and district levels. The other phase engaged farmer's associations and non-state actors at local and district levels.
- D. The stakeholders' consultation introduced the project to relevant stakeholders. This includes project objectives, components, key activities, and implementation plans, understanding the challenges and problems they are facing, and collected inputs from their previous experiences and on-going efforts. It was also about gaining consensus on key issues that are expected to increase the ownership of the project. At an end, the stakeholders' consultation provided perceptions, suggestions, comments and inputs through thematic group discussions, plenary and Q&A sessions. A total of 280 representative of different stakeholder participated in this workshop. The stakeholders' consultation workshops were held on February 13<sup>th</sup> -14<sup>th</sup> and 16<sup>th</sup> -17<sup>th</sup>, 2023 in Unguja and Pemba Islands respectively.
- E. The project design is consistent with the World Bank Environmental and Social Standards and Zanzibar legal and institutional frameworks. These standards are: (a) Assessment and Management of Environmental and Social Risks and Impacts (ESS1). This covers impacts on the natural environment such as air, water, land, human health, and safety. The decisions regarding the project shall be based on a critical analysis of project activities and associated environmental and social risks and impacts during implementation; (b) Labour and Working Conditions (ESS2) which recognizes the importance of employment creation and income generation in the pursuit of poverty reduction and inclusive economic growth; (c) Resource Efficiency and Pollution Prevention and Management (ESS3), It sets out the requirements to address resource efficiency and pollution prevention and management throughout the project life cycle;

F. Other applicable Standards are: (d) Community Health and Safety (ESS4) It requires borrowers to avoid or minimize safety and health risks and impacts of the project, with particular attention to people; (e) Biodiversity Conservation and Sustainable Management of Living Natural Resources (ESS6) addresses sustainable management of primary production and harvesting of living natural resources and recognizes the need to consider the livelihood of project-affected parties, whose access to, or use of, biodiversity or living natural resources may be affected by a project; (f) Cultural heritage (ESS8) requires Borrowers to (i) Protect cultural heritage from the adverse impacts of project activities and support its preservation (ii) Address cultural heritage as an integral aspect of sustainable development (iii) Promote meaningful consultation with stakeholders regarding cultural heritage (iv) Promote the equitable sharing of benefits from the use of cultural heritage; (g) Stakeholder Engagement and Information Disclosure (ESS10) is made to improve the environmental and social sustainability of projects, enhance project acceptance, and make a significant contribution to successful project design and implementation.

G. Likewise, the ESMF also applies the national laws on the protection and conservation of the environment and natural resources while ensuring the safety and health of community members at workplaces. The following are the applicable national policies and legislation that are relevance to the context of ESMF:

- Water Policy 2006
- Guidelines of Occupational Health 2001
- Food Security and Nutrition Policies 2008.
- Zanzibar Blue Economy Policy 2022
- Zanzibar Disaster Management Policy 2011
- Zanzibar Social Protection Policy 2020
- Zanzibar Investment Policy 2007
- Zanzibar National Forest Policy 1999
- Agricultural Policy (2002)
- National forest policy (1995)
- Healthy policy
- ZIPA Policy (2016)
- Local government policy (2012)
- Zanzibar employment policy (2009)
- Zanzibar Climate change strategy (2014)
- SMIDA policy (2006)
- Zanzibar electricity policy

## Legislations

- Zanzibar public and environmental health (2013)
- Zanzibar bureau standards (2011)
- Environment Management Act 2015
- Regional administration act (2014)
- Local government authority act (2014)
- Registered land act (1989)
- Land transfer act (1994)
- Employment act (2005)
- Water policy (2006)/act for water use
- Public and Environmental Health Act No. 11 of 2021
- Occupational health and safety act no. 8 of 2005 (Part IV section 27 (1-4), 36 and 39(1))
- Plant protection act No. 9 of 1997
- ZIPA Act (2018)
- Land tenure act (1992)
- Environmental assessment regulations (2019)

H. This project is categorized as substantial in terms of environmental and social risks as per the WB-ESF mainly due to capacity issues, most of the environmental impacts associated with project components are deemed to be low to moderate in magnitude. Nearly all the identified environmental impacts and risks can be easily managed through the development of project specific and robust ESMP, and the application of good engineering design and construction practices. Project design considers the consultation and participation of stakeholders. The effectiveness of mitigation measures shall be followed by a quarterly monitoring programme and where necessary, their compliance with the applicable legislation and the World Bank ESF shall be assessed. Additional instruments as per the WB-ESF such as Stakeholder Engagement Plan, Environmental and Social Commitment Plan and Labour Management Plan will strengthen the readiness to respond to any risks. Nonetheless, the Project will comply with WB-EHS General Guidelines.

I. The positive social impacts envisaged by this project are job creation that focuses on the principle of equal opportunities to all genders, reasonable wages rate, local context recruitment and unskilled labour. This will ensure that local people are more benefited out of the project. Other positive impacts are income to local suppliers and service providers; qualified local vendors/ entrepreneurs shall be given priority to supply different goods and services to the project. Hence

increasing skills and impart knowledge to local communities since the contractor shall provide on-the-job training.

- J. The negative social risks and impacts cover occupational safety and health impacts. The project will consider the incremental risks of the public's potential exposure to operational accidents or hazards, including natural disaster risks and extreme weather events. Other impact is community natural health, safety risks and security from the handling, transport, and disposal of construction wastes this involve GBV, SEA and sexual harassment. Mitigation measures will cover information on the GBV reporting mechanisms. Road accidents resulting from the transportation of materials from the source to the construction site is another aspect of risk and impacts. Enforcement of speed limits will be adhered as prescribed by the national responsible authorities and contractors will be required to abide with national law about vehicle conditions and movements and behavior of drivers. Also, road sign will be erected at construction sites to advise the community on the dangers of entering the site and appropriate barricades (fencing, tape etc.) will be put in place, especially around quarries, trenches. Other impacts are Gender-Based Violence –GBV, Gender discrimination, Child labour and increased level of crimes.
- K. Environmental risks and impacts comprehend exploitation of borrow pits, quarries and other natural resources for extraction of construction materials that will take place from the authorized land pits. Restoration of borrow pits/quarries after use constitutes levelling the area, planting of trees and grasses will be undertaken in association with local government (the department responsible for natural resources) and local environmental NGOs. Contamination and /impaired quality of receiving body – land and water. Mitigation measures proposed by the ESMF is an efficient collection and disposal system based on the principles of reduction, re-use and recycling of materials, shall be instituted at project areas as well as introduction of waste disposal bins, and warning notices, posted at strategic points.
- L. Increased solid waste management problem in the project areas is another potential impact whereby all reusable materials shall be re-used, and the non-reusable materials shall be sent to an authorized engineered landfill facility. ~~dump site~~, -The contractor shall have adequate facilities for handling construction waste. Again, topsoil shall be stockpiled and used for reclamation or re-vegetation at the site during landscaping and all hazardous waste shall be handled by registered authorized dealers recognized by ZEMA. Other impacts are increased wastewater management, impairment of air quality due to emissions, impairment of air quality due to dust and contribution to climate

change impacts. Again, increased noise level and vibration level, erosion and land degradation and biodiversity loss of flora and fauna.

M. This ESMF highlights the necessity of preparing site-specific ESF instruments, namely ESIAs/ESMPs and underlines the project implementation arrangements. The MAINL will be responsible for overall project coordination through the selected Project Coordination Unit (PCU) which will be responsible for the implementation of the TFSRP -Zanzibar. The PCU will be responsible for day-to-day coordination of the implementation including facilitation, oversight, and monitoring of technical, fiduciary, procurement and environmental and social assessments issues during project preparation and implementation. The role of Zanzibar Agricultural Research Institute (ZARI) will be to facilitate implementation of research related activities including seed related intervention, soil measurement, diseases, and pest identification. Department of Irrigation: Department's will be responsible for overseeing scheme rehabilitation activities and monitoring contractors as needed as well as developing the scheme rehabilitation strategy and design plans. Department of Agriculture and Food Security will facilitate and support dissemination of technological innovation to farmers through extension services system. The private sector will be suppliers and distributors of farming inputs and supplies. Farmers are principal beneficiaries of the project and expected to participate fully in the project implementation as producers. On these lights the MAINL will establish a project implementation team (PCU) under the Department of Planning, Policy and Planning (DPPR). The PCU will be responsible for project coordination, supervision, procurement, financial management functions, and progress reporting.

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## **LIST OF ACRONYMS AND ABBREVIATIONS**

E&S	Environmental and Social
EMS	Environmental Management System
EMP	Environmental Management Plan
ESMF	Environmental and Social Management Framework
ESIA	Environmental and Social Impact Assessment
ESS	Environmental and Social Standards
GDP	Gross Domestic Product
GIIP	Good International Industry Practice
GRC	Grievance Redress Committee
GRM	Grievance Readiness Mechanism
IPF	Investment Project Financing
MAINL	Ministry of Education and Vocational Training
NGO	Non-Governmental Organization
OHS	Occupational Health and Safety
RAP	Resettlement Action Plan
RGoZ	Revolutionary Government of Zanzibar
RPF	Resettlement Policy Framework
PIT	Project Implementing Team
RPF	Resettlement Policy Framework
SEP	Stakeholder Engagement Plan
WB	World Bank
ZEMA	Zanzibar Environmental Management Authority
TFSRP	Zanzibar Improving Quality of Basic Education
ZEP	Zanzibar Environmental Policy

## 1. INTRODUCTION

### 1.1. Description of the Tanzania Food System Resilience Program (TFSRP)

Agriculture is the main economic activity accounting for more than 70 percent of merchandise export earnings in Zanzibar. The sector is characterized by smallholder farmers – majority being women (with a per capita land holding of 0.25 ha), highly dependent of rainfall and limited use of improved productivity enhancing technologies. Although, food security data is scarce in Zanzibar, the latest IPC assessment indicates that, in 2017, 14 percent of the population was classified as IPC Phase 3 and 69 percent (604,000 people) as IPC Phase 2 or above. Food insecurity and malnutrition result from local food shortages combined with insufficient food access, both driven by structural factors exacerbated by recent crises.

To address the existing challenges, the Revolutionary Government of Zanzibar (RGoZ), through the Ministry of Agriculture, Irrigation, Natural Resources and Livestock (MAINL) under the financial support of the World Bank is embarking in implementing Tanzania Food Security Resilience Program (TFSRP). Further assessments will be carried out during project preparation to determine the type of technical assistance and capacity building needed to enable effective and timely implementation of the proposed project.

The proposed TFSRP builds on the achievements and lessons learned during the implementation of the Zanzibar Expanding Rice Production Project (ERPP) which was phased out in 2021. The proposed TFSRP has three main components to be implemented within five years from 2023/24 to the 2026/2027 financial year. Zanzibar will implement components 2 and 3; these are: Component 2: Support the delivery of Zanzibar's Agriculture Sector Development Program (ZASDP, 2019 - 2028). These components have two subcomponents. Sub-component 2.1: Improving the capacity of Zanzibar Agricultural Research Institute (ZARI) in the breeding and Seed Unit of the Department of Agriculture (DoA) and Sub-Component 2.2: Piloting new models for building resilience and Component 3: Supporting Institutional Transformation.

Increased capacity at Ministry and Agricultural agency levels will scale up the efficiency, effectiveness, and impact of TFSRP but also, more broadly, of public agricultural expenditures, for their beneficiaries nationwide. In this context, the broader impact of the GASFP grant will be to increase coverage and effectiveness of agricultural services for farmers (including to more underdeveloped and underserved regions) for increased productivity and resilience, improved commercialization of value chains (with greater inclusion of women and youth) for increased food supply and stability, and a significant scale up in public investment around the climate change and resilience agendas. The targeted populations for the entire Program will be those related to crop value chains. Building increased resilience within crop and vegetable value chains will help address food insecurity and malnutrition.

The TFSRP aims to support the implementation of national agriculture and food strategies of Zanzibar based on Zanzibar Agriculture Sector Development Program (ZASDP) to address medium to long term issues and increase the resilience of agro-food systems in the country and reduce food insecurity. It also aims at reducing investment fragmentation to increase impact resilience and food security. The project will implement its activities using IPF financing for investments in Zanzibar and for technical assistance in the Mainland and therefore ESF applies through the ESMF. While in Mainland the PforR will be guided by the ESSA instrument. On this note the project will improve service delivery in research, seed, and extension as well as rehabilitation of rural infrastructure to enhance climate resilience.

The TFSRP is therefore designed to ensure its long-term sustainability. The RGoZ has prioritized ensuring food and nutrition security in ZASDP, in full alignment with the country's Five-Year Development Plan 2021/22-2025/26. The TFSRP will be implemented through the existing structures, and the leading agencies will be the MAINL in collaboration with Ministry responsible for Local Governments and private sector. The Program will continuously engage target communities throughout the implementation to ensure ownership and sustainability. Finally, TFSRP targets increased institutional capacity in research, extension services, seed sub-sector, and irrigation scheme operation maintenance and management.

As a prerequisite to the rehabilitation activities, the project will involve various activities like structural designs, site clearance, excavation, and transportation of materials the sources to the project sites. These activities will follow relevant to World Bank environmental and Social Standards. Thus, an Environmental and Social Management Framework (ESMF) is needed during the implementation of the project to provide procedures for environmental and social risks and impacts assessment and management. The ESMF provides guidelines/ screening procedures and the level of assessment of environmental and social impacts for each project component to meet National and World Bank requirements such as Environmental and Social Impact Assessments (ESIAs) and Environmental and Social Management Plans (ESMPs).

## 1.2. Project Development Objective (PDO)

The Project Development Objective is to increase productivity, commercialization, and climate resilience of agri-food value chains by improving the efficiency and inclusiveness of delivery systems. Success toward the achievement of the PDO will be measured by indicators as follows:

### **Improving service delivery in research, seed, and extension**

- Number of ZARI Labs rehabilitated (soil, Tissue culture and entomology etc.)

- Number of new professional staff with post-graduate degree (Master's and Ph.D.) at ZARI
- Number of climate resilience enhancing technologies developed and released in Zanzibar
- Number of staff received short term training on Projects formulation
- Number of staff received short term training on Environmental and Social safeguards,
- Amount of certified seeds produced (in tons)
- Number of extension staff trained by the project on (i) climate-smart practices (% females), (ii) e-agric solutions (% female)
- Number of farmers that completed a farmer field school program<sup>1</sup> supported by the project (% women, % youth
- Number of farmers Trained on Contract Farming, and Farmers Business School (FBS), and Good Post Harvest Handling Practices (GPHHP)
- Number of farmers' Association Strengthened

### **Rehabilitation of rural infrastructure to enhance climate resilience in Zanzibar**

- Area provided with new/improved irrigation or drainage services (hectare)
- Number of farmer's Service Centres rehabilitated
- Number of boreholes rehabilitated
- Number of women vegetable producing/marketing groups established or strengthened

#### 1.3. Objective of the ESMF

The main objective of this ESMF is to establish Environmental and Social Screening procedures for identifying, assessing, and mitigating potential environmental and social impacts of the sub projects. The screening (see annex i) process will determine whether environmental and social impact assessment for the project component is required or not. The ESMF therefore will guide the level of assessments of the environmental and social impacts of the project component according to Zanzibar Environmental Management Act (2015). The specific objectives of the ESMF are:

- To create procedures for environmental and social screening, planning, review, approval and implementation of project components;
- To stipulate roles and responsibilities and reporting procedures for managing and monitoring environmental and social concerns for project components;
- To identify training, capacity building and technical assistance needed for implementation of the ESMF;
- To describe institutional arrangements for managing environmental and social impacts;

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<sup>1</sup> Soil fertility management and agroecological practices



- To assess which world Bank environmental and Social Standards apply to activities of the project components; and
- To ensure all adverse environmental and social impacts from the project activities are minimized.

#### 1.4. Methodology and approach

Preparation of this ESMF involved fieldwork/scoping; baseline studies; identification of receptors; impact assessment stakeholder consultation; development of mitigation measures and monitoring requirements; and analysis of MAINL's capacity to implement the ESMF.

##### Field studies

Fieldwork was done through rapid physical survey, investigation, and social-economic survey. This facilitated the acquisition of information and data on physical, biological, cultural, and social-economic aspects of the project areas.

##### Baseline Conditions

Following the fieldwork phase, more detailed assessments were undertaken to establish the baseline conditions. These involved desk-based studies of publicly available information. The full details of the assessments and literature surveys are summarized in this Report.

##### Stakeholder Consultation

The stakeholders' engagement took place in two phases. First phase dealt with institutional engagement at national and district levels. The other phase engaged farmer's associations and non-state actors at local and district levels. The stakeholders' consultation introduced the project to relevant stakeholders, objectives, component, key activities, and implementation plans) understanding the challenges and problems they are facing and collected inputs from their previous experiences and on-going efforts. It was also about gaining consensus on key issues that are expected to increase the ownership of the project. At the end, the stakeholders' consultation provided perceptions, suggestions, comments and inputs through thematic group discussion, plenary and Q&A sessions. A total of 280 representative of different stakeholder participated in this particular workshop The stakeholders' consultation workshop held on February 13<sup>th</sup> -14<sup>th</sup> and 16<sup>th</sup> -17<sup>th</sup>, 2023 in Unguja and Pemba Islands respectively. There after the comments were used to enrich the ESMF document.

#### 1.5. Environmental and Social Impact Management

The actions undertaken to determine the significance of potential project impacts involved the following four key steps:

**Step 1: Anticipation and Avoidance:** Avoidance is the most preferred form of mitigation. As a first step, the environmental and social assessment identifies and

evaluates technically and financially feasible alternatives (including location, technology, and or alignment options). When determining the technical and financial feasibility of alternatives, both cost and benefits were considered.

**Step 2: Minimization:** Where avoidance is not possible, the environmental and social assessment identifies specific actions to minimize or reduce adverse environmental and social risks and impacts that are likely to arise throughout the project life cycle.

**Step 3: Mitigation:** To manage the residual risks and adverse impacts (after the avoidance and minimization steps), the environmental and social assessment identified mitigation measures by establishing specific actions to ensure the project meets the requirements of ESS 1-4, 6 &10 and comply with relevant national laws and regulations.

**Step 4: Offset or Compensation:** Where avoidance, minimization, or mitigation is not adequate to manage significant adverse risks and impacts, it may be appropriate to design and implement measures that compensate/ offset residual risks and impacts. These measures do not necessarily eliminate the identified adverse risks and impacts, but they seek to offset them with comparable positive ones.

Potential impacts arising from planned activities, cumulative impacts with other developments and unplanned events (e.g., accidents, natural disasters, etc.) were also assessed. Stakeholder engagement is undertaken throughout the implementation of the proposed project to ensure that Affected and Interested Parties are aware and informed of the proposed project and have an opportunity to provide input regarding potential proposed project impacts and mitigation measures.

#### 1.6. Development of Mitigation Measures

As part of the ESMF process, when impacts are identified (which cannot be managed via design controls/incorporated mitigation), mitigation measures are developed in line with the Mitigation Hierarchy. First, efforts are made to avoid or prevent, then minimize or reduce adverse impacts. For remaining significant and moderate residual impacts, mitigation measures are developed.

#### 1.7. Assessment of Compliance with World Bank Environmental and Social Standards

The analysis was conducted using the Strengths-Weaknesses-Opportunities-and-Threats (SWOT) approach. The “weaknesses,” or gaps were considered on two levels: (i) the system as written in laws, regulations, procedures and applied in practice; and (ii) the capacity of MAINL to effectively implement the ESMF. In addition, the analysis examines the efficacy and efficiency of institutional capacity to implement the system as demonstrated by performance thus far. The analysis examined the questions of whether the current system: (i) mitigates adverse impacts; (ii) provides transparency and accountability; and (iii) performs effectively in identifying and addressing environmental

and social risks. The overarching objectives are to ensure that the risks and impacts of capacity to deliver the intended project development outcomes sustainably.

## **2. PROJECT DESCRIPTION**

### **2.1. Project Rationale**

The Tanzania Food Systems Resilience Program (TFSRP) will rehabilitate seed farm infrastructure to increase efficiency in the production and multiplication of climate-resilient seeds. The project will repair storehouses, and drying grounds in the field sites for seed production, multiplication, and distribution. The project will also rehabilitate four farmer's service centers; rehabilitate irrigation canals (26,845m); four diversion structure; drainage canals (5,000m); drilling four boreholes and rehabilitation of four boreholes; purchase of a complete set of pumps and pilot clean energy technologies (air and wind for pumping to cut electricity bills); rehabilitate farm roads (10km); and construction of stores, three drying areas in farmers' service centres. The risks and impacts of the proposed activities will be determined at based on exact location and technical design. In this situation, the Environmental and Social Management Framework (ESMF) is the right instrument to guide the development of the Environmental and Social Impact Assessments (ESIAs) and/or ESMPs for the specific investments based on locations and designs.

The ESMF determines the level of assessment required for to project components and provides procedures for environmental and social impact assessment. It sets out the principles, rules, guidelines, and procedures to assess the environmental and social risks and impacts. It contains measures and plans to avoid, reduce, mitigate, and/or offset adverse risks and impacts, provisions for estimating and budgeting the costs of such measures, and the capacity of the agency to manage environmental and social risks and impacts. It includes adequate information on the area in which project sub-component is expected to be sited, including environmental and social vulnerabilities of the area, and on the potential impacts that may occur and mitigation measures that might be expected to be used.

### **2.2. Project Components and Key Result Areas**

The Tanzania Food Systems Resilience (TFSRP) operation is focused on building increased resilience and addressing the challenges of food insecurity. The Program's underlying approach is to focus on strengthening the Ministry of Agriculture's budget management to improve the efficiency, effectiveness, and impact of government services. Predictable financing will support improved productivity in crop value chains by enabling a more coordinated and focused approach to generating and disseminating knowledge and technology that is relevant to food security and improved resilience. The

Program will build resilience and address food security by strengthening the systems for managing key infrastructure. It will also incentivize stronger community engagement in the operations and management of irrigation systems. This expected to improve the efficiency of water management and increase overall productivity in key crops. In Zanzibar, the Program's focus is specifically on increasing the capacity to demonstrate the delivery of innovations around the nexus of climate change, resilience, and social inclusion, with the overarching target of food security.

**Table 1: Summary of Performance-Based Conditions by components**

<b>Component</b>	<b>Sub-component</b>	<b>Performance Based Condition</b>	<b>Details (Year)</b>
<u>Component 2: Support the delivery of Zanzibar's Agriculture Sector Development Program (ZASDP, 2019 - 2028).</u>	Sub-component 2.1: Improving the capacity of Zanzibar Agricultural Research Institute (ZARI) in the breeding and Seed Unit of the Department of Agriculture (DoA).	Financing for the development and dissemination of climate-resilient technologies adapted to Zanzibar's agricultural system	TBD
	Sub-Component 2.2 Piloting new models for building resilience.	Extension outreach strengthened, including through ICT solutions for promoting climate-smart practices and labor-saving technologies.	
Component 3: Supporting Institutional Transformation.	Subcomponent 3.1: Putting in place the institutional systems to strengthen food security and build increased resilience across Tanzania's food system is a significant challenge.	Human capacity strengthened in the Ministries of Agriculture of Mainland and Zanzibar.	

The detail explanation of the project components is provided below

**Component 2: Support the delivery of Zanzibar's Agriculture Sector Development Program (ZASDP, 2019 - 2028).** Zanzibar needs to urgently develop institutional models to address the island's growing challenge of food insecurity and the need to

increase resilience. In this context, TFSRP will finance investments designed to promote innovation and institutional models that operate in the nexus of smart climate agriculture, gender/youth, and ICT. In this context, the Program will support the following three sub-components.

***Sub-component 2.1: Improving the capacity of Zanzibar Agricultural Research Institute (ZARI) in the breeding and Seed Unit of the Department of Agriculture (DoA).*** The Program will finance agricultural research institutions and the seed unit to accelerate production and access to climate smart and nutrition-sensitive innovations to improve resilience. Specifically, financing will focus on those areas which strengthen capacity by training key staff, providing equipment required to monitor soil quality, measure pest and disease control and seed quality, and refurbishment key infrastructure to support seed multiplication, seed processing, and seed variety maintenance.

***The indicator for results in this area is:*** Financing for the development and dissemination of climate-resilient technologies adapted to Zanzibar's agricultural system

***Sub-Component 2.2: Seed production, multiplication, and extension delivery.*** The project will finance breeding and field trials, specifically, the project will engage in research activities, infrastructure rehabilitation, technology dissemination, and workshops. The selection criteria for the breeding and field trials will include a focus on climate-smart technologies and practices and use of digital platforms in service delivery and data collection and support management to demonstrate plots on climate-smart and labor-saving technologies.

***The indicator for results in this area is:*** Extension outreach strengthened, breeding and field trials, ICT solutions for promoting climate-smart practices and labor-saving technologies.

**Component 3: Supporting Institutional Transformation.** Putting in place the institutional systems to strengthen food security and build increased resilience across Tanzania's food system is a significant challenge. The challenge ranges from improving budget management to accelerating the use of ICT technologies via supporting new performance-based contracts in irrigation. To address these challenges and to support the effective implementation of TFSRP, the Program will finance technical units in the Mainland and Zanzibar Ministries of Agriculture. The activities to be supported by these units will include reviewing policies, developing guidelines, designing partnerships with the private sector, building technical capacity, and supporting the verification of achievements of results.

***The indicator for results in this area is:*** Human capacity strengthened in the Ministries of Agriculture of Mainland and Zanzibar.

### 2.3. Project Key Results Areas

TFSPR will support three mutually reinforcing result areas, these are:

***Result Area 1:*** It will improve service delivery in research, seeds, and extension leads to improve productivity, increase resilience and food security.

***Result area 2:*** It will rehabilitate seed farm infrastructure to increase efficiency in the production and multiplication of climate-resilient seeds. Again, the project will repair storehouses, and drying grounds in the field sites for seed production, multiplication, and distribution. Hence the project will rehabilitate four farmer's service centers; Rehabilitate irrigation canals (26,845m), four diversion structure, drainage canals (5,000m), drilling four boreholes and rehabilitation of four boreholes, purchase of a complete set of pumps and pilot clean energy technologies (air and wind for pumping to cut electricity bills). Rehabilitation of farm roads (10km), Construction of stores and three drying area in farmers service centres.

***Result area 3:*** It will strengthen the institutions that enable agri-food public services to be delivered to support the needed transformation of the agri-food sector, improved access to key services will enable farmers (particularly women) to build more resilient and productive farming systems. These result areas cover both the Mainland and Zanzibar

### **3. POLICY, LEGAL AND REGULATORY FRAMEWORKS**

#### **3.1. RELEVANT POLICY FRAMEWORK**

##### **3.1.1. Zanzibar Vision 2020**

Zanzibar Vision 2020 encourages environmental protection, promote resource use efficiently and adoption of the safe and environmentally friendly technologies. The Vision's policy on environment is the conservation, protection, rational and efficient utilization of environment and natural resources. It is envisioned that sustainable economic development should be accompanied by proper environmental management so that the Zanzibar's natural resources and natural heritage are passed on to future generations. The objectives of the vision are to promote life quality, promote integrated approach in sustainable utilization of the resources, increase resource efficiency and environmental management, ensuring control of industrial pollution, and maintain environmental health and safety. The Zanzibar Vision 2020 encourages environmental protection; promote resource use efficiency, and adoption of safe and environment friendly technologies.

##### *Implication to the project*

The project's objective should be in line with the overall sustainability framework and mutual benefits in terms of economic, social and environmental services. The proposed project is compatible with the overall national development plan.

##### **3.1.2. Zanzibar Development Plan (ZADEP) 2021-2026**

The goals of ZADEP are related to environmental protection and sustainable development. There should be a sustainable land use program in order to protect, conserve and manage ecological resources including flora and fauna, and in maintaining soil and water conservation. The coastal ecosystems need protection. Furthermore, mangroves provide a valuable ecosystem function that extends to coral reefs and overall fisheries environment. If coastal erosion and coral reef damages remain unchecked, it will eventually affect environment, tourism, fisheries and Zanzibar's biodiversity. Communities have been empowered to set up their natural resources management committees and take part in the decisions making process in environmental and land use planning.

##### *Implication to the project*

ZADEP Implementation Plan recognizes the importance of protection of land resource base, coral reefs, mangroves, vulnerable species, conservation of land and soil, sustainable tourism, community participation and fisheries. The hotel operations should consider these parameters in its safeguard approaches at the early stage of planning of this project.

### 3.1.3. Zanzibar Environmental Policy (2013)

The Zanzibar Environment Policy has been established to address the current issues affecting the country's environment. The Revolutionary Government of Zanzibar recognizes the need for an urgent action to address the current environmental challenges affecting Zanzibar which include environmental pollution aggravated by inadequate management of solid waste and waste water; increasing depletion of fresh water resources as a result of increased demand, deforestation and destruction of water catchments and wetlands; increased demands for land resources and associated land degradation and pollution; inadequate energy supply, unreliable electricity supply and lack of alternative energy sources; loss of biodiversity and destruction of habitat. The Policy emphasis on conservation and development of environmental services with the view to utilizing them in a manner that will improve the welfare of the present and future generation. Hence, it lays emphasis on the need to ensure that biological and ecological principles that are important for the development of lives and resources are complied with.

The new Environment Policy focuses on:

- Ensuring the maintenance of basic ecological processes upon which all productivity and regeneration, on land and in the sea, depend.
- Promoting the sustainable and rational use of renewable and non-renewable natural resources.
- Preserving the terrestrial and marine biological diversity, cultural richness and natural beauty of Zanzibar's lands.
- Ensuring that the quality of life of the people of Zanzibar, present and future, is not harmed by destruction, degradation or pollution of their environment and natural resources.
- Strengthening both institution mechanisms for protecting the environment and the capabilities of the institution involved in the environmental management.

#### *Implication to the project*

It is important for the contractor and the developer to confine their work on the core impact area to minimize the negative impacts on the environment during all phases of the project developments. Also, the proponent will have to encourage biological and ecological principles that are important for the development of lives and resources complied with.



#### 3.1.4. Zanzibar Investment Policy (2005)

Zanzibar Investment Policy (2005) is directed towards major structural and institutional changes aimed at promoting private sector investment. Furthermore, the policy considers the need for improving service sector and provides linkage to tourism industry. The Policy realizes the potential opportunity for growth of the hotel tourism sector along with private entrepreneurship, rapid growth of tourism industry and development of service sector. The policy also provides opportunity for the rural and urban dwellers to benefit from such an investment sector. This investment policy is one of the visions that aim at seeing a society of educated and healthy individuals with dynamic culture and sustainable and economic development with regard to the financial economic infrastructure, communication and legal system.

##### *Implication to the project*

This project is about operating hotel business, by promoting services to the tourists. It is therefore very important to ensure that this type of investment is in line with the existing investment policy of Zanzibar. Current priority sector investment has been identified to include tourism sector which is in 2021 reported to contribute about 5-8% of GDP in Zanzibar.

#### 3.1.5. Zanzibar Land Policy (2017)

Critical environmental issues with respect to land aspects have come as a result of rapid increase of population growth, uncontrolled encroachment of urban settlements into fertile lands for agriculture, horizontal urban expansion, without considering integration of environmental regulations and guidelines. The consequences of land mismanagement could result into land use conflicts, unsustainable land-use practices; and degradation of natural resources. The land policy framework aims at:

- Integration of environmental social and economic development policy frameworks which provide transparent and easy access to land for all;
- Facilitating registration of rights on land to secure investments in land and property development;
- Provision of means to prevent land grabbing and the attached social and economic consequences;
- Protecting environment, cultural heritage and use of natural resources;
- Guaranteeing good, transparent, affordable and gender responsive governance of land for the benefit of all including the most vulnerable groups;
- Addressing the challenges of climate change and related consequences of natural disasters, food shortage, etc.

### 3.1.6. Zanzibar Forest Policy (1999)

The goal of the Zanzibar Forest Policy to protect, conserve and develop resources for the social, economic, and environmental benefits of present and future generations of the people of Zanzibar. The Specific Goals of Zanzibar's Forest Policy is as follow:

- To strengthen the role of forestry in alleviating poverty and increasing equity in resource management and utilization.
- To strengthen the role of forest resource in promoting economic development, in meeting demand for forest product, in creating income and increasing national revenues and efficiency.
- To protect and conserve forest resources including wildlife and flora and enhance the role of forest resources in maintaining soil and water conservation and other environmental benefits.

### 3.1.7. Zanzibar Water Policy (2004)

Water Policy emphasis on protecting water catchment areas all over Zanzibar Islands. The policy advocates for the adequate supply of quality and safe water and its rational use. The policy advocates the development planning take proper account on the availability of water resources and encourages rainwater harvesting, recycling and artificial recharge practices.

#### *Implication to the project*

Sustainable use of fresh water in the construction and operational activities for the proposed project is a pre-requisite condition. The proposed project site is considered as a water scarce zone and bore-hole around the area are known to saline. This will require the project proponent to look for alternative means of fresh water supply during the construction and operational phases.

### 3.1.8. Zanzibar Disaster Management Policy (2011)

The focus of this policy is on disaster risk reduction and livelihoods support. The aim is to develop as much as necessary the national capacity to coordinate and collaborate on comprehensive disaster management programs among the principal players at all inter sectoral levels. Issues discussed in the policy include erratic rainfall patterns, food shortages, marine accidents, fire outbreaks, terrestrial and marine degradation, depletion of mangrove forests, and waste management.

### 3.1.9. Zanzibar Energy Policy (2009)

The vision of the Zanzibar Energy Policy is to contribute to the sustainable development of a prosperous society with independent reliable and affordable energy for all. The

mission of the Zanzibar Energy Policy is to guide the stakeholders in the creation of an enabling environment in Zanzibar that will enhance the transformation of energy markets, facilitate the introduction of new and renewable sources of energy, and contribute to economic development and social equity while protecting the environment. The main objective of the Energy Policy is to meet the energy needs of the Zanzibar population for social and economic development in an environmentally sustainable manner.

#### 3.1.10. Zanzibar Tourism Policy (2004)

The Zanzibar Tourism Policy on environment is the conservation and protection of the environment, rational and efficient utilization of natural resources. It is envisioned that sustainable economic development should be accompanied by proper environmental management so that Zanzibar's natural resources and natural heritage are passed on to future generations. A sustainable use of Zanzibar resources should be completed first proceedings to establish viable criteria for the development of agriculture and fishing activities, open quarrying and garbage disposal, territorial infrastructure, and new alternative forms of tourism comparable with fragility of the environment.

##### *Implication to the project*

Probability of coastal and marine degradation could affect the environmental quality of the surrounding coastal layouts used for tourism. Wastes coming for the proposed project (solid, liquid and other forms of wastes) could damage the pristine marine environment around the hotel zone.

#### 3.1.11. Zanzibar HIV/AIDS Policy (2004)

The goals for Zanzibar HIV/AIDS Policy are to prevent new HIV infections in the population. Treat, care for, and support those who are infected, and mitigate the impact of HIV and AIDS on the social and economic status of individuals, families, communities of all those living in Zanzibar.

##### *Implication to the project*

HIV/AIDS is the one of occupational health risk categories that needs serious interaction in minimizing the rates of infections within a project zone. Workers will be required to submit their medical checkup report before employed and periodically training will be provided in order to increase awareness.

### 3.1.12. Occupational Safety and Health Policy (2017)

The main objective of the policy is to promote the right of workers to a safe and healthy working environment, in order to contribute to the improvement of workers well-being and national productivity. The policy provides general direction for the occupational health and safety stakeholders to adopt a management system that is effective in reducing the incidence of work-related injury and disease. Ensuring safety of workers during the operations is fundamentally critical for the OSHA authorities.

### 3.1.13. Zanzibar Climate Change Strategy (2014)

A set of guiding principles have been adopted in developing the strategy, which align the Strategy with current and emerging sustainable development goals, which use participatory approaches and opportunities for engagement with all groups of society, which focus on major areas that promote sustainable development for Zanzibar, but also address key cross-cutting issues of Gender and highly vulnerable groups, and which seeks to integrate the Programme across ministries and wider stakeholders including local communities.

#### *Implication to project:*

Among other reasons, coastal erosion is the result of fixed structures such as hotels, restaurants/jetties and bar built on beach and dunes. These structures affect the hydrodynamic pattern of the sea hence the existing buildings of the resort will be under threat from erosion.

### 3.1.14. National Spatial Development Strategy (2015)

In support of MKUZA II and its aims to improve and sustain future urban growth and development, a National Spatial Development Strategy (NSDS) has been devised. The NSDS recognizes that urban, rural and coastal development is interdependent and that a more effective land use planning and management service is required to support the Government's drive for sustainable future growth that benefits all Zanzibaris. It identifies key growth settlements and strategic infrastructure networks where major public and private sector investments and improvements will be encouraged. The aim is to create a high-quality living environment by enabling sustainable urban growth, supporting rural and coastal employment creating enterprises and promoting and protecting the cultural and natural environments.

#### *Implication to project*

The Strategy emphasizes the need to conduct Environment Impact Assessment for any development project to be established in Environmentally Sensitive Areas (ESAs)

including Reserved Area (REA) and Protected Areas. Proposals for development on sites likely to affect ESAs will be required to submit an EIA (see annex II) to obtain clearance from the Zanzibar Environmental Management Authority (ZEMA).

#### 3.1.15. Zanzibar Local Government Policy (2012)

The objective of this policy is to ensure that an establishment local government that has a capacity to provide better and efficient basic services to the people and safeguard their livelihoods.

##### *Implication to the project*

Ensuring that land and ownership rights are upheld and that communities are compensated in accordance with the laws of Zanzibar and that the right to information is disseminated to the local communities and all those who will be directly and indirectly affected by the proposed project.

#### 3.1.16. Zanzibar Employment Policy (2007)

The Policy has been developed to address some of the major constraints in employment and other emerging labor dynamics in Zanzibar. This is in line with the ongoing macro-economic reforms and with greater involvement of the private sector. The principal objective of the policy is to increase national productivity while generating gender sensitive and decent jobs for the citizens. The other specific objectives including gender-based employment, equal access to employment opportunities, skills, knowledge, resources and endowments for men and women; promote sustainable employment strategies in line with the national and international labour standards, safeguard occupational rights of the people, addressing HIV/AIDS.

##### *Implication to the project:*

It is obvious that this project will some reduce the prevailing challenges of unemployment by creating new employment opportunities especially unskilled labor for the surrounding communities.

#### 3.1.17. National Health Policy (2011)

The Zanzibar National Health Policy is supposed to provide general directions to health sector development in Zanzibar. The main objective of the health policy is to improve health services and social welfare of the people of Zanzibar. Clean environment, chemical and e-waste, inadequate management of hospital (both solid and wastewater), and existence of households without proper toilet facilities, pollution of water sources, air and sounding environment and increasing population are highlighted in the policy as major constraints to better health communities in Zanzibar.

### **3.2. Analysis of Legislation**

The following are the principal Acts of Zanzibar related to environmental and biodiversity conservation that the project proponent should be familiar with in order to comply with their regulations and standards.

#### **3.2.1. Zanzibar Environmental Management Act (2015)**

The Environmental Management Act (EMA) makes it mandatory for a person to comply with the environmental assessment requirement of the project which includes environmental screening, preparation of ESIA Report and its review before the decision of environmental clearance is made. The Act states that, a person shall not carry out or cause to be carried out; any activity which is likely to have significant impact on the environment and society without Environmental Impact Assessment Certificate issued by the Authority. The Act also states that a person who undertakes any activity that does not require an Environment Impact Assessment shall prepare an Environmental Report. Therefore, this Report was prepared to so as to meet the requirement of this Act.

#### **3.2.2. The Zanzibar Electricity Corporation Act (2006)**

The main functions of ZECO according to the Zanzibar Electricity Corporation Act No.3 of 2006 are:

- The establishment, acquisition maintenance and operation of works and undertakings for the generation, transmission, transformation, distribution and supply of electricity to consumers in Zanzibar.
- The investigation of new or additional facilities for the generation and supply of electricity within Zanzibar.
- To construct or erect and to maintain or alter machinery and plant, electrical distribution lines and any other works.
- To exchange, let or sell any of the property or plant acquired or constructed by the Corporation.
- To enter into contracts with any public, local authority or any person for the purchase and supply of electricity or for any other purpose.
- To enter into agreements for purchase of electricity in bulk from independent power producers within or outside Zanzibar for resale to consumers; and
- To carry on all such other activities as it may appear to the Corporation to be requisite, advantageous or in connection with the exercise of its functions.

#### **3.2.3. The Fire Bridged and Rescues Act (1999)**

The Act empowers the fire-fighting authorities and institutions to enter and inspect and premises, facilities, or any other place for the purpose of ensuring fire safety measures in those premises and facilities including all standard measures against fire hazards,

availability of fire hydrants, and all other safety measures aimed at saving life and property in the event of a fire calamity.

#### **3.2.4. Local Government Authority Act (2014)**

In the context of environment, the Act has emphasized on the local powers prevent and control public nuisance and ensure sustainable management of land and natural resources. Section 26 (1) of the Act specifies general functions of the local council which include maintenance of environmental sanitation, promotion of tourism and other investment opportunities available in their areas, keeping record of land and marine transport vehicles and vessels within their jurisdictional areas, control environmental pollution and prevent private nuisance, supervise and ensure measures to combat epidemic diseases; control extraction of stone, sand, wood, and other forms of natural resources, undertake afforestation and urban forestry initiatives, implement the land use plan, and deal with cross cutting issues of climate change, disaster management, and population issues.

#### **3.2.5. Zanzibar Forest Resources and Conservation Act (1996)**

The purpose of the Act is to promote protection, conservation, and development of forest and wildlife resources for the social, economic, and environmental benefit for the present and future generations of the people of Zanzibar. The Act addresses National Forest Resources Planning, Forest Reserves and Nature Forest Reserves, Community Forest Management Areas, Special Forest Management Areas, Licenses, and Conservation of Wild Animals and Plants.

#### **3.2.6. Zanzibar Water Act (2006)**

The act provides jurisdiction and powers to the Zanzibar Water Authority in all matters pertaining water management in Zanzibar. Thus the core functions of the Zanzibar Water Authority are:

- To regulate, control, manage, and protect all catchment areas.
- To secure continued supply of water in the country
- To develop and maintain waterworks plan and execute new projects for supply of water.
- To promote the conservation and proper use of water resources.
- To manage production and distribution of water on sustainable basis.
- To specify standards of water quality, effluent, and water equipment.

#### **3.2.7. Zanzibar Land Tenure Act and Regulations (2006)**

Under the Land Tenure Act, all land is public and is vested in the power of the President of Zanzibar. Regulations to Control Land Use for Investment, 2006, of the Land Tenure Act, 1992, Zanzibar, state that every person shall have the duty to ensure that the uses made thereon do not affect the land of a particular area; and that any person who

applies for land investment must state in the application the manner in which he/she is intending on using that land for environmental preservation of such land including the storage of various chemicals and pesticides. Regulation 11, 12, and 13, of the Regulations to Control Land Use for Investment, 2006, of the Land Tenure Act, 1992, Zanzibar, state that any person applying for land for industries purposes, must attach information and states in the application:

- Methods and procedures of land conservation to avoid destruction or misuse of land.
- Ensure that raw materials and tools used do not degrade the land
- Industries should install water treatment plants.

Moreover, Regulation 13 of the Regulations to Control Land Use for Investment, 2006, of the Land Tenure Act, 1992, Zanzibar, requires a project owner to install a waste incinerator for disposal of certain wastes as a method approved by law without affecting the natural and land. Therefore, the project proponent needs to comply with all these land related regulations.



## **4. INTERNATIONAL AND REGIONAL CONVENTIONS RATIFIED BY TANZANIA**

### **4.1. Convention on Biological Diversity**

The objectives of the convention are to promote: the conservation of biological diversity; sustainable use of its components; and fair and equitable sharing of benefits arising out of the utilization of genetic resources. The convention was adopted on 22<sup>nd</sup> May 1992. The United Republic of Tanzania ratified the Convention on 8 March 1996. The proposed project shall observe this by sitting areas in non-virgin areas to avoid compromising the biological diversity.

### **4.2. Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region and Related Protocols**

The objective of the convention is to promote sound environmental management of maritime and coastal areas of the eastern African region, as part of the Regional Seas Programme initiated by UNEP in 1974. The Convention was adopted on 25 June 1985. The United Republic of Tanzania ratified the Convention on 1 March 1996. Zanzibar is an Island whose activities may affect the marine and coastal environment if not well controlled. The project shall have proper waste management and ensure irrigation wastewaters are safe before discharged into the river, streams, and ponds.

### **4.3. The Convention on Wetlands**

The Convention on Wetlands (Ramsar, Iran, 1971) called the "Ramsar Convention" is an intergovernmental treaty that embodies the commitments of its member countries to maintain the ecological character of their Wetlands of International Importance and to plan for the "wise use" or sustainable use of all of the wetlands in their territories. The Convention uses a broad definition of the types of wetlands covered in its mission, including swamps and marshes, lakes and rivers, wet grasslands and peatlands, oases, estuaries, deltas and tidal flats, near-shore marine areas, mangroves and coral reefs, human-made sites such as fishponds, rice paddies, reservoirs, and salt pans. The convention was adopted in 1971 and entered into force in 1975. The United Republic of Tanzania acceded to the convention in February 1999. The Convention came into force for the United Republic of Tanzania on 13 August 2000. The project shall be implemented in areas which have no direct relationship with wetland.

### **4.4. United Nations Framework Convention on Climate Change - UNFCCC**

The objective of the convention is to achieve stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. The Convention was adopted on 9<sup>th</sup>

May 1992. The United Republic of Tanzania signed the convention on 12 June 1992 and ratified it on 17 April 1996. The convention entered into force on 16 July 1996. The proposed project shall not involve used equipment and unnecessary idling to reduce emissions during rehabilitation activities as well as discourage tree cutting.

#### **4.5. United Nations Convention to Combat Desertification-UNCCD**

The objective of the convention to combat desertification and mitigate the effect of drought in countries experiencing serious droughts and/or desertification, through effective action at all levels, supported by international cooperation and partnership arrangements, to contribute to the achievement of sustainable development in the affected areas. The convention was adopted on 17<sup>th</sup> June 1994. The United Republic of Tanzania signed and ratified the convention in 1994 and 1997 respectively. The project shall not undertake any activity that could result into deforestation in order to conserve the environment.

#### **4.6. The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal**

The convention was adopted on 22<sup>nd</sup> March 1989. The United Republic of Tanzania ratified the Convention on 7<sup>th</sup> April 1993. The objectives of this convention are:

- To reduce transboundary movement of hazardous wastes and other wastes to a minimum consistent with their environmentally sound management.
- To treat and dispose of hazardous wastes and other wastes as close as possible to their source of generation in an environmentally sound manner.
- To minimize the generation of hazardous wastes and other wastes in terms of both quantity of potential hazards.
- Zanzibar has not special landfill for hazardous wastes. Wastes are incinerated.

#### **4.7. Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movements of Hazardous Wastes within Africa - Bamako Convention**

The objectives of the convention are:

- To protect by strict control, the human health of the African population and the environment against adverse effects which may result from hazardous wastes by reducing their generation to a minimum in terms of quantity and/or hazard potential.
- To adopt precautionary measures, ensure proper disposal of hazardous wastes; and
- To prevent "dumping" of hazardous wastes in Africa.

The convention was adopted on 30<sup>th</sup> January 1991. The United Republic of Tanzania ratified the Convention on 7<sup>th</sup> April 1993. The project shall not use hazardous materials during the construction period.

#### 4.8. ILO Conventions

The United Republic of Tanzania is a party to the Occupational Safety and Health (Dock Work) Convention, 1979 (No. 152). This convention requires parties to adopt national laws or regulations, which prescribe measures complying with its provisions with a view to:

- Providing and maintaining workplaces, equipment and methods of work that are safe and without risk of injury to health.
- Providing and maintaining safe means of access to any workplace.
- Providing the information, training and supervision necessary to ensure the protection of workers against risks of accident or injury to health arising out of or in the course of their employment.
- Providing workers with any personal protective equipment and protective clothing and any lifesaving appliances reasonably required where adequate protection against risks of accident or injury to health cannot be provided by other means.
- Providing and maintaining suitable and adequate first aid and rescue facilities.
- Developing and establishing proper procedures to deal with any emergencies, which may arise.

The measures to be taken in pursuance of this convention also cover:

- General requirements relating to the construction, equipping and maintenance of the dock structures and other places at which dock work is carried out.
- Fire and explosion prevention and protection.
- Safe means of access to ships, hold, staging, equipment and lifting appliances.
- Transport of workers.
- Opening and closing of hatches, protection of hatchways and work in holds.
- Construction, maintenance, and use of lifting and other cargo handling appliances.
- Construction, maintenance, and use of staging.
- Rigging and use of ship's derricks.
- Testing, examination, inspection and certification, as appropriate, of lifting appliances, of loose gear, including chains and ropes and of slings and other lifting devices which form an integral part of the load.
- Handling of different types of cargo.
- Stacking and storage of goods
- Dangerous substances and other hazards in the working environment.
- Personal protective equipment and protective clothing.
- Sanitary and washing facilities and welfare amenities.
- Medical supervision.

- First-aid and rescue facilities.
- Safety and health organization.
- Training of workers.
- Notification and investigation of occupational accidents and diseases.

4.9. Occupational Safety and Health (Dock Work) Convention 1979 (No. 152) on 30th May 1983. The convention is relevant as the proposed project shall involve workers. The local regulations shall be applied to safeguard workers.

## **5. INSTITUTIONAL FRAMEWORK**

### **5.1. Zanzibar Department of Environment**

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

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

### **5.2. Zanzibar Environmental Management Authority (ZEMA)**

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

- Undertake and coordinate enforcement of the provisions of the Act.
- Coordinate the Environmental Impact Assessment process for any activity or investment.
- Coordinate environmental audits concerning any activity or investment.
- Carry out environmental monitoring supporting the proper management and conservation of the environment.
- Issue environmental certificates, permits or approvals.
- Receive and work on complaints related to the environment.
- Promote environmental education, awareness and dissemination to the society and other stakeholders according to the functions assigned to the Authority.

- Enforce regulations and ensure compliance with standards, guidelines and orders related to the environment.
- Monitor biodiversity, terrestrial and marine ecosystems, coastal zone, waste disposal and natural resources.
- Any other risks and impacts related to the environment.
- Prepare and submit to the Minister, a comprehensive annual implementation report.
- Operate the digital Zanzibar Environmental Information Management System.
- Raise funds and receive donations, grants, contributions, and loans from verified sources; and
- Carry out any other functions that are necessary and related to the purposes of the Act.

### **5.3. The Ministry of Labor and Employment**

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

### **5.4. Occupational Safety and Health (OSH) Department**

It was set up in 2001 under the Ministry of Labor and Employment to administer occupational health and safety at workplaces in the country.

### **5.5. Ministry of Agriculture, Irrigation, Natural Resources and Livestock**

The MAINL shall be responsible for all matters related to E&S issues of the project. Likewise, MAINL as client shall submit the ESIA report (if applicable) to ZEMA for Environmental clearance through a registered Environmental expert. The Ministry of Labor and employment through occupational Safety and Health department shall be responsible safeguarding workers (skilled and non-skilled) personnel.

### **5.6. World Bank Environmental and Social Standards**

According to the Environmental and Social Framework (ESF), there are ten (10) Environmental and Social Standards (ESS) which address environmental and social issues within the Bank's supported development projects. Thus, all projects under World Bank financing must comply with Environmental and Social Standards (ESS) before being cleared for implementation. Table 2 shows standards which will apply to the Zanzibar TFSRP.

Table 2: Applicable Environmental and Social Standards

Environmental and Social Standard (ESS)	Objectives	Requirements
<p>ESS1: Assessment and Management of Environmental and Social Risks and Impacts</p>	<p>To identify, evaluate and manage the environmental and social risks and impacts of the project in a manner consistent with the ESSs.</p> <p>To adopt a mitigation hierarchy approach to: (a) Anticipate and avoid risks and impacts; (b) Where avoidance is not possible, minimize or reduce risks and impacts to acceptable levels; (c) Once risks and impacts have been minimized or reduced, mitigate; and (d) Where significant residual impacts remain, compensate for, or offset them, where technically and financially feasible.</p> <p>To adopt differentiated measures so that adverse impacts do not fall disproportionately on the disadvantaged or vulnerable, and they are not disadvantaged in sharing development benefits and opportunities resulting from the project.</p> <p>To utilize national environmental and social institutions, systems, laws, regulations and procedures in the assessment, development, and implementation of projects, whenever appropriate.</p> <p>To promote improved environmental and social performance, in ways which recognize and enhance Borrower capacity.</p>	<p>The standard focuses in helping project beneficiaries to manage and reduce both environmental and social risks and enhance project positive impacts.</p> <p>The TFSRP will use this requirement to strengthen the environmental and social framework for the assessment, development, and implementation of World Bank-financed projects where appropriate.</p>

<b>Environmental and Social Standard (ESS)</b>	<b>Objectives</b>	<b>Requirements</b>
ESS2: Labor and Working Conditions	<p>To promote safety and health at work.</p> <p>To promote fair treatment, non-discrimination, and equal opportunity of project workers.</p> <p>To protect project workers, including vulnerable workers such as women, persons with disabilities, children (of working age, in accordance with this ESS) and migrant workers, contracted workers and primary supply workers, as appropriate.</p> <p>To prevent the use of all forms of forced labor and child labor</p> <p>To support the principles of freedom of association and collective bargaining of project workers in a manner consistent with national law.</p> <p>To provide project workers with accessible means to raise workplace concerns.</p>	<p>The standard focuses on the adoption of standard labour practices that take into account the acceptable working conditions for the people to be employed in the execution of the project activities. It requires the Borrower to prepare and adopt labour management procedures. Among others the standard call for provisions on the treatment of direct, contracted, community, primary supply workers, and government civil servants. It further calls for fair terms and conditions of work, non-discrimination and equal opportunity and workers organizations. Provisions on child labour and forced labour. Requirements on occupational health and safety, in keeping with the World Bank Group's Environmental, Health, and Safety Guidelines (EHSG).</p>
ESS3:	To promote the sustainable use of resources,	The standard aims at enhancing



<b>Environmental and Social Standard (ESS)</b>	<b>Objectives</b>	<b>Requirements</b>
Resource Efficiency and Pollution Prevention and Management	<p>including energy, water, and raw materials.</p> <p>To avoid or minimize adverse impacts on human health and the environment by avoiding or minimizing pollution from project activities.</p> <p>To avoid or minimize project-related emissions of short and long-lived climate pollutants.</p> <p>To avoid or minimize the generation of hazardous and non-hazardous waste.</p> <p>To minimize and manage the risks and impacts associated with pesticide use.</p>	<p>the effective use of resources and control of pollution. It further requires an estimate of gross greenhouse gas emissions resulting from the project (unless minor), where technically and financially feasible. Requirements on the management of wastes, chemical and hazardous materials, and contains provisions to address historical pollution. ESS3 refers to national law and Good International Industry Practice, in the first instance the World Bank Groups' EHSs.</p>
ESS4: Community Health and Safety	<p>To anticipate and avoid adverse impacts on the health and safety of project-affected communities during the project life cycle from both routine and non-routine circumstances.</p> <p>To promote quality and safety, and considerations relating to climate change, in the design and construction of infrastructure, including dams.</p> <p>To avoid or minimize community exposure to project-related traffic and road safety risks, diseases, and hazardous materials.</p>	<p>The standard aims at protecting local communities against any health risks and ensuring their safety against project activities. It requires infrastructure to take into account taking safety and climate change and apply the concept of universal access which are technically and financially feasible. It requires further on traffic and</p>

Environmental and Social Standard (ESS)	Objectives	Requirements
	<p>To have in place effective measures to address emergency events.</p> <p>To ensure that the safeguarding of personnel and property is carried out in a manner that avoids or minimizes risks to the project-affected communities.</p>	<p>road safety, including road safety assessments and monitoring. It calls for addressing risks arising from impacts on provisioning and regulating ecosystem service. Measures to avoid or minimize the risk of water-related, communicable, and non-communicable diseases. Requirements to assess risks associated with security personnel, and review and report unlawful and abusive acts to relevant authorities.</p>
<p>ESS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources</p>	<p>To protect and conserve biodiversity and habitats.</p> <p>To apply the mitigation hierarchy and the precautionary approach in the design and implementation of projects that could have an impact on biodiversity.</p> <p>To promote the sustainable management of living natural resources.</p> <p>To support the livelihoods of local communities, including Indigenous Peoples, and inclusive economic development, through the adoption of practices that integrate conservation needs and development priorities.</p>	<p>The standard aims at conserving biodiversity and maintaining sustainable Management of Living Natural Resources. Requirements for projects affecting areas that are legally protected designated for protection or regionally/internationally recognized to be of high biodiversity value. Requirements on sustainable management of living natural resources, including primary</p>

Environmental and Social Standard (ESS)	Objectives	Requirements
		production, and harvesting, distinguishing between small-scale and commercial activities. Requirements relating to primary suppliers, where a project is purchasing natural resource commodities, including food, timber, and fibers.
ESS8: Cultural Heritage	<p>To protect cultural heritage from the adverse impacts of project activities and support its preservation</p> <p>To address cultural heritage as an integral aspect of sustainable development</p> <p>To promote meaningful consultation with stakeholders regarding cultural heritage</p> <p>To promote the equitable sharing of benefits from the use of cultural heritage</p>	The standard aims conserving and protect cultural heritage against any adverse effects and promote equitable sharing of benefits
ESS10: Stakeholder Engagement and Information Disclosure	<p>To establish a systematic approach to stakeholder engagement that will help Borrowers identify stakeholders and build and maintain a constructive relationship with them, project-affected parties.</p> <p>To assess the level of stakeholder interest and support for the project and to enable stakeholders' views to be taken into account in</p>	The standard aims at making stakeholders part of the project through the continuous sharing of information and updates. The standard call for stakeholder engagement throughout the project life cycle, and preparation and implementation of a Stakeholder

Environmental and Social Standard (ESS)	Objectives	Requirements
	<p>project design and environmental and social performance.</p> <p>To promote and provide means for effective and inclusive engagement with project-affected parties throughout the project life cycle on issues that could potentially affect them.</p> <p>To ensure that appropriate project information on environmental and social risks and impacts is disclosed to stakeholders in a timely, understandable, accessible and appropriate manner and format.</p> <p>To provide project-affected parties with accessible and inclusive means to raise issues and grievances and allow Borrowers to respond to and manage such grievances</p>	<p>Engagement Plan (SEP). It requires early identification of stakeholders, both project-affected parties and other interested parties, and clarification on how effective engagement takes place. Stakeholder engagement to be conducted in a manner proportionate to the nature, scale, risks, and impacts of the project, and appropriate to stakeholders' interests.</p>

## **5.7. Policies and laws existing in Zanzibar matching with the ESS**

In this section, the capacity of the Zanzibar regulatory and institutional framework and MAINL system to comply with Environmental and Social Standards was assessed. The opportunities for enhancement are proposed for consideration to ensure compliance with the applicable standards.

### **5.7.1. Assessment and Management of Environmental and Social Risks and Impacts (ESS1)**

The TFSRP will rehabilitate seed farm infrastructure to increase efficiency in the production and multiplication of climate-resilient seeds. Again, the project will repair storehouses, and drying grounds in the field sites for seed production, multiplication, and distribution. Hence the project will rehabilitate four farmer's service centers; Rehabilitate irrigation canals (26,845m), four diversion structure, drainage canals (5,000m), drilling four boreholes and rehabilitation of four boreholes, purchase of a complete set of pumps and pilot clean energy technologies (air and wind for pumping to cut electricity bills). Rehabilitation of farm roads (10km), Construction of stores and three drying area in farmers service centers. This Environmental and Social Standard applies to this project due to its potentially adverse environmental risks and impacts in the areas of influence. These include impacts on the natural environment such as air, water, land, human health, and safety. The decisions regarding the project shall be based on a critical analysis of project activities and associated environmental and social risks and impacts during implementation.

The project sub-components will require the preparation of Environmental and Social Impact, Assessment (ESIA) and/or Environmental and Social Management Plans (ESMPs) before implementation approval. Therefore, each subproject will be screened to determine potential adverse impacts and mitigation measures for their planned activities.

### **5.7.2. Labour and Working Conditions (ESS2)**

The standard recognizes the importance of employment creation and income generation in the pursuit of poverty reduction and inclusive economic growth. MAINL will promote sound worker-management relationships and enhance the development benefits of the project by treating workers employed/engaged in the project fairly and by providing safe and healthy working conditions as per Labor Management Procedures (LMP). However, the preparation of Labor Management Procedures for the project will be finalized during project implementation as noted in the ESCP.

The provisions of ESS2 applies to the project given that the project will employ/engage both skilled and non-skilled workers, including through contractors/subcontractors, and primary suppliers, to undertake various activities. To comply with the provisions of ESS2, the project will operate under policy-led objectives that promote gender equality, non-discrimination and fair treatment in recruitment and employment, respect for

national labour laws, including in relation to prohibiting child and forced labour, and combatting gender-based violence, in particular sexual harassment. The LMP shall provide specific guidance on addressing these issues in relation to project workers. The MAINL HR policy appears to be deficient in addressing occupational health and safety and other labour and working conditions issues. The MAINL project implementation team (PIT) and all contractors/subcontractors and primary suppliers shall, and subcontractors shall ensure equal employment opportunity and not discriminate against anyone based on colour, nationality, tribe, social origin, political opinion, religion, gender, pregnancy, marital status/family responsibility, disability, HIV/AIDS, age, sexual orientation, or union membership. Moreover, in the recruitment and employment of project workers, the MAINL PIT will seek to ensure diversity and balance in the workplace by ensuring that employment or treatment of workers is not made based on personal characteristics unrelated to inherent job requirements.

The MAINL will ensure that workplace sexual harassment of any nature by workers directly hired, or project workers engaged through contracts/subcontracts companies shall be prohibited, and those determined to be guilty will be subject to disciplinary action, including summary dismissal.

MAINL will have to take worker safety seriously by laying out internal controls and procedures contained in their ESMF that will protect workers employed or engaged in relation to the project from occupational hazards during all relevant project phases. All works will be done in compliance with relevant environmental and health and safety standards to minimize the impact on workers as well as the local area and citizens. MAINL has no Health and Safety policy to guide its operations. However, deliberate efforts are in place to ensure that all site personnel are provided with First Aid Kit and protective equipment as appropriate for different tasks. In addition, the presence of the OHS department in Zanzibar under the Ministry of Labor, Empowerment, Elders, Youth, Women and Children, is the opportunity and the MAINL will use the Department for capacity building to PCU of the MAINL, workers, contractors, and sub-contractors through training in workplace health and safety procedures and enforcement and in preparing and enforcing health and safety provisions in construction and operating contracts. The Labour Management Procedures (LMP) as per ESS2 requirements will be devised to the project in the following manner: (a) persons employed or engaged directly by the MAINL/Project Coordination Unit (PCU) to work specifically in relation to the project, (b) persons employed or engaged by contractors or subcontractors to perform work related to core functions of the project, regardless of location and (c) persons employed or engaged by the project's primary suppliers. The ESIA/ESMP process shall contain robust procedures for worker safety, requiring plans for accident prevention as well for the health and safety of workers and communities, which are also part of contracts for civil works.

### **5.7.3. Resource Efficiency and Pollution Prevention and Management (ESS3)**

This ESS sets out the requirements to address resource efficiency and pollution prevention and management throughout the project lifecycle. Since project activities may generate pollution to air, land, ecosystem services and the environment (at insignificant level) during rehabilitation phase, the project will utilize the pollution prevention and emergency response plan drafted as part of the ESIA/ESMP to mitigate any potential risk of pollution as required by ESS1 and ESS3. Also, requirements set out in the WBG EHS Guidelines, GIIP, as well as the Zanzibar's environmental policies, laws and regulations will be applied related to the environment. The most stringent requirements between local and WB standards will be considered.

### **5.7.4. Community Health and Safety (ESS4)**

The ESS requires borrowers to avoid or minimize safety and health risks and impacts of the project, with particular attention to people who, because of their particular circumstances may be vulnerable. The requirements in ESS4 will be met regarding (i) rehabilitation of irrigation infrastructure, canals and weirs and Equipment Design and Safety, (ii) Safety of rehabilitation Services., and (iii) Emergency Preparedness and Response. Considering that, the implementation of project components has health and safety risks and impacts on project-affected communities; the expected labour influx from mainland Tanzania to work in relation to the project could create considerable social and economic problems for project-affected communities. These risks and impacts could include increased rates of crime, social conflict and violence, increased transmission of HIV/STDS, as well as increases in gender-based violence, in particular sexual exploitation, including trafficking in persons for sex work. While project contractors/subcontractors will be responsible for establishing and maintaining work camps that might be established to accommodate project workers, especially those coming from mainland Tanzania and elsewhere, the MAINL will be responsible for camp supervision and ensuring that these camps comply with national law and the provisions of ESS2 and ESS4. MAINL's PIT, manpower and institutional capacity constraints present a risk concerning ensuring adequate supervision and remediation of problems that might arise regarding these camps and the labour influx. Where necessary, additional measures will be integrated into the LMP, the GRM, and the ESMF/ESMPs. The project will ensure compliance with national law requirements as well as World Bank guidelines regarding the COVID-19 situation, including in relation to workers who are part of the labour influx. MAINL shall work closely with Shehias to communicate to local communities related health and safety risks and preventive measures for accidents associated projects and other human health issues including covering mitigation measures to GBV risks and prevention of HIV and AIDS during construction. MAINL will work with Ministry of Health expertise to provide training on HIV and AIDS to workers, farmers, scheme in charge and contractors in Unguja and Pemba project sites.

To ensure safety during project implementation, all project sites shall be placed with appropriate H&S signage to warn people of potential dangers associated with trespassing or accessing the campsites with no supervision. The ESIA process shall contain robust procedures for accident prevention as well for the health and safety of project-affected communities.

#### **5.7.5. Land Acquisition, Restrictions on Land Use, and Involuntary Resettlement (ESS5)**

The proposed project activities under the subcomponent 2.1 and 2.2 will be implemented on existing irrigation schemes and areas under the jurisdiction of ZARI. Thus, the project is expected to acquire no new lands for its activity's implementation. In the case new parcel of land will be required for research/demonstration purposes outside the irrigation scheme and ZARI sites, Zanzibar has a good institutional framework for managing land acquisition and resettlement issues/impacts. There are Land laws, acts, clear staff roles and responsibilities, grievance procedures and dispute resolution, and emphasis on community land consultation. In addition to institutional capacity, the project shall use the RPF, and recruit dedicated environmental and social risk and impact specialists for the project to provide additional technical guidance.

#### **5.7.6. Biodiversity Conservation and Sustainable Management of Living Natural Resources (ESS6)**

ESS6 addresses sustainable management of primary production and harvesting of living natural resources and recognizes the need to consider the livelihood of project-affected parties, whose access to, or use of, biodiversity or living natural resources may be affected by a project. The site where the proposed activities under project subcomponents 2.1 and 2.2 shall have no impact on natural resources since all rehabilitation of the irrigation infrastructure will be exercised within the irrigation scheme sites where no new vegetation clearance would take place. The ESIA process shall consider biodiversity and natural resources during project design and implementation and appropriate mitigation measures adopted. However, the risks identified for strengthening the system for ESS1 apply to this ESS6.

#### **5.7.7. Cultural Heritage (ESS8)**

Cultural heritage (ESS8) requires Borrowers to (i) Protect cultural heritage from the adverse impacts of project activities and support its preservation (ii) Address cultural heritage as an integral aspect of sustainable development (iii) Promote meaningful consultation with stakeholders regarding cultural heritage (iv) Promote the equitable sharing of benefits from the use of cultural heritage.



#### **5.7.8. Stakeholder Engagement and Information Disclosure (ESS10)**

Effective stakeholder engagement can improve the environmental and social sustainability of projects, enhance project acceptance, and make a significant contribution to successful project design and implementation. The proposed project will engage stakeholders as per SEP developed for the Tanzania Food Security and Resilience Program – Zanzibar. The engagement will cover all phases of the project including the development of all E&S instruments. Implementing agencies will provide stakeholders with timely, relevant, understandable, and accessible information, and consult with them in a culturally appropriate manner, which is free of manipulation, interference, coercion, discrimination, and intimidation.

#### **5.8. Gap Analysis**

The assessment has established that, Zanzibar has the legislative/regulatory provisions and the institutions to ensure consistency with the requirement of the World Bank. However, implementation is not consistently effective in the areas of environmental and social management plan (ESMP) implementation, supervision, and monitoring.

Table 3. shows actual gaps of Zanzibar's regulatory framework to meet World Bank Environmental Social Standards. The ESMF includes measures to mitigate these underlying risks/gaps in the project.

**Table 3. Gap Analysis**

<b>ESS &amp;Topic</b>	<b>Major requirements</b>	<b>Gaps /Status in Zanzibar framework</b>	<b>Main actions needed</b>
ESS 1: Assessment and Management of Environmental and Social Risks and Impacts			
Scope of application	ESSs apply to associated facilities to extent of Borrower's control/influence	Associated facilities not covered by Zanzibar ESIA law	WB standards will be applicable
Borrower's E&S Framework	May use Borrower's framework if can meet objectives of ESSs	No provision for alternative requirements,	ESF shall be applicable
A. E&S Assessment	Conduct E&S assessment, including stakeholder engagement. Retain international expert(s) for high-risk projects. Apply national framework, ESSs, EHSGs Apply mitigation hierarchy Offset significant residual impacts Differential measures for vulnerable or disadvantaged people Consider primary suppliers	Zanzibar regulations has an emphasis on social impacts, No distinction between international and Zanzibar experts No reference to ESSs, EHSGs. No equivalent provision for offsets, No equivalent provisions for vulnerable and disadvantaged people, No coverage of primary suppliers,	ESF shall be applicable
B. ESCP	ESCP for compliance in a	Projects which comply with	

ESS & Topic	Major requirements	Gaps /Status in Zanzibar framework	Main actions needed
	specified time	regulations are approved and given permit	
C. Project monitoring & reporting	Monitor proportionate to the nature of the project, risks and impacts, and compliance requirements Reports to World Bank	The regulation insists on supervision and Monitoring but receives little attention on the ground	
D. Stakeholder engagement and information disclosure	Engage stakeholders through the life cycle	The law insists on disclosure of ESIA but not continued engagement. Engagement is always done during ESIA preparation.	ESF shall be applicable
<b>ESS2: Labor and Working Conditions</b>			
Scope of application	ESS2 applies to workers employed by MAINL who work on the project and to contracted workers, primary supply workers, and community workers	Labour code of Zanzibar applies to an employer's direct employees and contracted workers	
A. Working conditions and management of labor relations	Written labor management procedures Terms and conditions of	Written employment contract required, including procedures and employment conditions Specific	

ESS & Topic	Major requirements	Gaps /Status in Zanzibar framework	Main actions needed
	employment Nondiscrimination and equal opportunity Worker's organizations	nondiscrimination and equal opportunity requirements Organizations are allowed	
B. Protecting the workforce	Child labour Forced labour	No employment under the age of 18 No forced labor	
C. Grievance mechanism	A grievance mechanism has to be provided for all direct and contracted workers	MAINL has not diversified grievance redress mechanisms to capture the whole community.	ESF shall be applicable
D. Occupational Health and Safety (OHS)	Measures relating to occupational health and safety will be applied to the project: Apply World Bank Group General and sector-specific EHS Guidelines Requirements to protect workers, train workers, document incidents, emergency preparation,	Current legislation does not set minimum requirements for worker accommodations although it does require per diem for work at distances from home.	ESF shall be applicable also LMP will be implemented

ESS & Topic	Major requirements	Gaps /Status in Zanzibar framework	Main actions needed
	<p>address issues</p> <p>Provide a safe working environment</p> <p>Workers are allowed to report safety issues and refuse to work under certain circumstances</p> <p>Provide appropriate facilities (canteens, toilets, etc.) and ensure accommodations meet the needs of workers</p> <p>All employers to collaborate on applying OSH requirements</p> <p>Monitor OSH performance</p>		
E. Contracted workers	<p>Reasonable efforts to verify contractors have labour management procedures to meet requirements of ESS2 (except those that apply to community and primary supply workers)</p> <p>Procedures for managing and monitoring performance</p> <p>Access to a grievance mechanism</p>	<p>Zanzibar law applies to contracted workers</p> <p>A grievance mechanism has to be developed for subcontracted workers</p>	<p>ESF shall be applicable also</p> <p>LMP will be implemented</p>

ESS & Topic	Major requirements	Gaps /Status in Zanzibar framework	Main actions needed
F. Community workers	Requirements for working conditions and OHS applied to community labor	OHS policy is in place	
G. Primary supply workers	Depending on the level of GSE/contractor control/influence,	No such requirements	ESF shall be applicable also LMP will be implemented
<b>ESS3: Resource Efficiency and Pollution Prevention and Management</b>			
<b>Resource Efficiency</b>			
Scope of application	Borrowers must apply feasible resource efficiency and pollution prevention measures per the mitigation hierarchy	No specific requirements for mitigation hierarchy but Zanzibar law is generally consistent with EU legislation and directives	
A. Energy use	Adopt measures in EHSs if the project is significant energy use	There is general requirements in Zanzibar law. Not Specific for this project	ESF shall be applicable
B. Water use	Assess water use and impacts and communities and adopt mitigation measures as needed	Explicitly shown in the Water laws of Zanzibar	
C. Raw material use	Reduction of significant resource usage	Explicitly shown in the Environmental and Natural resources laws of Zanzibar	
<b>Pollution prevention and management</b>			
General requirements	Avoid, minimize, and	Explicitly shown in the	

ESS & Topic	Major requirements	Gaps /Status in Zanzibar framework	Main actions needed
	<p>control the release of pollutants, apply the more stringent of EHSGs and national law.</p> <p>Historic pollution and non-degradation requirements</p>	<p>Environmental and Natural resources laws of Zanzibar and WBG-EHS</p>	
<p>A. Management of air pollution</p>	<p>Requires assessment of potential air emissions and implementation of technically and financially feasible and cost-effective options to minimize emissions</p>	<p>There are emission guidelines in Zanzibar</p>	
<p>B. Management of hazardous and non-hazardous wastes</p>	<p>Apply mitigation hierarchy to waste management</p> <p>National and international conventions for hazardous waste management and movement</p> <p>Verify hazardous waste management contractors are licensed and disposal sites operate to meet standards</p>	<p>Laws are in place</p>	
<p>C. Management of chemicals and hazardous materials</p>	<p>Minimize the use of hazardous materials</p> <p>Avoid the use of internationally</p>	<p>Zanzibar has regulations for chemicals and hazardous materials</p>	

ESS & Topic	Major requirements	Gaps /Status in Zanzibar framework	Main actions needed
	controlled materials		
D. Management of pesticides	Requirements for pesticide use	Zanzibar has regulations for pesticide use	
ESS4: Community Health and Safety			
Community health and safety			
A. Community health and safety	<p>Evaluate risks to community health and safety and apply mitigation hierarchy and GIIP to reduce risks</p> <p>Consider third-party safety risks in designing infrastructure and equipment, concerning high-risk locations</p> <p>Ensure the safety of services provided to communities identify traffic/road risks, assess risks if needed, consider safety in fleet decisions, take measures to protect the public Assess and avoid impacts on provisioning and regulating</p>	<p>General traffic laws will apply, and Guideline for EIA Zanzibar of 2009 will be applied</p>	



ESS & Topic	Major requirements	Gaps /Status in Zanzibar framework	Main actions needed
	<p>ecosystem services as appropriate</p> <p>Avoid or minimize the potential for disease transmission and communication, considering vulnerable groups</p> <p>Address risks to the community of hazardous materials management</p> <p>Prepare and respond to emergencies, consider in EIAs, prepare response plans</p>		
B. Security personnel	<p>Assess and address risks of security arrangements</p> <p>Apply principles of proportionality, GIIP, and law Verify contracted workers are not implicated in past abuses</p>	<p>Zanzibar Employment act 2005, Zanzibar Compensation Act 2005 and ZOSH Act 2005 will be applicable</p>	

ESS & Topic	Major requirements	Gaps /Status in Zanzibar framework	Main actions needed
	<p>and are trained</p> <p>Investigate incidents, report unlawful acts to authorities</p>		
<b>ESS5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement</b>			
Applicability	<p>Assessment needs during the ESIA process Applies to permanent and temporary displacement, listing types of infringements</p> <p>Limitations on applicability</p> <p>This applies to land users and owners</p>	Land use is recognized under the law.	
A. General	<p>Affected people: landowners, users with legal claims, and users with no legal claims</p> <p>Design project to avoid/minimize displacement</p> <p>Provide replacement cost and assistance, disclose standards, offer land-for-land where possible, pay compensation before displacing people, where possible Engaged with affected communities, including women</p> <p>Grievance</p>	<p>Land use is recognized and protected under law, but not illegal use</p> <p>Existing practice is to pay under expected development on land used by non-owners, but no further assistance is provided if the land is lost</p> <p>There is a specific requirement on crops to avoid displacement and has already in use.</p>	

ESS & Topic	Major requirements	Gaps /Status in Zanzibar framework	Main actions needed
	<p>mechanism</p> <p>Census, cut-off dates, notices; detailed plan and monitoring required; require audit if significant displacement</p>	<p>Procedures for establishing value and payments, also there are requirements for livelihood restoration, assistance, land-for-land by uses a meeting with parties for agreeing.</p> <p>Few specific requirements for consultation are required, and there are specific efforts to engage women</p> <p>There are the requirements for a grievance mechanism</p>	
B. Displacement	Detailed requirements for physical displacement Detailed requirements for economic displacement, including livelihood restoration	Less detailed requirements for physical displacement Less detailed requirements to address economic displacement, and little special consideration for vulnerable people	There will be no new development and land consolidation. The project will only rehabilitated existing infrastructure in targeted irrigation schemes (canals, farm road, farmers service centers and drying floors
C. Collaboration with other responsible agencies or	Collaborate with other involved agencies,	There is specific requirements to	SEP will be applicable

ESS & Topic	Major requirements	Gaps /Status in Zanzibar framework	Main actions needed
subnational jurisdiction	provide support as needed; include arrangements in the Plan	involve other parties	
D. Technical and Financial Assistance	Address environmental and social risks and impacts associated with technical assistance (TA) that is supported through Investment Project Financing (IPF) under the Environmental and Social Framework (ESF).	TA would be required in the first and second year of the project.	
Annex 1: Involuntary resettlement instruments	Detailed requirements for resettlement plans, resettlement frameworks, and process frameworks	No requirements for detailed written resettlement or other plans	
<b>ESS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources</b>			
A. General	Consider direct, indirect, & cumulative impacts in ESS1  EIA Characterize baseline conditions	Procedures to address impacts on critical habitats are in place  Protected areas: less restrictive requirements for	

ESS & Topic	Major requirements	Gaps /Status in Zanzibar framework	Main actions needed
	<p>Manage risks with mitigation hierarchy and GIIP, including adaptive management</p> <p>Differentiated habitats, ESS applies to all, provides for offsets</p> <p>ESS applies to modified habitats with significant biodiversity value</p> <p>Avoid natural habitats unless no feasible alternative;</p> <p>If affected, achieve no net loss of biodiversity Requirements if a project affects legally protected and international recognized areas of high biodiversity value Strict conditions on affecting critical</p>	<p>impacts on most protected areas</p> <p>Invasive species: awareness but no specific requirements</p> <p>The project does not involve primary production</p>	

ESS & Topic	Major requirements	Gaps /Status in Zanzibar framework	Main actions needed
	habitats requires Biodiversity Management Plan  No introduction of spreading of invasive species Requirements for projects involving primary production and harvesting		
B. Primary suppliers	Requirements when Borrower purchases natural resource commodities	Not relevant to this project	
<b>ESS10: Stakeholder Engagement and Information Disclosure</b>			
Requirements	Engage stakeholders throughout the project life cycle, and determine how they wish to be engaged  Provide stakeholders with information, Maintain a documented record of engagements	Zanzibar Environmental Management Act requires that the EIA process should involve consultations with relevant stakeholders. It does not explicitly state their involvement throughout the project cycle. The project shall use the SEP to bridge the gap.	
A. Engagement during	Identify and	The regulation does not	

ESS & Topic	Major requirements	Gaps /Status in Zanzibar framework	Main actions needed
project preparation	<p>analyze stakeholders, including disadvantaged or vulnerable</p> <p>A stakeholder Engagement Plan (SEP) is required, with detailed requirements for disclosure, the timing of consultations, measures for the disadvantaged or vulnerable, etc.</p> <p>Disclosure of information early to allow consultation on design</p> <p>Consultation to allow ongoing two-way communication throughout the project life cycle</p>	<p>state the involvement of stakeholders before project commencement except during the ESIA process. In this case the ESF shall be applicable</p> <p>Draft EIA report had to be disclosed for reviews</p>	
B. Engagement during project implementation and external reporting	Engagement and disclosure of information to continue throughout implementation, following the Plan	The regulation does not have such a requirement	ESF and SEP shall be applicable

ESS & Topic	Major requirements	Gaps /Status in Zanzibar framework	Main actions needed
C. Grievance mechanism	<p>Establish and implement prompt, effective, culturally appropriate, and discreet grievance mechanism</p> <p>No limit on legal remedies</p>	<p>No equivalent requirement</p> <p>The project owner/developer has to respond only to formal correspondence and claims.</p>	GRM will be applicable
D. Organizational capacity and commitment	Define roles & responsibilities, assign personnel to implement stakeholder engagement activities	No similar requirement	
Annex 1: Grievance mechanism	Options for managing mechanism: ways of submission, log, advertised procedures, appeals process, mediation	No requirement for a grievance mechanism,	the ESF shall be applicable



## 5.9. Environmental, Health and Safety General Guidelines

The general guidelines (WBG EHS) will also be applied at relevant levels or measures as follows

### **On Environmental**

- Air Emissions and Ambient Air Quality
- Energy Conservation
- Wastewater and Ambient Water Quality
- Water Conservation
- Hazardous Materials Management
- Waste Management
- Noise
- Contaminated Land

### **On Occupational Health and Safety**

- General Facility Design and Operation
- Communication and Training
- Physical and Chemical Hazards
- Biological Hazards
- Personal Protective Equipment (PPE)
- Special Hazard Environments  
Monitoring

### **On Community Health and Safety**

- Water Quality and Availability
- Structural Safety of Project Infrastructure
- Life and Fire Safety (L&FS)
- Traffic Safety
- Transport of Hazardous Materials
- Disease Prevention
- Emergency Preparedness and Response

### **On Construction and Decommissioning**

- Environment
- Occupational Health and Safety
- Community Health and Safety

## 6. ENVIRONMENTAL AND SOCIAL BASELINE

This chapter provides the baseline data on the relevant characteristics of the proposed project regions, especially for the planned activities. This includes a description of the physical environment, biological environment, and socio-economic environment.

### 6.1. Biological environment

Biological environment here refers to the living landscape, that is the plants, animals, and other aspects of nature that occur on irrigation farmland and other natural lands. As long as this project deals and covers rehabilitation of existing schemes therefore it will have no negative influence on biological resources utilization or depletion will occur.

### 6.2. Physical environment

#### ▪ Climate

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

#### ▪ Rainfall

Zanzibar has two rainy seasons: one more intense, known as the "long rains" (Masika) season, from March to May, with the peak in April, and the other less intense, known as the "short rains" (Vuli season), between mid-October and December. Total annual rainfall is about 1,600 millimeters in Unguja and 1,900 mm in Pemba. April and May are the wettest months when downpours can be really strong and cause floods. However, some short thunderstorms can occur throughout the year. Rainfall is reliable and well-distributed in comparison with most of East Africa. Table 4.1 shows the average precipitation in Zanzibar.

Table 4: Monthly rainfall total of Zanzibar

Month	Ja n	Fe b	Ma r	Apr	Ma y	Ju n	Jul	Au g	Se p	Oc t	No v	De c	Yea r
Rainfall (mm)	58	66	150	320	290	53	28	30	41	66	170	140	1410
Days	10	7	13	18	15	7	8	8	8	9	11	13	127

#### ▪ Temperature

Temperatures are high throughout the year. The warmest period is from October to March, during which the maximum temperature hovers around 31/33°C and the humidity is high, although the breeze tempers a little the heat. In the worst moments, the temperature can reach 36/38°C. The period from May to August, when the

southeast trade winds predominate, is cooler, with highs around 29°C. Table 4.2 shows the monthly average temperature in Zanzibar.

Table 5: Average temperature in Zanzibar

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Year
Min (°C)	24	24	25	25	24	23	22	22	22	23	24	24	24
Max (°C)	32	33	33	30	29	28	28	28	29	30	32	31	31

- **Topography and Terrain**

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

- **Geology and Soils**

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

- **Hydrology**

Zanzibar has small/seasonal streams flowing from highlands/ridges to the sea or ending in the coral areas. Most of the streams occur within the sandy soils which have variable infiltration rates and runoff potential. There are spatial and temporal variations in the

distribution of recharge because of the variations in soil, land use and rainfall. Temporally, the highest recharge occurs from April to June and November to January. The recharge is also contributed by sinking streams. The spatial distribution of recharge shows that most land cover over clayey soils with slowly permeable layers has marked low recharge compared to other land covers. The soils of significant recharge are the loamy soil products of the coralline limestone. Northern and Southern areas have heavy high water-table, unlike the areas to the east and west are situated on the higher and dry coral ground (Finnie, 2003). The design of buildings should ensure the presence of storm water drainage systems.

### 6.3. Social Characteristics

According to the 2012 National Census, Zanzibar’s population was 1.3 million whereby 900,000 was from Unguja, and 400,000 were from Pemba. By 2020, Zanzibar’s population is expected to increase to 1.6 million people, given an estimated population growth rate of 3.1 per cent per year.<sup>2</sup> Currently, over 60 per cent of the inhabitants live in urban areas, and the population density of this island nation is more than ten times higher than in Tanzania-mainland. The region with the largest population is Urban West which accounts for 46 per cent of the total population of Zanzibar. The population size is determined by the birth rate, mortality rate and internal movement of people from one part of the country to another. In Zanzibar, all regions have negative net migration except the Urban West region which pulls migrants from all the regions due to the presence of Stone town and the availability of other services like markets. The statistics of population size, density, growth rate and internal migration in project regions as of the 2012 census are shown in Table 4.3. In all project regions, the female population is higher than the male population with exception of Unguja South. Persons are concentrated in Urban West regions with population densities of 2,581 persons per square kilometer. Moreover, recent studies and surveys show that 70% of the urban population in Zanzibar lives in informal settlements. High rate of urbanization, low income, lack of development control mechanisms and confusion on municipal and master plan boundaries are among the causes for emerging informal settlements in Zanzibar.

Table 6: Population size, density, growth rate and internal migration in project regions

Region	Total Population	Male population	Female population	Population density (people/km <sup>2</sup> )	Population growth (%)	Internal migration

<sup>2</sup> Tanzania-Zanzibar National Population Projections, February 2018. It is estimated that the population will reach 1.6 million inhabitants in 2020, 1.76 million in 2022 and 2.3 million in 2035.

North Unguja	187,455	92,114	95,341	399	3.2	0.3
South Unguja	115,588	57,880	57,708	135	2	0.4
Urban West	593,678	283,590	310,088	2581	4.2	2.9

- Household size

The average household size is obtained by dividing the total population of private households by the number of private households. Zanzibar has 253,608 households, with an average household size of 5.1. In project regions, North Unguja has the highest household size (4.8 persons) followed by South Unguja (4.4 persons). The project region with the lowest household size is Urban West (4.2 persons).

- Level of poverty

In Zanzibar, there has been some progress in poverty reduction. The percentage of the population living below the basic-needs poverty line was 34.9 per cent in 2010 while in 2015 was 30.4 per cent. The decline in poverty is mainly experienced in Unguja where more than 60 per cent of the population lives. Pemba experienced an increase in poverty (55 per cent from 48 per cent). In contrast, more than 80 per cent of the population in Pemba lives in rural areas. Most of rural households depend on fishing and agriculture for their livelihood and spend on average 18 per cent of their incomes on energy, water, and housing. The proposed project shall increase agriculture production and productivity, hence contributing to poverty reduction.

- Literacy rate

As of 2010 World Data, the highest percentage of literate men was found in the Urban West region (96.8 per cent) followed by South Unguja (94.7 per cent). The project region with the lowest male population who are literate is North Unguja (77.8 per cent). This trend was similar to females in that the region which had the highest literate rate was Urban West (93.6 per cent) followed by South Unguja (90.3 per cent). The region with the lowest literate rate for females was North Unguja (72.4 per cent). These data show that the literacy rate is good and there will be no problem when sharing project information. This shows that 30% of women will not have access to information if only written information is shared. This will be addressed as per SEP developed along with this ESMF.

- Urbanization

Zanzibar is a predominantly rural archipelago with a largely rural population (60%), with most people living in villages, far removed from urban life. The proportion of people living in urban areas has increased from less than 10% in 1975 to 40% in 2012. Despite rapid urbanization, there has been a threefold increase in the rural population, adding to pressure on land and forests in rural areas (Wenban-Smith, 2014). The speed at which

urbanization is taking place in Zanzibar places enormous pressure on the city authorities to match the provision of basic services (including clean water supply, sewage and waste management, transportation, health, and education). The proposed project shall reduce pressure on education provision in Zanzibar due to the increase of classes and associated infrastructures; there will be a reduction of transportation challenges as pupils and students shall commute shorter distances.

- Local labour force and employment opportunities

According to the Integrated Labor Force Survey (ILFS, 2006), the employment-to-population ratio in Zanzibar at 78.4% (84.8% for males and 73.3% for females). In urban areas, the employment ratio was below the national average which is only 68% (78.1% for males and 58.9% for females). The MKUZA II aimed to reduce the youth unemployment rate to 11.4% by 2015 which was to be achieved through the creation of enabling environment including imparting entrepreneurship skills and provision of Labor Market Information to youth. Petty trade, handcraft, the construction sector and fishing are the largest employers in urban areas. Most of these activities are carried out informally and uncoordinated. The uncoordinated activities add little to national wealth because they are not adequately captured in national accounts and are also a threat to the environment.

Concerning formal employment, the public sector dominates the formal employment in Zanzibar Town with 20% in public administration, 19% in education, over 5% in health and 2% in electricity.<sup>3</sup> Communications (14%) and Accommodation and Food including tourism (13%) are the largest employers among the private sectors in this area. Wages in Zanzibar are low, the daily average wage is \$4 US.

According to the integrated labor force survey 2014, Zanzibar has about 12% of children engaged in child labour, including gravel making, domestic labour, fishing, small businesses, and clove picking (Source for this is U.S. Department of State Human Rights Report for Tanzania, 2019). Domestic and workplace violence against women is also a problem in Zanzibar. The Employment Act, of 2005 provides a prohibition of sexual harassment in employment<sup>4</sup>. The proposed project shall be designed to maximize employment opportunities and working skills.

#### Occupational Health and Safety issues in Zanzibar

For the period of five years (2007-2011), the workers' compensation unit recorded 351 occupational injuries distributed as follows: central government-148, Zanzibar

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<sup>3</sup> POFEDP (2013) Technical Assistance for the Preparation of a Diagrammatic Indicative Structure Plan for Zanzibar Municipality and Its Immediate Periphery and Urban Development Policy for Zanzibar Town Review Report October 2013

<sup>4</sup> The Zanzibar Occupational Safety and Health Policy, 2017

Corporation-18, Special department-48, cloves and coconut plantations-43, and private sector-94. The figures only reflect accidents to employees engaged under a contract of service and exclude the growing number of self-employed workers and independent contractors. A substantial proportion of employees is known not to report accidents to compensation authorities. These figures are significant underestimates of the full extent of work-related accidents.

The system in place for collecting and recording occupational or work-related injury and disease data suffers from several problems that make it difficult to enumerate the true picture of occupational health injuries and accidents in Zanzibar. However, the management of occupational safety and health in Zanzibar is facing several challenges which include;

- Inadequate institutional and legal framework for effective implementation of occupational safety and health
- Inadequate access to occupational health and safety to cover the country's workforce
- The insufficient funding mechanism for the implementation of occupational safety and health management systems
- Unavailability of workplace safety and health management system
- Inadequate capacity of occupational safety and health in both public and private sector
- Inadequate awareness and low level of culture of prevention among workers and employees
- Insufficient evidence-based information for planning and of occupational safety and health programs
- Inadequate coordination, monitoring and evaluation system for occupational safety and health

The TFSRP shall have a Labour Management Plan (LMP) which takes into account the health and safety of workers. MAINL shall use Health and Safety expertise services from Occupational Health and Safety (OHS) Department of Zanzibar for technical guidance during project implementation activities.

▪ **Gender-Based Violence (GBV)**

The study on GBV Incidences and Responses in Zanzibar (2007) revealed that over 17 percent of respondents reporting being victims of GBV have suffered some type of Sexual violence. Incest is reported by 3.1 percent of respondents interviewed. A significant number of sexual violence is experience in childhood (23.5%) and in adolescence (31.4%) though some also occurred during adulthood (31.4%). In addition, 17.7 percent of respondents have a sibling who has experienced GBV, specifically

sexual violence. 40 percent of sexual crimes involving siblings of respondents were committed against female relatives including rape (29.8 percent) and sodomy (14 percent). About 2 percent of sexual crimes involve a disabled female sibling. A total of 35.2 percent respondents admitting to committing sexual violence 32.4 percent committed sodomy while 2.9 percent exposed themselves. The 2010 TDHS Report indicates that 10% of women aged 15 – 49 were forced against their will to perform their first sexual intercourse. Apart from that, sexual exploitation and raping of children becomes challenging within the Zanzibar society. The Study also indicated that 6.5 % of women in Zanzibar, 7.8% of Women in Unguja and 4.1% of Pemba experienced Sexual Violence. The TDHS also reported that 17.3% of women aged between 20-24 had experienced either physical or sexual violence Responses from community members surveyed under the Study on Violence Against Women in 2012 “Wall of Silence” indicated that sexual violence tended to be viewed more seriously than physical and emotional violence. 17.2 percent of ever partnered women surveyed in Unguja and 33.3 percent in Pemba indicated they had experienced sexual violence. The Study also indicated that 6% of girls and 9% of boys ranging between ages 13 and 24 had been subjected to acts of sexual violence.

#### **6.4. Land tenure**

Land tenure in Zanzibar is categorized under three groups: (1) state-owned public lands, (2) privately-owned land which includes a 3-acre land area distributed to individuals by the government for farming and lands under traditional tenure systems which are under the control of local elders; and (3) public land which is found in all settlements in the form of beaches and landing sites, small islets, and public burial grounds is accessible for community use. In many areas, however, people tend to occupy land, which they inherit from their parents and relatives for habitation and farming. There have been changes in land use and land cover types across Unguja Island. Forest land has been reduced in area coverage over time and forest has been converted to settlement and agriculture, probably due to population pressure, poverty, and unemployment. The proposed project shall be implemented in state-owned public lands and in particular irrigation schemes sites and areas under the ZARI mandates, and they do not contain forests.

#### **6.5. Health characteristic**

Malaria, HIV and AIDS and tuberculosis are major diseases which cause deaths in the Zanzibar community. Efforts to improve healthcare quality have been impeded by inadequate numbers of health providers and inadequate availability of essential medicine, diagnostic equipment and facilities as well as improved water sources at health facilities. Another cause of death in Zanzibar is traffic accidents. Traffic risks are high because roads are overwhelmed by the number of vehicles. On the other hand, the project likely to accelerate the spread of HIV and AIDS due to social interaction. The



project shall ensure that First Aid Kits and water supply are available to increase the health care quality in project sites.

#### **6.6. Gender-based violence**

According to the social-cultural setup in Zanzibar, this project will be associated with the risk related to Gender and Gender-based violence policies. Gender inequality continues to be one of the notable human rights violations within Zanzibar society. Gender-based violence is violence directed against a person because of their gender. Both women and men experience gender-based violence but the majority of violence is inflicted on women and girls, by men. Many forms of violence against women in Zanzibar are rooted in power inequalities between women and men. There are also two other categories of violence: domestic violence and (sexual) harassment.

#### **6.7. Gender discrimination**

Formal Sector Employment and Earning Survey indicated that more males (56%) were employed in formal institutions such as Government, Public and Registered Private institutions (OCGS, 2016). The reported cases of violence against children increased by more than 50%. Girls were more victims than boys-one in every nine reported violence cases was against girls (OCGS) 2018. From these statistics, gender inequality in Zanzibar was still a challenge. Gender inequality is a result of gender discrimination/unequal treatment of men and women in various social economic activities. This project will ensure that there is the involvement of women in project activities.

#### **6.8. Child labour**

The child labour rate in Zanzibar is 5.6 per cent with more boys (6.8 per cent) than girls (4.3 per cent). However, children in rural were more engaged in child labour (8.4 per cent) than in urban (1.3 per cent). Generally, boys were more affected than girls in both rural and urban areas. Among those who are engaged in child labour, 52.7 per cent were engaged in hazardous work, of whom 87.2 per cent live in rural areas (Zanzibar Socio- Economic Survey, 2014). Most of the children were working for a good upbringing and impairing of skills. This reason was mainly for girls while for boys majority were working to supplement household income where they are living. The majority of children were working in dust, fumes and gases without using protective gear. Child labour also affects the attendance of children at school. Notable progress has been achieved in Zanzibar in fighting against child labour. The first main effort was to ratify all important conventions relate to fighting against child labour. The second effort was to domesticate related international conventions in Zanzibar laws including labour laws such as employment Act No. 11 of 2005 and child Act No. 6 of 2011. The LMP will specify the minimum age for employment or engagement in connection with the project. The LMP has provided that no one under the age of 18 may be employed or

engaged in connection with the project. The MAINL-PIT will conduct regular monitoring of project workers concerning health, working conditions, hours of work, minimum age, and the other requirement of national law and ESS2.

#### **6.9. Economic Infrastructure**

- Energy sources and status

Zanzibar relies solely on electricity from Tanzania-mainland. The power from TANESCO is purchased under separate PPAs for Unguja and Pemba. Unguja and Pemba purchase power from TANESCO through submarine cables of 100 MW and 25 MW capacity, respectively. Unguja was first connected to the mainland national grid in 1980 through a 45MW 132kV submarine cable, which is based on obsolete technology. The new 100MW 132kV submarine cable (funded through an MCC grant) was installed in 2013 when the electricity demand was approaching its maximum capacity. Pemba was first electrified in 1958 and relied on island-based diesel gen-sets until it was connected to the mainland through a 25MW 33kV submarine cable in 2010 (funded through a Norwegian grant). Field visits revealed that most of the project sites have power supplies important irrigation water pumping.

- Road networks

Zanzibar has roughly 1,234 km of main, urban and rural roads. Zanzibar's Ministry of Infrastructure and Communications (MOIC) is responsible for the construction and maintenance of the road network in Zanzibar. About 70 per cent of Zanzibar's roads are located on Unguja Island, which contains the main urban centre and the main port and plays host to large tourism industry. Although this gives Unguja one of the densest road networks in Africa, most of the roads were constructed after the revolution in 1964 and have not been sufficiently maintained.

#### **6.10. Social Infrastructure and Services**

- Health Services

Zanzibar Island's main public hospital is Mnazi Moja General Hospital, on the south side of stone town but most visitors and locals use a private facility. Options include Zanzibar Medical Group, a small private clinic, and Zanaid Clinic. Measuring accessibility to health care, therefore, contributes to a wider understanding of the performance of health systems within Zanzibar.

Recognizing the fact that Zanzibar has a relatively small population with a limited health budget, the Government cannot afford large investments to develop advanced medical expertise and acquire advanced technologies. Although there was a significant improvement in life expectancy, efforts to improve healthcare quality have been impeded by inadequate numbers of health providers and inadequate availability of

essential medicine, diagnostic equipment and facilities as well as improved water sources at health facilities. The proposed project shall improve health care provision at the irrigation scheme level by establishing health clubs and provision of first aid kits and waste supplies.

- **Sanitation**

Adequate sanitation is a basic human right, and access to it for every person is compelling. It focuses on the provision of sanitary services that ensure the safe management of human excreta from the toilet to containment and storage, safe use, and disposal to reduce adverse effects on users and other people. Lack of adequate sanitation is a major cause of infectious diseases, such as cholera, typhoid, and dysentery among others. In the irrigation schemes perspectives, there are sanitation facilities such as ventilated improved pit latrines, pit latrines with slabs, pit latrines without a slab or platform. The project will improve sanitation facilities to ensure they are complying with sanitary standard

- **Waste disposal sites**

It is obvious that rehabilitation of irrigation infrastructures are associated with production of solid and liquid wastes generated from civil work and domestic ones. These may include paper and plastics, cans and bottles, construction materials remain such pieces of timber, stones, aggregates, and sands. The demolition or decommission of the project temporary camps, equipment and fixtures at contractor's camp site and related infrastructure will result in large quantities of solid waste. Thus, the contractor shall be responsible for collection and disposal of such materials. In addition, there shall be health education on sanitation and solid waste management within the community in order to prevent human health risk and environmental pollution. Workers will be encouraged to collect and store non-usable material at designated site so that can easily be taken and transported into official disposal site. After rehabilitation works, the farmers will be trained on proper handling and disposal of hazardous materials. The hazardous and non-hazardous wastes will be treated and disposed in authorized facilities following standard national regulations as well as WBG ESF requirements.

## **7. POTENTIAL ENVIRONMENT AND SOCIAL RISKS AND MITIGATION**

The section provides potential environmental and social risks and impacts associated with the project components. The project will finance rehabilitation of seed farm infrastructure, repair storehouses, and drying, rehabilitate four farmer's service centers; Rehabilitate irrigation canals, four diversion structures, drainage canals drilling four boreholes and rehabilitation of four boreholes and rehabilitation of farm roads. The potential social and environmental risks and impacts are expected to be significant or difficult to avoid or mitigate, and few will be short-term and localized include GBV, labour-related risks, and community exclusion.

### **7.1. ENVIRONMENTAL AND SOCIAL RISKS AND IMPACTS AND MITIGATION MEASURES**

Although the project is categorized as substantial as per the WB ESF due to capacity issues, most of the environmental impacts associated with project components are deemed to be low to moderate in magnitude. Nearly all the identified environmental impacts and risks can be easily managed through the development of project specific and robust ESMP, and the application of good engineering design and construction practices. Project designs shall take into consideration of consultation and participation of stakeholders. The effectiveness of mitigation measures shall be followed by a quarterly monitoring programme and where necessary, their compliance with the applicable legislation and the World Bank ESF shall be assessed. Additional instruments as per the WB ESF such as the Resettlement Policy Framework, Stakeholder Engagement Plan, Environmental and Social Commitment Plan and Labor Management Procedures will also strengthen the readiness to respond to any risks. The Project shall comply with WB EHS General Guidelines. The potential Environmental and Social risks and impacts, and mitigation measures are described in the table 7 below.

**Table 7. Potential Environmental and Social risks/impacts, and mitigation measures**

Impacts/Risks	Mitigation Measures	Project Phase	Responsible Entity	Deadline	Monitoring Frequency	Budget
Occupational Safety and Health impacts	<p><b><u>Project preparatory phase:</u></b>  <b><u>Infrastructure and equipment design and safety: Mitigation measures</u></b></p> <ul style="list-style-type: none"> <li>• Structural elements of a project shall be designed and constructed by competent professionals and certified or approved by competent authorities or professionals. The Structural design shall consider climate change considerations, as appropriate. However, the project shall not be engaged in a dam construction or related structure and no dam is existing in the proposed subproject sites.</li> <li>• Where the project includes new buildings and structures that will be accessed by members of the public, the MAINL shall consider the incremental risks of the public’s potential exposure to operational accidents or natural hazards, including extreme weather events. Where technically and financially feasible, the MAINL shall also apply the concept of universal access to the design and construction of such new buildings and structures so that the buildings and structures provide reasonable accommodation for persons with disabilities, women, and elder</li> </ul>	Pre-Constructi on phase	MAINL E&S risk and impacts managem ent teams	Before the commenceme nt of the works under component 2.1 and 2.2	Quarterly monitoring and Verificatio n Report	The cost will be estimated by ESIA/ES MP

Impacts/Risks	Mitigation Measures	Project Phase	Responsible Entity	Deadline	Monitoring Frequency	Budget
	<p>people.</p> <ul style="list-style-type: none"> <li>• There shall be a development of the LMP in line with ESS2 measures and consideration of relevant requirements of the WBH EHS Guidelines to improve occupational safety and avoid health impact of workers and laborer's</li> </ul> <p><b><u>Project preparatory phase: Safety of services</u></b></p> <ul style="list-style-type: none"> <li>• Where the project involves provision of services to communities, the MAINL shall establish and implement appropriate quality management systems to anticipate and minimize risks and impacts that such services may have on community health and safety. In such circumstances, the MAINL will also apply the concept of universal access, including consideration of a reasonable accommodation into building and structure facilities for persons with disabilities, women, and older people, where technically and financially feasible.</li> </ul> <p><b><u>Project preparatory phase: Emergency Preparedness and Response</u></b></p> <ul style="list-style-type: none"> <li>• MAINL shall conduct a risk hazard assessment (RHA) to projects having</li> </ul>					

Impacts/Risks	Mitigation Measures	Project Phase	Responsible Entity	Deadline	Monitoring Frequency	Budget
	<p>potential to generate emergency events, as part of the environmental and social assessment undertaken pursuant to ESS1. Based on the results of the RHA, the MAINL shall prepare an Emergency Response Plan (ERP) in coordination with the relevant local authorities and the affected community, and shall consider the emergency prevention, preparedness and response arrangements put into place with project workers under ESS2. ERP shall include, as appropriate: (a) engineering controls (such as containment, automatic alarms, and shutoff systems) proportionate to the nature and scale of the hazard; (b) identification of and secure access to emergency equipment available on-site and nearby; (c) notification procedures for designated emergency responders; (d) diverse media channels for notification of the affected community and other stakeholders; (e) a training program for emergency responders including drills at regular intervals; (f) public evacuation procedures; (g) designated coordinator for ERP implementation; and (h) measures for restoration and cleanup of the environment following any major accident</p>					

Impacts/Risks	Mitigation Measures	Project Phase	Responsible Entity	Deadline	Monitoring Frequency	Budget
	<p><b><u>Construction phase: General Health and Safety issues and mitigation measures</u></b></p> <ul style="list-style-type: none"> <li>• The project shall undertake identification of OHS mitigation measures which shall be based on the mitigation hierarchy including elimination and or substitution measures, engineering controls, administrative controls, and PPEs - appropriate working gear (such as nose and mouth masks, ear plugs and clothing) and good construction site management shall be provided,</li> <li>• During construction, the contractor shall ensure that the construction site is fenced and hygienically kept with adequate provision of facilities including waste disposal receptacles, sewage, firefighting, and clean and safe water supply.</li> <li>• A well-stocked first aid kit (administered by medical personnel) shall be maintained at the construction site. The medical personnel shall also be responsible for the primary treatment of ailments and other minor medical cases as well as providing health education to the workforce.</li> <li>• Reporting mechanisms for the public to register concerns or complaints regarding</li> </ul>					



Impacts/Risks	Mitigation Measures	Project Phase	Responsible Entity	Deadline	Monitoring Frequency	Budget
	<p>perceived risks to their health and safety due to the construction operation shall be put in place.</p> <ul style="list-style-type: none"> <li>• Emergency contact details in the event of an accident shall be provided.</li> <li>• Training all contractor staff in emergency planning and spill response.</li> <li>• Developing a detailed health and safety plan and training all contractor staff on the plan.</li> <li>• Surfaces, structures, and installations should be easy to clean and maintain, and not allow for accumulation of hazardous compounds.</li> <li>• Buildings should be structurally safe, provide appropriate protection against the climate, and have acceptable light and noise conditions.</li> <li>• Fire resistant, noise-absorbing materials should, to the extent feasible, be used for cladding on ceilings and walls.</li> <li>• Floors should be level, even, and non-skid.</li> <li>• Heavy oscillating, rotating or alternating equipment should be in dedicated buildings or structurally isolated sections.</li> </ul>					
Community health, safety risks and	<ul style="list-style-type: none"> <li>• GBV, SEA and sexual harassment training before working on the Project which shall be provided by the Community Social Officers</li> </ul>	Construction phase	MAINL E&S risk and	Before the commencement of the works	Quarterly monitoring and	The cost will be estimated

Impacts/Risks	Mitigation Measures	Project Phase	Responsible Entity	Deadline	Monitoring Frequency	Budget
<p>security from the handling, transport, and disposal of construction wastes</p>	<p>from the LGA and on the Child and Gender desk of the police. This will include information on the GBV reporting mechanisms.</p> <ul style="list-style-type: none"> <li>• Institute good site practices including preventing public access to the construction site by securing equipment and demarcating project boundaries using warning signs with appropriate text (local language) and graphic displays.</li> <li>• Institute traffic management and safety programme including, training, and testing of heavy vehicles operators and drivers, enforcement of speed limits, maximum loading restrictions and compliance with all Zanzibar transportation law and standards as well as road safety standards in line with ESF requirement.</li> <li>• Awareness campaigns/education on HIV and STDs and COVID-19 shall be provided to workers and the community.</li> <li>• Low-skilled workers shall be hired around the project jurisdiction, if necessary, to reduce the population of foreigners.</li> <li>• Protect stockpiles of friable material subject to wind through wetting.</li> <li>• Cover loads with friable material during</li> </ul>		<p>impacts management teams assisted by Contractor</p>	<p>under 2.1 and 2.2</p>	<p>Verification Report</p>	<p>by ESIA/ESMP</p>

Impacts/Risks	Mitigation Measures	Project Phase	Responsible Entity	Deadline	Monitoring Frequency	Budget
	<p>transportation.</p> <ul style="list-style-type: none"> <li>• Contractors will be provided with signage on issues such as HIV/AIDS, GBV, COVID 19 etc. which will be posted at worksites.</li> <li>• Contractors/workers shall attend awareness education sessions on disease transmission notably HIV/AIDS, COVID-19 and malaria and will implement the control measures needed to protect public health.</li> <li>• Contractors/workers shall ensure good housekeeping arrangements on-site to avoid creating breeding grounds for rodents and insects which can spread diseases.</li> <li>• Contractors shall ensure access to potable water for all workers.</li> <li>• Contractors shall be required to abide by national law about vehicle conditions and movements and behaviour of drivers.</li> <li>• Signage shall be erected at construction sites to advise the community of the dangers of entering the site and appropriate barricades (fencing, tape etc) shall be put in place, especially around quarries, trenches, etc</li> <li>• The contractor shall be instructed to ensure waste disposal from construction materials are in line with ESF requirements</li> </ul>					

Impacts/Risks	Mitigation Measures	Project Phase	Responsible Entity	Deadline	Monitoring Frequency	Budget
Road Traffic Impact Management	<ul style="list-style-type: none"> <li>Develop and implement a road traffic and community safety management plan as part of each work package contract before the commencement of the rehabilitation and or construction works</li> </ul>	Construction phase	MAINL E&S risk and impacts management teams assisted by Contractor	Before the commencement of the works under component 3	Quarterly monitoring and Verification Report	The cost will be estimated by ESIA/ESMP
Road accidents resulting from the transportation of materials from the source to the construction site include incident reporting requirements and ESIRT procedures	<ul style="list-style-type: none"> <li>Enforcement of speed limits shall be adhered as prescribed by national responsible authorities.</li> <li>Contractors shall be required to abide by national law about vehicle conditions and movements and behavior of drivers.</li> <li>Signage will be erected at construction sites to advise the community of the dangers of entering the site and appropriate barricades (fencing, tape etc.) will be put in place, especially around quarries, trenches, etc.</li> <li>The contractor shall be required to prepare and submit report of road incidents with a consideration of ESIRT procedures which shall be oriented to the contractors before engaged into rehabilitation assignments.</li> </ul>	Construction phase	MAINL E&S risk and impacts management teams assisted by Contractor	Before the commencement of the works under component 3	Quarterly monitoring and Verification Report	The cost will be estimated by ESIA/ESMP
Increased incidences of	<ul style="list-style-type: none"> <li>A safety, health and environment induction course shall be conducted to all workers and</li> </ul>	Construction phase	MAINL E&S risk	Before the commencement	Quarterly monitoring	The cost will be

Impacts/Risks	Mitigation Measures	Project Phase	Responsible Entity	Deadline	Monitoring Frequency	Budget
diseases and ill health	<p>contractors, putting more emphasis on HIV/AIDS, which has become a national disaster as well as other emerging pandemics such as COVID-19 and dengue fever.</p> <ul style="list-style-type: none"> <li>The project shall include an information education and communication component (IEC) in its budget. This will help to raise more awareness of HIV/AIDS and means to suppress its incidence.</li> <li>Environmental sanitation systems shall be improved.</li> <li>First Aid Kits shall be provided at each subproject to enhance healthcare</li> </ul>		and impacts management teams assisted by Contractor	nt of the works	and Verification Report	estimated by ESIA/ESMP
Increased pressure on social services/ facilities and utilities	<ul style="list-style-type: none"> <li>Measures on conservative use of water, introduction of rainwater harvesting systems, and extraction of groundwater resources shall be explored.</li> </ul>	Construction and operation phase	subproject	Before the commencement of the works and during project implementation	Quarterly monitoring and Verification Report	The cost will be estimated by ESIA/ESMP
Gender-based violence	<ul style="list-style-type: none"> <li>The project shall prepare a GBV Action Plan that ensures a project awareness-raising strategy (for workers and community members), a list of GBV service Providers to which GBV survivors will be referred, revisions to the GRM to ensure it can</li> </ul>	Construction and operation phase	MAINL E&S risk and impacts management teams	Before the commencement of the works	Quarterly monitoring and Verification Report	The cost will be estimated by ESIA/ES

Impacts/Risks	Mitigation Measures	Project Phase	Responsible Entity	Deadline	Monitoring Frequency	Budget
	address GBV complaints, and information on GBV allegation procedures in the workplace. The government of Zanzibar has a regulation that governs gender violence which this project shall adhere to it during its implementation.					MP
Gender discrimination	<ul style="list-style-type: none"> <li>This project shall ensure that there is the involvement of women in project activities.</li> </ul>	Construction and operation phase	MAINL E&S risk and impacts management teams	Before the commencement of the works	Quarterly monitoring and Verification Report	The cost will be estimated by ESIA/ESMP
Child labour	<ul style="list-style-type: none"> <li>MAINL shall conduct regular monitoring of project workers about health, working conditions, hours of work, minimum age, and the other requirement of national law.</li> <li>Work and collaborate with local authorities and irrigation scheme committee in the area to control school dropout</li> <li>Create awareness raising to the communities on the importance of education for the children,</li> <li>The local authorities should develop bylaws to control the engagement of children in petty business or work in project-related activities</li> </ul>	Construction phase	MAINL E&S risk and impacts management teams	Before the commencement of the works	Quarterly monitoring and Verification Report	The cost will be estimated by ESIA/ESMP
Increased level	<ul style="list-style-type: none"> <li>Establish community-based security in</li> </ul>	Construction	MAINL	Before the	Quarterly	The cost

Impacts/Risks	Mitigation Measures	Project Phase	Responsible Entity	Deadline	Monitoring Frequency	Budget
of crimes	collaboration with Shehas. <ul style="list-style-type: none"> <li>• The contractor shall establish his security to protect his properties and should establish community policing to support insufficient police force.</li> <li>• The community shall be encouraged to participate in security matters by providing information on suspects.</li> <li>• The cooperation of local people shall be instilled to lessen criminal incidents and maintain the security of people and their properties.</li> </ul>	on phase	E&S risk and impacts management teams	commencement of the works	monitoring and Verification Report	will be estimated by ESIA/ESMP
<b>Environmental risks and impacts, and mitigation measures</b>						
<b>Rehabilitation of irrigation of infrastructures, construction of irrigation scheme facilities and borehole drilling works</b>						

Impacts/Risks	Mitigation Measures	Project Phase	Responsible Entity	Deadline	Monitoring Frequency	Budget
Vegetation and soil erosion degradation of Exposed Surfaces	<ul style="list-style-type: none"> <li>• Rehabilitation and or construction shall be done as per engineering design and procedure of which a maximum requirement of compaction strength is achieved during the construction. That is the maximum dry density (MDD) specified in the design manual by the consultant.</li> <li>• Contractor should be informed to take extra care to clear vegetation in area where work shall be undertaken to avoid soil erosion. In addition, placement of sediment traps and other relevant mitigation measures to mitigate erosion impacts shall be considered.</li> <li>• Where tree(s) necessitate to be cut, to open space or access to machineries (e.g., drilling trucks), tree cutting permits shall be applied from the authorized agency.</li> <li>• Construction of irrigation scheme facilities shall be placed within the scheme boundaries and shall be placed where shall be no critical vegetation to avoid biodiversity loss or hill terrain to avoid erosion.</li> <li>• Maintain gravel fill and/or re-vegetate around the structures.</li> <li>• Unnecessary ground clearance and sensitive re-alignments shall be avoided.</li> <li>• Directing flow to properly designated</li> </ul>	Construction phase	MAINL E&S risk and impacts management teams	Before the commencement of the works	Quarterly monitoring and Verification Report	The cost will be estimated by ESIA/ESMP



Impacts/Risks	Mitigation Measures	Project Phase	Responsible Entity	Deadline	Monitoring Frequency	Budget
	<p>channels.</p> <ul style="list-style-type: none"> <li>All excavation works shall be properly backfilled and compacted. and,</li> <li>Most of the construction activities shall be done during dry weather or season</li> </ul>					
Increased waste generation during rehabilitation and or construction works.	<ul style="list-style-type: none"> <li>There shall be health education on sanitation and solid waste management within the community to prevent human health risk and environmental pollution.</li> <li>Workers will be encouraged to collect and store non-usable material at designated site so that can easily be taken and transported into authorized engineered landfill site.</li> <li>Optimum care shall be taken to ensure that no waste is deliberately dumped into the water or open areas in the subproject sites</li> </ul>	Construction phase	MAINL E&S risk and impacts management teams	Before the commencement of the works	Quarterly monitoring and Verification Report	The cost will be estimated by ESIA/ESMP
The exploitation of borrow PCUs/quarries and other natural resources	<ul style="list-style-type: none"> <li>The exploitation of construction materials shall take place from authorized sources only,</li> <li>Restoration of the borrow PCUs/quarries after use constituting of levelling the area and seeding or planting of trees and/or grasses shall be done by Department of Forestry in collaboration with local government. If appropriate, the levelled area shall be left for</li> </ul>	Preparatory phase and Construction phase	MAINL E&S risk and impacts management teams	Before the commencement of the works	Quarterly monitoring and Verification Report	The cost will be estimated by ESIA/ESMP

Impacts/Risks	Mitigation Measures	Project Phase	Responsible Entity	Deadline	Monitoring Frequency	Budget
	natural re-vegetation or planted with agricultural crops proposed by district agricultural officer					
Contamination and /impaired quality of receiving body – land and water.	<ul style="list-style-type: none"> <li>• An efficient collection and disposal system based on the principles of reduction, re-use, and recycling of materials, shall be instituted at project areas.</li> <li>• Introduction of waste disposal bins, and warning notices, posted at strategic points.</li> <li>• No, on-site burial or open burning of solid waste shall be permitted.</li> <li>• Wastes not suitable for incineration and general municipal waste dumping (e.g., plastics, rubbers, tires, etc.) shall be removed for recycling, treatment, and/or disposal by a licensed contractor as appropriate.</li> <li>• Instructions to the contractor to put on his/her methodologies for handling hazardous waste such as oils, lubricants, and non-combustible waste during the bidding process.</li> <li>• The contractor shall be instructed and oriented with ESF to ensure waste disposal requirements are in line with ESF requirements and GIIP.</li> </ul>	Construction phase	MAINL E&S risk and impacts management teams assisted by consultant	Before the commencement of the works	Quarterly monitoring and Verification Report	The cost will be estimated by ESIA/ESMP
Increased Solid waste management	<ul style="list-style-type: none"> <li>• All materials which can be reused shall be reused.</li> </ul>	Construction and operation	MAINL E&S risk and	Before the commencement of the works	Quarterly monitoring and	The cost will be estimated

Impacts/Risks	Mitigation Measures	Project Phase	Responsible Entity	Deadline	Monitoring Frequency	Budget
problem in project areas	<ul style="list-style-type: none"> <li>Materials that cannot be reused shall be sent to an authorized dumpsite or Engineered landfill</li> <li>The contractor shall have adequate facilities for handling the construction waste. Topsoil shall be stockpiled and used for reclamation or re-vegetation at the site during landscaping.</li> <li>All hazardous waste (including asbestos) shall be handled by registered authorized dealers recognized by ZEMA. The project in collaboration of ZEMA, shall consider the development of specific procedures for the management of asbestos-containing material, if found as an environmental liability issue</li> </ul>	phase	impacts management teams assisted by Contractor		Verification Report	by ESIA/ESMP
Increase in Wastewater Management problems.	<ul style="list-style-type: none"> <li>Sewage (Human liquid waste from toilet): this type of waste shall be treated in the Septic Tank and then disposed into the Soak away pit at site. wastewater discharge standards which are in line with WBG ESH Guidelines shall be applied.</li> <li>The contractor shall be instructed to put in place an acceptable procedure for handling hazardous waste such as oils, lubricants, and non-combustible waste.</li> <li>Training on waste management shall be</li> </ul>	Construction and operation phase	MAINL E&S risk and impacts management teams assisted by Contractor	Before the commencement of the works	Quarterly monitoring and Verification Report	The cost will be estimated by ESIA/ESMP

Impacts/Risks	Mitigation Measures	Project Phase	Responsible Entity	Deadline	Monitoring Frequency	Budget
	<p>done to all personnel, operators, and service providers.</p> <ul style="list-style-type: none"> <li>• Contractor shall be instructed that all wastewaters from tested boreholes are well managed and not discharged to settlements or farmers crops to avoid damage to settlements and crops. Wastewater discharge standards in line with WBG ESH Guidelines will be adhered</li> </ul>					
Dust	<ul style="list-style-type: none"> <li>• Protect stockpiles of friable material subject to wind through wetting.</li> <li>• Cover loads with friable material during transportation.</li> <li>• Restrict speed on loose surface roads to 30 km/hr during dry or dusty conditions.</li> <li>• Douse with water work sites with loose open soil to reduce dust generation when necessary.</li> </ul>	Construction phase	MAINL E&S risk and impacts management teams assisted by Contractor	Before the commencement of the works	Quarterly monitoring and number of complaints against dust and noise	The cost will be estimated by ESIA/ESMP

Impacts/Risks	Mitigation Measures	Project Phase	Responsible Entity	Deadline	Monitoring Frequency	Budget
Impairment of air quality due to emissions	<p>The project shall apply air quality standards which are in line with WBG ESH Guidelines; to ensure this is happening:</p> <ul style="list-style-type: none"> <li>• All equipment shall be maintained in good running condition and equipment, which generates excessive black smoke shall not be used.</li> <li>• Enforce vehicle road restrictions to avoid excessive emissions from engine overloading, where practical switching off engines shall be done when machines are not in use.</li> <li>• There shall be a routine inspection of equipment.</li> <li>• Trucks transporting materials shall be fully covered. and,</li> <li>• Turn off engines to reduce idling.</li> </ul>	Construction phase				The cost will be estimated by ESIA/ESMP
Contribution to climate change impacts	<ul style="list-style-type: none"> <li>• Equipment shall be maintained in good running condition and equipment, which generates excessive black smoke shall not be used.</li> <li>• Enforce vehicle road restrictions to avoid excessive emissions from engine overloading, where practical switching off engines will be done when machines are not in use.</li> </ul>	Construction and operation phase	MAINL E&S risk and impacts management teams assisted by Contractor	Before the commencement of the works after the cessation of construction activities	Quarterly monitoring and number of complaints against dust and noise	The cost will be estimated by ESIA/ESMP

Impacts/Risks	Mitigation Measures	Project Phase	Responsible Entity	Deadline	Monitoring Frequency	Budget
	<ul style="list-style-type: none"> <li>• There shall be a routine inspection of equipment.</li> <li>• Turn off engines to reduce idling.</li> </ul>					
Additional risks related to flooding, droughts, and other relevant natural disaster risks	<ul style="list-style-type: none"> <li>• Ensure the rehabilitation of irrigation infrastructures follow approved engineering designs to avoid flooding and other relevant natural disaster risks such as extensive soil erosion. Application drought resistance varieties', salt tolerance varieties and Smart Climate Agriculture Technologies. Trees and extensive vegetation clearance shall be avoided not to cause drought scheme and other related natural disasters.</li> </ul>	Construction phase	MAINL E&S risk and impacts management teams assisted by Contractor	Before the commencement of the works	Quarterly monitoring and Verification Report	The cost will be estimated by ESIA/ESMP
Increase noise level	<ul style="list-style-type: none"> <li>• Vehicles carrying construction materials shall be restricted to work during nighttime only.</li> <li>• Machine operators in various sections with significant noise levels shall be provided with noise protective gear.</li> <li>• MAINL shall include in tenders, employment contracts, subcontractor agreements and work method statements clauses that assure the minimization of noise and compliance with directions from management to minimize noise.</li> <li>• Ensure that site managers periodically check</li> </ul>	Construction phase	MAINL E&S risk and impacts management teams assisted by Contractor	Before the commencement of the works	Quarterly monitoring and Verification Report	The cost will be estimated by ESIA/ESMP

Impacts/Risks	Mitigation Measures	Project Phase	Responsible Entity	Deadline	Monitoring Frequency	Budget
	<p>the site, nearby residences and other sensitive receptors for noise problems so that solutions can be quickly applied.</p> <ul style="list-style-type: none"> <li>• Avoiding the use of radios and stereos outdoors and the overuse of public address systems dwellers can be affected.</li> <li>• Avoid shouting and minimize talking loudly and slamming vehicle doors.</li> <li>• The contractor shall be required to comply with Occupational Health and Safety procedures by ensuring that machinery is well maintained and properly fitted with exhaust mufflers to minimize noise and vibrations from trucks transporting materials. In addition, contractors shall be required to comply with air quality standards which in line with WBG ESH Guidelines.</li> </ul>					
Groundwater Water pollution	<ul style="list-style-type: none"> <li>• Toilets shall be placed far from underground water sources</li> <li>• Wastewater from irrigation schemes shall be discharged to the natural wastewater treatment system.</li> <li>• Wastewater from toilets shall be treated in the Septic Tank and then disposed into the Soak away pit at site.</li> <li>• All wastewater treatment shall follow the requirement of WBG EHS guidelines.</li> </ul>	Operation phase	MAINL/PCU	During implementation	Quarterly monitoring and Verification Report	The cost will be estimated by ESIA/ESMP

Impacts/Risks	Mitigation Measures	Project Phase	Responsible Entity	Deadline	Monitoring Frequency	Budget
Biodiversity impacts (Loss of flora and fauna)	<ul style="list-style-type: none"> <li>• Clearance of patches of native forest remaining in the neighborhood of the proposed project shall be avoided.</li> <li>• Close supervision of earthworks shall be observed to confine land clearance within the project site.</li> <li>• An appropriate landscaping programme to help in the re-vegetation of part of the project area after construction shall be designed and implemented.</li> <li>• The site where the proposed activities under project subcomponents 2.1 and 2.2 shall have no impact on natural resources because, all rehabilitation of the irrigation infrastructure will be exercised within the irrigation scheme sites where no new vegetation clearance would take place.</li> <li>• The ESIA process shall consider biodiversity and natural resources during project design and implementation and appropriate mitigation measures adopted in line with ESS6 requirement. In addition, application of the mitigation hierarchy for the definition of biodiversity mitigation measures and development of Biodiversity Management Plans shall be considered in case of significant impacts.</li> </ul>	Operation phase	MAINL/PCU	During implementation	Quarterly monitoring and Verification Report	The cost will be estimated by ESIA/ESMP



Impacts/Risks	Mitigation Measures	Project Phase	Responsible Entity	Deadline	Monitoring Frequency	Budget
Increased storm water generation and overflow	<ul style="list-style-type: none"> <li>The design of storm water drainage shall be given a high priority.</li> <li>Where feasible, rainwater harvesting shall be used in proposed project sites to minimize the generation of surface runoff.</li> </ul>	Operation phase	MAINL/PCU	During implementation	Quarterly monitoring and Verification Report	The cost will be estimated by ESIA/ESMP
<b><i>Positive social risks and impacts, and enhancement measures</i></b>						
Job creation	<ul style="list-style-type: none"> <li>Employment shall be on equal opportunities for all genders and priority will be given to the youths and women from the local community.</li> <li>Youths and women shall be employed as service provider such power tiller operators, transplanners, harvesters, weeders etc.</li> <li>Increased commercial and social activities around targeted scheme</li> <li>Provide good security within the project area and area of influence.</li> <li>Create conducive business opportunities for attracting investments during rehabilitation work.</li> </ul>	Operation phase	MAINL/PCU	During implementation	Quarterly monitoring and Verification Report	The cost will be estimated by ESIA/ESMP

Impacts/Risks	Mitigation Measures	Project Phase	Responsible Entity	Deadline	Monitoring Frequency	Budget
<b><i>Negative Social Impacts and mitigation measures</i></b>						
Community Health and Safety	<ul style="list-style-type: none"> <li>• A safety, health and environment induction course shall be conducted for all students and teachers, putting more emphasis on HIV/AIDS, which has become a national disaster as well as other emerging pandemics such as COVID-19 and dengue fever.</li> <li>• The project shall include an information education and communication component (IEC) in its budget. This will help to raise more awareness of HIV/AIDS and means to suppress its incidence.</li> <li>• Environmental sanitation systems shall be improved.</li> <li>• First Aid Kits shall be provided at each subproject irrigation scheme to enhance healthcare.</li> </ul>	Operation phase	MAINL/PCU	During implementation	Quarterly monitoring and Verification Report	The cost will be estimated by ESIA/ESMP
Increased pressure on social services/facilities and utilities	<ul style="list-style-type: none"> <li>• Use of water conservatively by instituting technologies and awareness-raising notices to users, etc.</li> <li>• Use existing water resources for use during project rehabilitation exercise and any new extraction of groundwater sources should follow existing laws and regulations as govern by ZAWA.</li> </ul>	Operation phase	MAINL/PCU	During implementation	Quarterly monitoring and Verification Report	The cost will be estimated by ESIA/ESMP

Impacts/Risks	Mitigation Measures	Project Phase	Responsible Entity	Deadline	Monitoring Frequency	Budget
Gender-based violence	<ul style="list-style-type: none"> <li>The project will prepare a GBV Action Plan that ensures a project awareness-raising strategy (for workers and community members), a list of GBV service Providers to which GBV survivors will be referred, revisions to the GRM to ensure it can address GBV complaints, and information on GBV allegation procedures in the workplace.</li> </ul>	Operation phase	MAINL/PCU	During implementation	Quarterly monitoring and Verification Report	The cost will be estimated by ESIA/ESMP
Gender discrimination	This project will ensure that there is the involvement of an equal percentage of women and men in project activities. Effluents					
<b><i>Risks and Impacts, and mitigation measures on the physical environment</i></b>						
<b><i>Negative environmental risks and impacts</i></b>						
Groundwater Water pollution	<ul style="list-style-type: none"> <li>Toilets shall be placed far from underground water sources</li> <li>Wastewater from irrigation schemes shall be discharged to the natural wastewater treatment system.</li> <li>Wastewater from toilets shall be treated in the Septic Tank and then disposed into the Soak away pit at site.</li> <li>All wastewater treatment shall follow the requirement of WBG EHS guidelines.</li> <li>Project shall prepare IPMP and train farmers on appropriate use agrochemicals to avoid</li> </ul>	Operation phase	MAINL/PCU	During implementation	Quarterly monitoring and Verification Report	The cost will be estimated by ESIA/ESMP

Impacts/Risks	Mitigation Measures	Project Phase	Responsible Entity	Deadline	Monitoring Frequency	Budget
	groundwater pollution					
Groundwater extraction	<ul style="list-style-type: none"> <li>Undertake hydrological survey to assess water availability and determine water table before borehole is drilled</li> </ul>	Operation phase	MAINL/PCU	During implementation	Quarterly monitoring and Verification Report	The cost will be estimated by ESIA/ESMP
Increased storm water generation and overflow	<p>The design of storm water drainage will be given a high priority.</p> <p>Where feasible, rainwater harvesting may be used in proposed project sites to minimize the generation of surface runoff.</p>	Operation phase	MAINL/PCU	During implementation	Quarterly monitoring and Verification Report	The cost will be estimated by ESIA/ESMP
Explore the possibility for desalination	<ul style="list-style-type: none"> <li>Feasibility studies shall be called in to seek using the saltwater into irrigation schemes to reduce undergrounds water extraction to help identify environmental and social risks and impacts and practical mitigation measures</li> </ul>	Operation phase	MAINL/PCU	During implementation	Quarterly monitoring and Verification Report	The cost will be estimated by ESIA/ESMP
Contribution to Climate Change	<ul style="list-style-type: none"> <li>Promote use of renewable energy technologies to minimize carbon dioxide emissions for example use of solar power for water pumping for the use irrigation scheme</li> </ul>	Operation phase	MAINL/PCU	During implementation	Quarterly monitoring and Verification	The cost will be estimated by

Impacts/Risks	Mitigation Measures	Project Phase	Responsible Entity	Deadline	Monitoring Frequency	Budget
	<p>activities to minimize the use of electricity which sourced from hydropower generation.</p> <ul style="list-style-type: none"> <li>Control illegal wood cutting and in case during subproject operations demand trees cut, proper procedure and permits shall be secure prior felling the trees. In addition, application of the mitigation hierarchy for the definition of biodiversity mitigation measures and development of Biodiversity Management Plans shall be considered in case of significant impacts.</li> <li>Replace removed vegetation where appropriate.</li> </ul>				n Report	ESIA/ESMP
<b><i>Positive environmental risks and impacts – enhancement measures</i></b>						
Protection of catchment areas or water sources	<ul style="list-style-type: none"> <li>Support trees and other vegetation planting around water sources available around irrigation schemes to protect water sources</li> </ul>	Operation phase	MAINL/PCU	During implementation	Quarterly monitoring and Verification Report	The cost will be estimated by ESIA/ESMP

## 8. ENVIRONMENTAL AND SOCIAL RISKS AND IMPACTS, AND MITIGATION MEASURES DURING THE DECOMMISSIONING PHASE

The project has identified the following environmental and social risks and impacts that expected to occur during decommissioning phase and put in place mitigation measures;

Table 8: ENVIRONMENTAL AND SOCIAL RISKS AND IMPACTS

Impacts/Risks	Mitigation Measure	Project Phase	Responsible Entity	Deadline	Monitoring Frequency	Budget
<b><i>Social risks and impacts, and Mitigation measures</i></b>						
Loss of employment	<ul style="list-style-type: none"> <li>Seminars shall be conducted on alternative means of livelihood after the termination of job</li> <li>Semi-skilled labours shall be encouraged to use the knowledge and skills they acquired while working with project to find other related jobs to earn means of livelihood.</li> </ul>	Decommissioning phase	MAINL E&S risk and impacts management teams	After completion of the rehabilitation and or construction works	Weekly monitoring and Verification Report	The cost will be estimated by ESIA/ESMP
<b><i>Environmental risks and Impacts and mitigation measures</i></b>						
Loss of aesthetic value due to	<ul style="list-style-type: none"> <li>The debris resulting from the demolition shall either be transported by a licensed waste transporter for dumping at an approved site or</li> </ul>	Decommissioning	MAINL E&S risk and	After completion of the	Weekly monitoring and	The cost will be estimated

Impacts/Risks	Mitigation Measure	Project Phase	Responsible Entity	Deadline	Monitoring Frequency	Budget
haphazard disposal of demolished waste	<p>used as a base material for new construction work.</p> <ul style="list-style-type: none"> <li>All the necessary health and safety measures be implemented including the provision of personal protective equipment such as safety harnesses, helmets, gloves, respirators, safety shoes, coveralls, goggles, and ear protectors.</li> <li>Restoration of the affected land will involve the filling in of any open pits and grading the land to its natural contours, then planting appropriate tree species and undercover vegetation to hold the soil in place and to prevent flooding.</li> </ul>	phase	impacts management teams	rehabilitation and or construction works	Verification Report	by ESIA/ESMP
Noise and Vibration	<ul style="list-style-type: none"> <li>Planning activities in consultation with local communities so that activities with the greatest potential to generate noise are planned during periods of the day that will result in least disturbance.</li> <li>Using noise control devices, such as temporary noise barriers and deflectors for impact and blasting activities, and exhaust muffling devices for combustion engines.</li> <li>Avoiding or minimizing project transportation through community areas.</li> </ul>	Decommissioning phase	MAINL E&S risk and impacts management teams	After completion of the rehabilitation and or construction works	Weekly monitoring and Verification Report	The cost will be estimated by ESIA/ESMP

Impacts/Risks	Mitigation Measure	Project Phase	Responsible Entity	Deadline	Monitoring Frequency	Budget
Occupational Health and Safety	<ul style="list-style-type: none"> <li>• Training of workers in lifting and materials handling techniques in construction and decommissioning projects, including the placement of weight limits above which mechanical assists or two-person lifts are necessary</li> <li>• Planning work site layout to minimize the need for manual transfer of heavy loads</li> <li>• Selecting tools and designing workstations that reduce force requirements and holding times, and which promote improved postures, including, where applicable, user adjustable workstations</li> <li>• Implementing administrative controls into work processes, such as job rotations and rest or stretch breaks</li> <li>• Implementing good house-keeping practices, such as the sorting and placing loose construction materials or demolition debris in established areas away from foot paths</li> <li>• Cleaning up excessive waste debris and liquid spills regularly</li> <li>• Locating electrical cords and ropes in common areas and marked corridors.</li> </ul>	Decommissioning phase	MAINL E&S risk and impacts management teams	After completion of the rehabilitation and or construction works	Daily monitoring and Verification Report	The cost will be estimated by ESIA/ESMP



Impacts/Risks	Mitigation Measure	Project Phase	Responsible Entity	Deadline	Monitoring Frequency	Budget
	<ul style="list-style-type: none"> <li>• Wearing appropriate PPE, such as safety glasses with side shields, face shields, hard hats, and safety shoes</li> <li>• Using a designated and restricted waste drop or discharge zones, and/or a chute for safe movement of wastes from upper to lower levels</li> </ul>					

**9. RISKS AND IMPACTS, AND MITIGATION MEASURES TO TECHNICAL ASSISTANT TO SUPPORT THE EFFECTIVE SYSTEMS AND STRENGTHENING PROJECT MANAGEMENT**

These project components have potential downstream environmental and social implications like vegetation clearance and waste generation which may arise when and if the activities lead to future investments. Mitigation measures may include screening activities followed by a choice of appropriate E&S instruments as detailed in Table 5. Screening (see annex 1) involves the determination of potential E&S impacts or issues associated with the activity while identification of instruments will be based on the E&S issues, following the process described in the ESMF or requirements for additional ToRs to address the risk.

**Table 9: Proposed instruments for TA activities**

TA activity	Instruments to be Prepared
Support the effective implementation of the project	TORs for reviewing the irrigation infrastructure designs and drawings and BOQ TORs for activities in which environmental and social considerations are to be fully incorporated.
Strengthen PCU effectiveness	TORs for enhancing project team competencies and skills in managing the project activities
Systems strengthening and project management	TORs for training/workshops in which environmental and social considerations are to be fully incorporated. TOR for system strengthening and project management

## 10. PROCEDURES TO ADDRESS ENVIRONMENTAL AND SOCIAL ISSUES

### 10.1 ENVIRONMENTAL AND SOCIAL SCREENING OF PROJECT COMPONENTS

Application of the Exclusion Criteria: This is the first step to be carried out by the Project. Each proposed project activity of subproject should be screened based on the exclusion criteria given below, as informed by TFSRP Project objectives on rehabilitation and repair of irrigation infrastructure, seed farm infrastructure and farmers' service centers. If the potential project meets any of the criteria given in the list, then it should be rejected.

The projects will not:

- (i) take place in disaster prone areas (a region or a locale that has been heavily damaged by either natural, technological or social hazards) unless it is meant to mitigate respective disasters;
- (ii) take place in protected areas or buffer zones of protected areas;
- (iii) lead to conversion or degradation of natural or critical habitats such as wetlands; and
- (iv) involve land reclamation (i.e., drainage of wetlands or filling of water bodies to create land).
- (v) take place in areas whereas there is risk for significant impact of ground water resources
- (vi) take place whereas there use of banned chemicals
- (vii) take place in cultural heritage sites

Subprojects that pass the Exclusion Criteria will be subjected to screening using a screening form whose template is included in Annex 1. After screening all high-risk sub-projects will be excluded.

Once the project components have been identified and locations selected, MAINL will have to use this section as the guideline to screen project components and implement the appropriate measures while ensuring adherence to all respective legislative requirements for screening and ESIA as well as WB ESF requirements. The environmental and social screening process helps to foresee whether project components are likely to have potential adverse impacts.

#### 10.2 Screening and review of project sub-components

Once the project component activity is defined and the location selected, the MAINL will compile project conceptual and/or preliminary design details and fill out the Screening Form (Annex I) to decide if environmental and social standards might be applicable to

project activities. This form will be filled out by the Environmental and Social Specialist at MAINL in collaboration with ZEMA and will be approved by the World Bank. This exercise will involve identifying the potential environmental and social impacts and determining their significance. The screening process will eventually identify which project component will or will not require detailed environmental assessments. Issues regarding inconsistency with the requirements stipulated in the environmental and social screening form identified by the reviewers may result in requesting the developer/implementer to find alternatives to the project component design or site which will be also subject to screening and alternative analysis. Thus, the project components should then be requested for re-screening with analyses and resubmission for review. The reviewers will then review it for the second time and if is acceptable then will be recommended for approval. If not acceptable the second time, then it will be sent back to the implementation unit for more improvement. The proposed project components will not comply with the requirements of World Bank ESF specifically the stipulated ESS which applies to the project and Zanzibar's policies will not be cleared for implementation.

Once the project component has been screened and approved by World Bank, the environmental and Social Impact assessment will be conducted based on the Environmental and Social Framework and Zanzibar Environmental Management Act, upon submission to ZEMA of the proposed subproject, the environmental authority shall advise on the nature of information required for approval. Three outcomes of screening at ZEMA are possible: no ESIA required, ESMP, or ESIA required. The borrower will be required to adhere to ZEMA recommendations but also accommodate all comments and inputs received from World Bank. This includes review of ToR for screening exercise as well as reviewing and approving screening reports.

If the environmental and social screening results by ZEMA indicate the potential impacts will be sufficiently managed by the application of proposed mitigation measures in project design, and the project would not cause significant negative impacts, the subproject will not require a full ESIA. ZEMA will recommend approval of the subproject – with conditions like preparation of ESMP. The applicant will be issued a Letter of Approval with conditions (instead of an EIA Certificate) by ZEMA. The project implementer shall hire an environmental expert to prepare the ESMP under the supervision of the project implementation unit with following minimum qualifications:

(i) MSc. in Environmental Management, Environmental Engineering or a related field (ii) 5 years' experience of conducting similar exercise, (iii) Sound technical knowledge of Social issues aspects (iv) Experience working on the preparation, implementation, monitoring and supervision of safeguards documents, such as, ESIA, ESMF and ESMP,

and (v) Experience on working with World Bank-financed projects and familiarity with World Bank safeguards policies and guidelines is highly valuable

The objective of the ESMP is to cater for the environmental and social needs of the project in a simple, responsive, and cost-effective manner that will not unnecessarily overload or impede the project cycle. The ESMP should include: potential environmental and social impacts related to siting, construction, and operation of the project component; mitigation and monitoring measures to address potential impacts; responsibilities for monitoring EMP requirements; training and capacity-building requirements for project officers and communities; and estimated budget.

If a subproject is screened and found to have the potential to cause adverse impacts and the management measures do not suffice; it will be categorized for detailed assessment, and a full ESIA (involving scoping and development of TOR followed by detailed impact assessment study - see annex iii) will be required. Moreover, the project implementer will be responsible for sourcing and paying for the service of environmental and social impact assessment from the consultant and reviewing costs and charges for the certificate at ZEMA. This level of assessment may require a team of experienced and registered Environmental and Social specialists/consultants. Based on the Environmental and Social Framework and the latest project design and preliminary feasibility study.

### 10.3 Approval of project components

Reviewers (safeguard specialist from PIU and ZEMA) will clear the project sub-components designs and proposals that comply with environmental and social management and then submit to World Bank for approval. Generally, the project document is accompanied by a copy of completed environmental and social screening forms. MAINL must involve recognized Environmental Experts or Environmental Management Officers in the approval processes. During the approval processes the following documents must be submitted for consideration; a) Environmental and Social Screening results, b) Environmental checklists, c) Design drawings, d) Environmental clearance or Certificate for project components that undertook ESIA, and e) Environmental and Social Management Plan (ESMP). The World Bank will review and clear subprojects after satisfactorily confirming that the project design has identified and considered environmental and social impacts, mitigation plan, management plan, monitoring plan and institutional measures to be undertaken during the implementation and operation of the subproject.

#### **10.4 Preparation of environmental and social instruments**

An ESIA along with an ESMP, shall be prepared based on the outlines given (see annex iii) which are consistent with the ESF, specifically ESS1. ESIA will address direct, indirect, induced, and cumulative impacts. ESIA and ESMPs will have to be submitted to ZEMA after World Bank approval for obtaining certification. Project components that require ESIA study will follow the steps for undertaking EIA are attached in Annex II. In this situation, environmental procedures (from registration and scoping to the preparation of ESMPs/ ESIA and review, to issuing an EIA certificate) as provided by the Zanzibar Environmental Management Authority will apply. Apart from adhering to report structure and content, the ESIA shall have an attachment on a summary of public consultations carried out, Terms of Reference for which guided preparation of an ESIA and drawings for the project component.

The ESMP (see annex iv & v) shall provide all mitigation measures with associated monitoring measures as well as a responsible institution for the particular action. The ESMP should be implemented during the implementation and operations of all project components. Implementation of the ESMP will be solely the responsibility of MAINL-PIT shall supervise and monitor all components implemented by the Contractor(s). MAINL shall provide the necessary supervisory oversight to ensure the mitigation measures are implemented. All aspects of the project development and operation will be managed to comply with the ESMF and ZEMA regulatory requirements and standards. This will be done to minimize identified adverse environmental and social impacts to levels that will not have a negative impact to the nearby surrounding or area of influence. The ESMP will be one of the crucial documents for submission during the approval of the project component. Annex VI shows a generic Environmental and Social Management Plan for TFSRP. Key aspects of the ESMP are described below.

#### **10.5 Mitigation**

Every mitigation measure shall be well explained and how it will be implemented. In case the implementation will involve other institutions apart from the implementing institution then other institutions shall also be mentioned and their specific roles for implementing the mitigation measure and implementation costs. Mitigation measures shall be included in the bidding documents and civil works contracts. In this case, No civil works can start at project sites before getting certification from ZEMA. No civil works can start before the World Bank's clearance of environmental and social instruments as well.

## 10.6 Monitoring

Monitoring is a tool for assessing the effectiveness of the mitigation measure applied for specific impacts by observing the response of the indicator of the impact. Environmental monitoring activities shall be based on the parameter to be measured/ direct or indirect indicators of emissions, effluents, and resource use applicable to the particular project. Monitoring activities should indicate methods to be used to measure a specific parameter, sampling locations and frequency. Monitoring frequency should be sufficient to provide representative data for the parameter being monitored. The monitoring shall be conducted by trained individuals, following monitoring and record-keeping procedures, and using properly calibrated and maintained equipment. The monitoring data should be analyzed and reviewed at regular intervals and compared with the operating standards based on Tanzanian Standards/WHO standards.

The ESMP should also provide a specific period set for monitoring purposes because some of the impacts are short-term and others are long terms. Therefore, it will reach a time when monitoring of short-term impacts will cease while the long-term one will continue. The ESMP should also be cost-effective to avoid unnecessary costs.

## 10.7 Key environmental and social considerations during project implementation

### Procurement of Contractors

The Project Teams will ensure that all relevant resources (human and financial) for proposed mitigations are complete before initiating project implementation. Execution of project works, and operation of some facilities will be undertaken by respective project implementers through Contractors. Project components 1, 2 and 3 shall be under the supervision of MAINL. The project Team at MAINL will have to work with Procurement Section (responsible for supervising the tendering process) so that environmental and social issues are taken on board and incorporated in the contracts throughout the project life. Contractors must be aware of their obligations upfront and demonstrate their understanding of the requirements and costs and resources for implementing the E&S (including health and safety) requirements and conducting self-monitoring in their proposals. Contractors' contracts will include all the E&S health and safety requirements, including requirements for the contractor to develop Construction Environmental and Social Management Plans (CESMPs) before any construction begins for issues such as noise, traffic, labour and grievances by workers and communities and carrying out self-monitoring during implementation. Labor Management Procedures (LMP), including the need for worker specific GRMs, shall be adhered to by the contractor as well.

## Permits and Notifications

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

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

## Environmental and Social Management Controls by Contractor

The contractor shall ensure that all mitigation measures that are to be implemented during mobilization and construction and operation are attended to according to ESMP and specific work plans. The Contractor shall simultaneously undertake monitoring and reporting of environmental and social performance/improvement of implementation.

Development of project-specific work plans may include:

- Waste Management Plan;
- Health and Safety Plan;
- Traffic Management Plan;
- Stakeholders Engagement Plan; and
- Emergency Response Plan (ERP).
- Biodiversity management plans,
- Integrated pest management plans,
- cultural heritage management plans, etc.

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

- Introduction
- General purpose
- Scope and structure of the document
- Scope of work and sub-project description



- Environmental/Social requirements and controls – Policy and planning, environmental impacts, risks and mitigation, procedures for monitoring the construction processes against environmental/social objectives, pollution control measures, environmental/social risk register, incidents/accidents register
- Consents and permissions
- Management plans – Specific management plans such as noise and vibration, traffic, labor, grievances, etc.
- Health and safety procedures and requirements
- Community consultations / site-specific GRM
- Training
- Incident reporting and investigation
- Emergency response measures/plans
- GBV Action Plans

Occupational Health and Safety and Environmental and Social sensitization during construction

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

MAINL, with support from the supervision consultant, will ensure regular training of permanent and temporary workers on occupational health and safety to workers and information relevant to health risks including malaria, COVID-19, yellow fever, hepatitis, etc., is provided to workers. During the rehabilitation period, the contractor shall provide, equip and maintain adequate personal protective equipment, first-aid stations and signboards directing where these services are situated and transported in case of emergency. Appropriate protective gear including, but not limited to helmets, heavy-duty gloves, safety vests and boots, should be provided to site workers and visitors. Furthermore, the project will comply with WB EHS general guidelines.

Environmental and Social Supervision during Construction

The Supervision engineer/consultant will oversee the construction activities and ensure compliance with the contractor's environmental and social management plans. Where

non-compliances are observed, the Supervision engineer/consultant will work with the contractor to rectify the problem in coordination with the PIU. In case of significant non-compliance particularly where there is harm to individuals, communities and or the environment the work shall be stopped, and the information shall be shared with the PIU immediately. Thereafter, the PIU will promptly report the incident to World Bank and following the ESIRT procedures

Chance Find Procedures will be followed if tangible cultural heritage is encountered during civil works Environmental and social supervision of works will also be carried out directly by MAINL.

#### Environmental Health and Safety Supervision During Operation

MAINL through PIT and irrigation scheme committee shall be responsible for supervision of EHS management and supervision during operation phase. The MAINL shall ensure contractor supply the requirements for EHS management and supervision, inspection, and monitoring.

#### 10.8 Grievance Management and Comment Response

A grievance is a concern or complaint raised by an individual or group affected by the project's components on construction or operational activities. Both concerns and complaints can result from either real or perceived impacts of a project's operations and may be filed in the same manner and handled with the same procedure.

The Grievance Mechanism (GM) will consist of several levels starting with a Shehia Grievance Committee at the lowest level, a project grievance committee, a District Grievance Committee, and a Ministerial Grievance Committee. The Land Tribunal is also available for land-related matters. Complainants can always go to the judicial system. The structure of grievance committees is detailed in SEP.

#### 10.9 Handling Gender-Based Violence (GBV)

The project in collaboration with stakeholders shall ensure effective implementation, monitoring, evaluation, and coordination of National frame works for Preventing and Responding to Sexual and Gender Based Violence in Project area as guided the Zanzibar gender Policy 2016.

The project will facilitate access to quality user friendly and coordinated services to SGBV survivors including protection, medical, legal and psychological services.

Strengthen the coordination and reporting mechanisms at all levels to monitor SGBV prevention and response.

Address structural and underlying causes and risk factors to SGBV.

Strengthen mechanisms for preventing, protecting, reporting and handling of SGBV at workplaces.

## **11. PROJECT IMPLEMENTATION ARRANGEMENTS, RESPONSIBILITIES AND CAPACITY BUILDING**

### **11.1. Project Implementation arrangement**

The MAINL will be responsible for overall project coordination through the selected Project Coordination Unit (PCU) which will be responsible for the implementation of the TFSRP -Zanzibar. The PCU will be responsible for day-to-day coordination of the implementation including facilitation and oversight and monitoring of technical, fiduciary, procurement and environmental and social assessments during project preparation and implementation. The roles of the following institutions are:

- ZARI: facilitate implementation of research related activities including seed related intervention, soil measurement, diseases, and pest identification.
- Department of Irrigation: Department's engineers in collaboration with PCU will be responsible for overseeing scheme rehabilitation activities and monitoring contractors as needed as well as developing the scheme rehabilitation strategy and design plans.
- Department of Agriculture and Food Security: facilitate and support dissemination of technological innovation to farmers through extension services system.
- Private sector/suppliers that will be engaged in project activities: these are suppliers and distributors of farming inputs and supplies.
- Farmers: these are principal beneficiaries of the project and expected to participate fully in the project implementation as producer.

### **11.2 Project Coordination Unit (PCU)**

The MAINL will establish a project implementation team under the Department of Planning, Policy, and Planning (DPPR). The PCU will be responsible for project coordination, supervision, procurement, financial management functions, and progress reporting. The PCU will be staffed by individuals with the necessary skills to carry out the above functions. PIUs staff will be comprised of government employees and consultants as needed. The PCU will be in place before project take-off. The PCU at MAINL will work with the relevant technical staff and teams in beneficiary institution(s).

The PIT will work closely with core departments involved in project implementation and each of the departments will select a focal point to coordinate with project implementation team. The Department that will work with the PIT in project implementation include Department of Irrigation (DoI), Department of Agriculture and Food Security (DoAFS), Zanzibar Environmental Management Authority (ZEMA), Zanzibar Agriculture Research Institute (ZARI). The focal points will also have alternates ready to participate or provide information should the focal point be absent

from project-related meetings and activities. The composition of PIT proposed to have the following key members:

- A Project Coordinator (overall in charge of the project implementation)
- A Project Financial Management Specialist (overall in charge of all projects financial matters)
- A Procurement Specialist (overall in charge of all project procurement affairs)
- A Project Accountant (In charge of project accounting matters),
- A Project Social Specialists (In charge of all matters related to social safeguarding aspects of the project)
- An Environmental Specialist (In charge of all environmental safeguarding issues of the project, OHS and biodiversity expertise as applicable.
- A Project Engineer (In charge of all engineering matters of the project)
- A Seed Specialist (In charge of seed matters of the project)
- A Project Monitoring and Evaluation Specialist

However, to ensure the smooth implementation of the TFSRP, MAINL and PCU shall in one way or another work closely with the World Bank Consultants (, ESMP, ESIA etc.), Design Consultants, Supervision Engineer/Consultant, The Contractor, ZEMA, DoE, Zanzibar Labour Commission, and Department of OHS. (see annex vi)

### 11.3 Roles and responsibilities of project implementers in Environmental and Social issues

The environmental and social safeguard specialist of the project shall have overall supervision role on environmental and social related activities within the project. However, several key institutions/stakeholders are expected to participate in the implementation in environmental and social related activities; these include:

#### **Ministry of Agriculture, Irrigation, Natural Resource and Livestock (MAINL)**

MAINL shall establish a Project Coordination Unit (PCU) for strategic planning and implementation of project components. Monitoring and Evaluation guidelines developed to monitor the entire project will include parameters for compliance with proposed measures to safeguard the environmental and social risks and impacts. Monitoring activities by the Implementers will be performed periodically through performance surveys/audits. MAINL has no unit of environment, however, prior project implementation, the MAINL will recruit one (1) Environment Specialist, one (1) Social Specialist and one (1) Health and Safety specialist with knowledge and experience in

managing resettlement, grievances, community engagement, Gender Based Violence or Sexual Exploitation and Abuse Risks. The roles and responsibilities of MAINL regarding environmental and social issues in specific project components are described below.

### **Roles and Responsibilities of Environmental Specialist (see annex viii)**

- Tracking project impacts associated to construction activities.
- Undertake project sites E&S screening
- Coordinate development of Environmental and safety management system (e.g., formulation of EMS policy, plans, procedures, monitoring, and review)
- Ensure that the ESMF is implemented in compliance with National Legislations and the World Bank Group Environmental and Social Standards (ESSs) requirements.
- Ensure that the necessary environmental authorizations and permits are obtained.
- Send ESIA and associated ESMPs to Zanzibar Environment Management Authority (ZEMA) for certification and to the World Bank for approval before the commencement of any works on site.
- Determine the scope of environmental work i.e., identify the magnitude, sensitivity, and risk category of the sub-projects.
- Coordinate preparation of ESIA and environmental and social management plans (ESMPs) done by the consultant and site-specific ESMPs (SSESMP).
- Coordinate development of Environmental and safety management system (e.g., formulation of EMS policy, plans, procedures, monitoring and review)
- Facilitate public consultations and other project stakeholders in preparation for ESIA/ESMP and oversee the functionality of the project Grievance Mechanisms.
- Ensure the relevant elements of the ESIA (including budget) are incorporated into final designs.
- Include the requirements and mitigation measures from site-specific ESMPs in the bidding documents and contractor contracts.
- Provide site-specific ESMPs to the design consultants to incorporate E&S measures identified.
- Ensure that contractors have an Environmental Health and Safety Officer (EHS), who is familiar with the compliance requirements, including WB EHS guidelines.
- Ensure supervision of the civil works either by hiring a supervision consultant or through designated environmental supervisors in the team of the supervision engineer.
- Review progress reports by the supervision engineer/consultant during civil works and conduct inspection of the sites.

- Send sub-project screening documents and site-specific ESMPs to ZEMA and the World Bank for approval.
- Send progress reports every 3 months to the World Bank.

### **Roles and Responsibilities of Health and Safety Specialist (see annex VII)**

- Coordinate development of Health and safety management system (e.g. formulation of OHS policy, plans, procedures, monitoring and review)
- Ensure that the OHS system is implemented in compliance with National Legislations and the World Bank Group Environmental and Social Standards (ESSs) requirements;
- Ensure that the necessary permits are obtained;
- Keeping accidents records
- Ensure the relevant elements of OHS (including budget) are incorporated into final designs;
- Include the requirements and mitigation measures from site-specific OHS in the bidding documents and contractor contracts;
- Ensure that contractors have Health and Safety Officer (EHS), who is familiar with the compliance requirements, including WB HS guidelines;
- Ensure contractors will be provided with signage on issues such as HIV/AIDS, GBV etc which will be posted at worksites.
- Ensure contractors/workers will attend education sessions on disease transmission notably HIV/AIDS, and malaria and will implement the control measures needed to protect public health.
- Contractors/workers will ensure good housekeeping arrangements on-site to avoid creating breeding grounds for rodents and insects which can spread diseases.
- Contractors will ensure access to potable water for all workers.
- Contractors will be required to abide by national law about vehicle conditions and movements and behavior of drivers.
- Signage will be erected at construction sites to advise the community of the dangers of entering the site and appropriate barricades (fencing, tape etc.) will be put in place, especially around quarries, trenches, etc.
- Review progress reports by the supervision engineer/consultant during civil works and conduct inspection of the sites;
- Send progress reports every 3 months to the World Bank.

### **Roles and Responsibilities of Social Specialist (see annex x)**

- Tracking project impacts associated to construction activities.
- Undertake consultations, focus group discussions, and other activities to ensure that the objectives of the SEP are met.

- Liaise, as relevant, with local authorities to ensure smooth implementation of the SEP.
- Coordinate SEP implementation with various areas/regions/etc. as relevant.
- Establish and maintain an effective grievance tracking system and where relevant ensure that grievances are channeled to appropriate response mechanisms (e.g., out-of-project, GBV service providers, etc.).
- Receive and develop resolution of grievances as required.
- Participate in grievance committee meetings as relevant.
- Undertake a regular review of grievances and where relevant identify systemic issues to be addressed and trends that require attention from management.
- Serve as a conduit of information between stakeholders and the project implementing team, especially considering emerging environmental and social risks, impacts and potential mitigation measures.
- Update the SEP including updating the stakeholder identification, as relevant, and as detailed in the Environmental and Social Commitment Plan.
- Provide technical support and capacity building to relevant institutional and community actors to support the implementation of the SEP.
- Prepare progress reports on the implementation of SEP, including grievance management, and submit them to project management.
- Ensure that community health and safety are observed during project implementation
- Undertake project sites E &S screening
- Include the requirements and mitigation measures from site-specific ESMPs in the bidding documents and contractor contracts.

#### **Environmental and Social Impact Assessment (ESIA) Consultants (see annex III)**

- Work with the PCU to understand the requirements of the environmental and social assessment;
- Conduct initial site visits with the PCU to understand the sub-project setting and site-specific requirements;
- Prepare the ESIA's and ESMPs based on the procedures described in the ESMF including carrying out an alignment walk, alternatives analysis and baselines studies, identifying the E&S risks and impacts, developing mitigation measures and monitoring plans incorporating EHS requirements;
- Cost all the mitigation and management measures proposed in the ESMPs and SSEMPs
- Propose a capacity-building plan for the implementation of the sub-projects for all actors involved with cost estimates and schedule;
- Carry out public consultations;
- Conduct training as needed;



- Assist the PCU in preparing documentation to obtain certification from ZEMA for the ESIA's and ESMP's.

### **Design Consultants**

Understand the sub-project setting and site-specific requirements with discussions with the PCU.

Incorporate the issues identified in the ESIA's, ESMP's into the project design Provide cost estimates for implementing the design requirements.

### **Supervision Engineer/Consultant**

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

- Assist the PCU to ensure that the necessary environmental, health and safety authorizations and permits have been obtained;
- Maintain open and direct lines of communication between the PCU and contractor(s) concerning environmental matters;
- Review and approve the contractor's site-specific construction ESMP's (CESMP), Health and Safety, Labor Management Plans and Traffic Management Plans together with the PCU; Conduct regular site inspections of all work areas to ensure compliance with CESMP's and E&S specifications for contractors Assist the contractor in finding environmentally responsible solutions to problems;
- 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 stop activities which generate adverse impacts, and/or when the contractor(s) fails to implement the ESMP requirements / remedial actions;
- Provide training to the contractor on the EHS requirements to be followed;
- Monitor the contractor's environmental awareness training program for all personnel working onsite;
- In case of any accidents or incidents, immediately notify the PCU and support the process of documenting and reporting the case to the WB; and
- Prepare written reports for the PCU such as the weekly report of non-compliance issues; summary monthly report covering key issues and findings from supervision activities; and a consolidated summary report from the contractor's monthly report.

## **The Contractor**

The contractor and his employees shall minimize the impacts that may result from the civil works and implement the mitigation measures to prevent harm and nuisances on local communities, and to minimize the negative impacts on the environment. The contractor shall appoint an Environmental, Health and Safety Officer to oversee the E&S aspects. The duties of the contractor include:

- Compliance with relevant environmental and social legislative requirements (project-specific, district- and national level), including allocating adequate budget for implementation of these requirements;
- Work within the scope of contractual requirements and other tender conditions;
- Prepare CESMPs based on the ESMPs in the bidding documents and contracts;
- Train workers about EHS (including relevant WBG EHS Guidelines) and the site-specific environmental and social measures to be followed;
- The EHS officer of the contractor will participate in the joint site inspections with the PCU and Environmental Supervision Engineer/consultant;
- Carry out any corrective actions instructed by the Supervision Engineer/consultant;
- In case of non-compliance/discrepancies, carry out an investigation and submit proposals on mitigation measures, and implement remedial measures to reduce environmental impact;
- Propose and carry out corrective actions to minimize the environmental impacts;
- Send weekly reports of non-compliance to the Supervision Engineer/consultant;
- Send monthly progress reports to the Supervision Engineer/consultant.

## **World Bank**

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

- Review the ESIAs, ESMPs and site-specific ESMPs;
- Review quarterly reports by the implementing agencies;
- Monitor compliance with the ESMF; and
- Undertake implementation support missions.

## **ZEMA**

ZEMA will perform an enforcement monitoring role supported by PCU based on submissions and recommendations from the EIS. The ZEMA will ensure that the monitoring plan for the overall monitoring of the entire TFSRPTFSRP requirements is

implemented with a particular focus on monitoring the cumulative impacts of the infrastructure projects and ensuring that individual project components' mitigation measures are effective. ZEMA would primarily achieve this objective through periodic field visits, coordinating and implementing the Training Program and through technical assistance and backup services to the MAINL project.

### **Department of OHS**

It is the nationally designated authority that is responsible for the administration of occupational safety and health legislation. The department will cooperate with MAINL in developing the occupational Safety and health system. The department will perform periodic field visits and coordinate and monitor the implementation of the occupational Safety and health system through technical assistance and backup services to TFSRP.

#### **11.4 Need for capacity building**

Capacity needs to the organization on environmental and social impacts and risks management: There is an adequate national regulatory framework in Zanzibar and technical guidelines exist for environmental and social due diligence concerning the potential impacts of the project. However, the implementation of these regulatory frameworks at MAINL might not be consistently up to standards due to insufficient resources – financial, personnel and skills – for preparing, reviewing, and implementing ESIA's, and ESMP's and overseeing and monitoring the implementation of impact mitigation measures. MAINL has experience in dealing with the rehabilitation of irrigation infrastructure under ERPP and Exim Bank, which were implemented by MAINL under IPF and old environmental and social safeguards policies. However, the institutional capacity in environmental and social risk management of MAINL needs to be enhanced through training in overall environmental and social risk management, and specific training in the Environment and Social Framework (ESF). Although MAINL has no dedicated unit for environmental and social risk and impact management, the recruitment of environmental and social specialists to work with the project will provide TFSRP adequate environmental and social supervision and monitoring requirements. However, there is an opportunity to strengthen the capacity for monitoring, supervision, and enforcement of impact management implementation by establishing an environmental and social unit at MAINL to support future projects.

Capacity needs to Project Coordination Unit (PCU): To ensure that there is adequate capacity to implement and monitor E&S issues, capacity building will be needed by the project team in the institution to facilitate effective management of E&S issues. The capacity building will enable improvement of the understanding and capacity for monitoring and evaluation reporting expected by PCU and compliance with the World Bank standards and procedures. Under this the capacity-building objectives will intend to achieve the following:

Develop and impart skills to EO and project team in the respective institution for screening and monitoring environmental and social concerns; and  
Impart skills to contractors, service providers and communities to report in line with the WB ESF and Zanzibar legislations.

Capacity needs in preparing Safety and Health Policy /System; MAINL may need to get support in developing an OHS policy, an Emergency Response Plan (ERP) and training employees and making the plan available to all irrigation of Zanzibar The ERP shall clearly outline the potential emergencies that may affect irrigation infrastructure and associated structures. The plan should give clear instructions as to what actions are required by relevant personnel in the event of said emergencies.

Capacity needs for Project Management: Capacity need assessment has revealed that MAINL does not have the required capacity to comply with the requirements of the Environmental Policy and Environmental Management Act. A similar situation is also revealed in this project in which MAINL lack the necessary capacity to address Environmental and social issues. Major gaps at MAINL are the lack of environmental, gender and occupational Safety and Health policies for integrating environmental and social management issues starting from project development, planning and implementation.

Therefore, MAINL cannot screen, review and clear project components. These weaknesses define the inadequacies in managing environmental and social issues along with implementing the ESMP in this project. Thus, the ESMP will be implemented through the administrative and management structure defined in this project. However, the implementing sector has to be strengthened in terms of resources and training for capacity building.

11.5 EHS Capacity needs for rehabilitation contractors and scheme operation Staff  
MAINL shall organize training for rehabilitation contractors and scheme operation staff on; hazard identification; hazard assessment and management; risk assessment and management; emergency preparedness plan and Response; child protection; safety issues in irrigation schemes, risks, and crises management; and stakeholder engagement and grievance management, including about the worker grievance mechanism, for the social and environmental staff.

Capacity needs for Environmental and Social Specialists and Other Project Staff; For successful implementation of the ESMF, capacity enhancement through training should

be done for the MAINL project team. The training can be in the form of the whole project staff or Training of Trainers (TOT), in the form of a short and long training courses . The training will ensure that the specialists can manage and monitor the environmental and social aspects of project activities. The training should take place in the first quarter of the TFSRP implementation. The workshop can be conducted by an external consultant with substantial knowledge of the environmental management requirements for Tanzania, including World Bank ESF and requirements. Other relevant staff members of MAINL and other key stakeholder can be included in the training to widen the familiarization with the ESMF.

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

(a) Environmental and Social assessment process:

- Screening process;
- Impact prediction and identification;
- Formulation of mitigation measures;
- Formulation of the environmental and social management plan;
- How to prepare terms of reference for environmental and social impact assessment;
- How to integrate environmental and social management considerations in project design and preparation of contract documents for rehabilitation works;
- Reviewing, and approving ESIA's;
- Public participation in the ESIA process;
- Monitoring and reporting of project implementation.
- GBV handling;
- GRM operationalization; and
- Stakeholders engagement.

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

- How to incorporate Environmental and social policies and legislation according to the nature of the project;

- World Bank Environmental and Social Standards applicable to the project, including special capacity building on labour and working conditions, as well as on implementation, monitoring, and reporting
- Guidance for review of ESIA and ESMP; and
- Collaboration with relevant institutions through workshops on environmental and social, including labour and working conditions, and risk management in each of the 11 districts involving District Community Development Officers.
- Deliver training on environmental and social standards and corresponding national laws, for community officers, contractors, relevant government agencies, and other entities. Special issues to be covered may include sensitization regarding gender-based violence risks, the inclusion of vulnerable individuals and groups about project design, implementation, and impacts, participatory approaches, and labour and working conditions.

(c) Occupational Safety and Health issues:

- Hazard identification
- Hazard assessment and management
- Risk assessment and management
- Emergency preparedness plan and Response
- Child protection
- Safety issues in irrigation schemes
- Risks and crises management
- Stakeholder engagement and grievance management, including about the worker grievance mechanism, for the social and environmental staff.

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

- How to prepare the Environmental and Social Management Systems;
- How to screen projects; appraise and approve ESIA's;
- How to review environmental and social screening and assessment processes;
- How to supervise and report the implementation of the project components;
- How to create baseline information before project implementation;
- Environmental pollution;
- Gender issues during project implementation
- Child labour issues
- Waste management; and
- Protection of water resources against pollution.

## 11.6 Cost for addressing environmental, social, safety and health issues

Adequate budget allocation is a critical requirement for addressing environmental and social issues. An estimated budgetary allocation of US\$1,833,000 will be required to comply with environmental and social standards (Table 7.2). The proposed costs are only indicative, should the proposed development proceed with the suggested changes, MAINL will work out on actual costs and include them in the overall cost of the project.

**Table 10: Cost of implementing Environmental and Social Management Framework (ESMF)**

Item #	Mitigation Measure	Responsible Entity	Deadline	Monitoring Frequency	Budget (US\$)
<b>Establishment of Environmental and Social Unit</b>					
1.1	Procurement of office furniture and working facilities	MAINL management/ PCU/ Consultant	During the first year of TFSRP Implementation		5,000
<b>Develop and Implement an ESMS manual based on Plan/Do/Check/Act Cycle.</b>					
2.1	Develop Environmental and Social Policy for MAINL	MAINL / PCU/Scheme In-charge/ irrigation engineer /Consultant	During the first year of TFSRP Implementation	Quarterly monitoring and Verification Report	10,000
2.2	Set objectives and targets consistent with E&S Policy.				1,000
2.3	Define roles and responsibilities for persons responsible for the implementation of the EMS, budget for staff and consultant, travel and equipment				5,000
2.4	Develop document control procedures and templates to ensure the quality of data entry for the EMS system.		5,000		
2.5	Develop operational control procedures for operations that are associated with the identified environmental and social aspects of MAINL's daily operations and those of their approved contractors and suppliers.		5,000		
2.6	Develop a monitoring programme and system which will allow performance evaluation and review of the EMS for continuous improvement.		3,000		
			During the first/second year of TFSRP Implementation		



Item #	Mitigation Measure	Responsible Entity	Deadline	Monitoring Frequency	Budget (US\$)
2.7	Define performance monitoring indicators and how to measure them to assess performance of the EMS.				2,500
2.8	Carry out environment awareness training on EMS for both MAINL, PCU, irrigation scheme In-Charge and other relevant staff of the DoI and approved contractors and suppliers.		During 2 <sup>nd</sup> Year of TFSRP Implementation		10,000
<b>Develop and Implement Safety and Health Management System</b>					
3.1	Develop Occupational Health and Safety policy	MAINL management/ PCU/ Irrigation scheme In-Charge/ Consultant	During first year of TFSRP Implementation	Verification Report	20,000
3.2	Develop an emergency response management plan and display on-site spill response procedures				20,000
3.3	Developments of a local emergency plan and local major outbreaks in case of infrastructure breakdowns, especially near roads or residential areas				20,000
3.4	Develop a monitoring programme and system which will allow performance evaluation and review of the OHS system for continuous improvement.				20,000
3.5	Define performance monitoring indicators and how to measure them to assess the performance of OHS system				20,000
<b>Cost for engaging consultants for the preparation of Environmental and Social Instruments</b>					
4.1	Preparation of ESIA/ESMP for all sites (see annex iii)	MAINL-PCU/Consultant	Before finalization/preparation of	Reports	200,000

Item #	Mitigation Measure	Responsible Entity	Deadline	Monitoring Frequency	Budget (US\$)
			bidding documents for civil works		
<b>Cost for hiring an independent firm/consultant to monitor and review on-site implementation of the E&amp;S measures by the contractor</b>					
5.1	Environmental Specialist (see annex viii)	MAINL Management/PCU/Consultant	Get engaged Before the commencement of any civil works and work throughout the TFSRPTFSRP Implementation	Reports	1,365,000
5.2	Social Specialist (see annex x)				
5.3	Occupational Health and Safety Specialist (see annex ix)				
<b>Develop Gender Policy for MAINL</b>					
6.1	Develop Gender Policy to mainstream gender outcomes into the TFSRP	MAINL management/Consultant	By November 2024	Study Report approved by the Management	20,000
<b>Recruit Dedicated E&amp;S risk and impacts staff to improve on the capacity for TFSRP Implementation</b>					
7.1	Recruit one (1) Social Specialist for MAINL-TFSRP team	MAINL management/PCU	Before the end of the first quarter following Project approval by the Bank	Report	60,000
7.2	Recruit one (1) Environmental Specialist for the MAINL-TFSRP team	MAINL management/PCU	Before the end of the first quarter following	Report	60,000

Item #	Mitigation Measure	Responsible Entity	Deadline	Monitoring Frequency	Budget (US\$)
			Project approval by the Bank		
Training					
8.1	Environmental and Social assessment process: Screening process; Impact prediction and identification; Formulation of mitigation measures; Formulation of the environmental and social management plan; How to prepare terms of reference for environmental and social impact assessment; How to integrate environmental and social management considerations in project design and preparation of contract documents for rehabilitation works, and approving ESIA's; Public participation in the ESIA process; and Monitoring and reporting of project implementation.	MAINL management/ PCU/irrigation scheme In-charge/Consultant	Before the end of the first quarter following Project approval by the Bank	Verification Report	15,000
8.2	Environmental and Social policies, procedures and guidelines: How to incorporate Environmental and social policies and legislation according to the nature of the project; World Bank Environmental and Social Standards Review of ESIA and ESMP; and Collaboration with relevant institutions.	MAINL management/ PCU/irrigation scheme In-charge/Consultant	Before the end of the first quarter following Project approval by the Bank	Verification Report	10,000
8.3	Occupational Safety and Health issues: Hazard identification	MAINL management/	Before the end of the first	Verification Report	10,000

Item #	Mitigation Measure	Responsible Entity	Deadline	Monitoring Frequency	Budget (US\$)
	Hazard assessment and management Risk assessment and management Emergency preparedness plan and Response Risks and crises management Training for local communities on risk management Training on child protection Training on safety issues	Consultant	Quarter following Project approval by the Bank		
8.4	Other key topics on environmental and social issues: How to prepare Environmental and Social Management Systems How to screen projects appraise and approve ESIA's How to review environmental and social screening and assessment processes How to supervise and report the implementation of the project components How to create baseline information before project implementation? Environmental pollution Gender issues during project implementation Waste management and Protection of water resources against pollution. Curriculum design, assessment, review, and monitoring Research skills	MAINL management/ Consultant	Before the end of the first Quarter following Project approval by the Bank	Verification Report	10,000
	ESMF Translation				
9.1	Cost of translating summary of ESMF in Kiswahili	MAINL/PCU	Just after ESMF approved by the	Translated ESMF	4,000

Item #	Mitigation Measure	Responsible Entity	Deadline	Monitoring Frequency	Budget (US\$)
			World Bank	summary repo	
Grand Total				(US\$)	1,833,000

## **12. STAKEHOLDER ENGAGEMENT AND INFORMATION DISCLOSURE**

### **12.1. Stakeholder Consultation**

Stakeholder consultation shall be done with people affected by the project in any way, government agencies, Districts, Ministries, NGOs, vulnerable groups, and other interested parties as stipulated in the SEP. This shall continue throughout the project life, i.e., design and during rehabilitation. This includes during the preparation of E&S risk and impacts instruments. Participation needs to be meaningful and inclusive of all stakeholders and communities. MAINL, through a consultant, will conduct a monitoring exercise on the implementation of the SEP including regular communication to the community on risks/impacts.

However, the level of stakeholder engagement will depend on the subproject phase, location, likelihood and magnitude of impacts. All consultations for the project will be a two-way dialogue with the provision of project-related information and obtaining feedback from participants. Collected feedback will need to be used to improve project design and mitigation plans. Consultations such as during the preparation of ESIA will be documented. This includes a list of stakeholders, issues raised, the response provided and how those issues are reflected in the design.

### **12.2. Consultation process during ESMF preparation**

For the preparation of ESMF, Stakeholder consultations were done in three phases. During the first phase, the consultation was done before the preparation of ESMF; the consultation was done at the Ministry of Agriculture, Irrigation, Natural Resource and Livestock (MAINL), Zanzibar Agriculture Research Institute (ZARI), Department of Irrigation (DoI), Department of Agriculture and Food Security (DoAFS), Department of Forestry (DoF) and Department of Livestock Development (DoLD). Other sector consulted include the Ministry of Water Energy and Mineral (MWEM), Occupation Safety and Health (OSH) department, Zanzibar Environmental Management Authority (ZEMA), Tanzania Horticulture Association (TAHA), MVIWATA, Zanzibar Cooperative Union (CUZA), These stakeholders requested for an appointment via phone calls and letters. Upon confirmation of appointments, the consultant and MAINL representative (environmental coordinator) visited stakeholders whereby discussions were held in their respective offices.

The consultation aims to obtain their environmental and socio-economic concerns and perceptions regarding the proposed project which include envisaged negative environmental impacts, negative and positive social impacts of the project, management aspects of the identified negative impacts, enhancement mechanism of positive impacts and aspects to be considered for sustainable project operations.

The consultation methods employed by the consultant team were mainly interviews and focus group discussions. Before the discussion about the project, the ESMF consultant team used the project concept notes to provide the TFSRP description. The description entailed project rationale, key project activities, timeline and next step, implementation arrangement, project scope and funding.

Stakeholders had an opportunity of providing their questions, views, and perspectives on the project. These were documented and responded to accordingly by the consultant team and MAINL representatives.

### 12.3. Summary of Stakeholders' Views and Concerns

The study team identified the main concerns and issues raised by different stakeholders as indicated in the sections hereunder.

### 12.4. Project Acceptance /Recommendations/Considerations

Consultations with stakeholders were carried out to determine the socio-economic aspirations of the community and to assess the people's perception of the implementation of the TFSRP. Generally, consultation with stakeholders indicated that the proposed project is viewed as a positive venture that may improve the agriculture and accelerate the development in Zanzibar. In addition, participants were convinced that the project would not pose irreversible negative impacts on the environment or community in the foreseeable future. The threats of the proposed project to the nearby communities were identified as biodiversity loss, water pollution, occupational health and safety and increase solid waste generation.

### 12.5. Analysis of stakeholder views and concerns

Environmental and Socio-economic issues that emerged during the consultations with stakeholders and from other sources regarding the TFSRP were categorized and sorted into specific topics. The categorization includes economic impacts – employment, livelihoods, health impacts; environmental, safety and security; community services; and general well-being impacts. Both actual and perceived impacts are described, having been gathered from people's opinions as well as factual data and comments.

Most of the economic impacts of the proposed project are positive, in that the implementation of the TFSRP is associated with benefits. Health impacts – both real and perceived – are those associated with air and water pollution as a result of the project irrigation activities of safety and security and GBV/ incidents. Many of the anticipated community impacts – especially on safety and security need prompt handling. The identified environmental and socio-economic impacts are summarized in Table 11.

**Table 11: Identified socioeconomic impacts**

<b>Topics</b>	<b>Aspect</b>	<b>Potential Impacts</b>
Economic issues	Macroeconomics	Tax payments to Government will increase due to an improved business atmosphere resulting in local and national economic development
	Employment	Availability of skilled and unskilled jobs during the project's lifetime
	Business and market opportunities	Opportunities for local businesses to provide goods and services during the project's lifetime
Environmental and Health issues	Noise levels in the community	Perceived there will be an increase in noise levels in the project area during the rehabilitation phase
	Air quality – dust from the project	Increase in dust generation and fumes/emissions from the project Perceived potential for increased airborne diseases
	Biodiversity	There will be a clearance of vegetation during the rehabilitation phase. The use of agrochemical during crop production might impact living organisms
Occupational and Safety issues	Occupational accidents	Increased risk of accidents to workers from rehabilitation and operational activities
Demographics and population movements	The influx of people in search of employment	Increased adverse social impacts associated with the influx of people Increased economic opportunities

**Source:** Consultation meetings, February 2023

12.6. Stakeholders' expectations on negative and positive impacts of the TFSRP  
The study provided a wide variety of views and opinions on what are the main concerns and issues of different stakeholders. The raised concerns were analyzed and then given a due weight based on the frequency of issues which were raised. Stakeholders expect that MAINL will consider their views in the planning and implementation of the project. For instance, stakeholders expect that the proposed TFSRP will solve the problem of



water availability for irrigation farming, agriculture inputs availability and agriculture extension services, availability of agro-processing services.

#### 12.7. Information Disclosure

All E&S risk and impact reports for the project will be publicly disclosed and made available in both English and Swahili versions to the project-affected groups, interested groups/individuals, NGOs, and the public. Disclosure of the ESMF is planned to be in Zanzibar (MAINL) and on the World Bank website. Copies of the draft documents will be available for public review and comment at the following locations for 180 days:

- Information Centre of the MAINL;
- Offices of Regional and District Office within the project area of influence;
- Offices of the Executive Director in respective District;
- Offices of the District Agricultural Development Officers (DADO) and Shehia with a sub-project
- Info-Shop of the World Bank where the disclosure will precede appraisal of TFSRP

The ESIA/ESMP prepared for the proposed TFSRP sub-component will also be disclosed to the public as detailed above. Copies of the documents will be accessible to the public and interested parties; different easily accessible locations shall be used for disclosure, i.e., local government authorities (e.g., local councils, district offices), government agencies (e.g., ZEMA) and implementing partners.

#### 12.8. Ongoing engagement after the disclosure process

MAINL has provided adverts through media with information about the project, including project components, project impacts and mechanisms to handle the impacts. However, the adverts did not reach most of the affected households as the project sites have not yet been known. Consequently, MAINL shall prepare more targeted communication materials, including video clips and a PowerPoint presentation, to provide explanations of the impact of the project and safety rules. The communication materials will be accessed at shehia offices and MAINL head office in Unguja and sub office in Pemba. These lessons will be considered for the TFSRP implementation.

#### 12.9. Mechanism(s) for Future Consultations and Information Disclosure

The effectiveness of risks/impacts mitigation and level of compliance shall be gauged through ongoing consultation and participation of stakeholders throughout the project life so that both parties have a common perception as to what the project entails. The consultation will be done as stipulated in SEP, whereby the following categories of stakeholders are identified;

- Government officials- Ministry of Agriculture, Irrigation, Natural Resource and Livestock, Ministry responsible for Water, The First Vice President Office, dealing with Environment; Local Government Authorities and Municipality; and Departments;
- Government Agencies
- Impacted Communities-Communities in all Shehia
- NGOs like MVIWATA, Cooperative Union of Zanzibar (CUZA), The Zanzibar Federation of Disabled People Organizations (SHIJUWAZA), Tanzania Horticulture Association (TAHA), Organic Farming Organization
- Disadvantaged/Vulnerable Individuals (Women, Elderly, Youth, and people with disabilities)

This list of stakeholders is likely to expand/change in composition through project implementation. Additional stakeholder groups might include:

- Contractors and subcontractors;
- Suppliers and businesses;
- Private sectors;
- Research community; and
- Interest groups

#### 12.10. Methods for effective consultation and information disclosure

Methods to be used to ensure effective consultation and information disclosure shall include:

##### ***Public/community meetings***

At the start of the project, MAINL will organize project launch meetings in each of the beneficiary Districts. From then on, Community Liaison Officers (one project focal person per district) will help organize community meetings/sensitization sessions in the Shehia/villages quarterly throughout the project's lifecycle. The facilitation of these meetings and the Focal Persons as Community Liaison Officers (CLOs) will be provided through the project. Meetings in each of the District Council and Municipality (LGAs) levels will also be organized quarterly.

### ***Mass/social media communication***

The ICT officer from DPPR of the MAINL shall post information on the MAINL Facebook page and communicate with the local population via social media campaigns or tools like WhatsApp throughout the project's lifecycle. Social media channels will be used as much as possible to disseminate information as rates of social media use (especially Facebook) appear to be high across users of different ages and backgrounds to project beneficiaries.

### ***Communication materials***

Written information will be disclosed to the public via a variety of communication materials including brochures, flyers, posters, etc. A public relations kit will be designed specifically and distributed both in print and online form. The MAINL website will be used to disclose project documents via a dedicated TFSRP webpage, including the mitigation documents such as the ESMF, SEP, ESCP and LMP and subsequent ESIA, ESMPs, documents on environmental and social performance, and other relevant material. The material will be provided in both Kiswahili and English (executive summaries of the environmental and social documents will be translated into Kiswahili). MAINL will also update its website regularly (at least quarterly) with key project updates and reports on the project's environmental and social performance both in English and Swahili. The website will also provide information about the grievance mechanism for the project.

### ***Training, workshops***

Finally, training on a variety of social and environmental issues will be provided to MAINL project staff and contractor staff and possibly relevant government or non-government service providers. Issues covered will include sensitization to gender-based violence risks, inclusiveness of vulnerable individuals and Environmental, Health and safety risks.

### ***Information Desks***

Information Desks at each subproject will provide project information through Brochures and fliers on various project-related social and environmental risks. All future project-related environmental and social monitoring reports, listed in the above sections will be disclosed on a webpage. Project updates (including news on rehabilitation activities and relevant environmental and social data) will also be posted on the homepage of MAINL's website.

### **13. SUMMARY AND CONCLUSION**

At the time of TFSRP preparation, eight (8) Environmental and Social Standards (ESS1, ESS2, ESS3, ESS4, ESS5, ESS6, ESS8 and ESS10) were found to be relevant. However, the Revolutionary Governmental of Zanzibar (RGoZ) and MAINL have strengths and opportunities to comply with standards. Thus, the project will entail minimal adverse environmental impacts if adequate mitigation measures are proposed and incorporated in the project design. In that regard, the proposed project is a positive venture that may stimulate new economic and social activities and enhance development in Zanzibar.

In addition, stakeholders were convinced that the project will not pose irreversible negative impacts on the environment or community in the foreseeable future. The threats of the proposed project to the nearby communities were identified as noise, dust generation, traffic accidents, occupational health and safety and increased solid waste generation.

It can therefore be concluded that the proposed project will entail no significant impacts provided that the recommended mitigation measures highlighted are adequately and timely implemented. MAINL will have to be committed to implementing all the recommendations given in this ESMF and further carrying out the environmental auditing and monitoring schedules.

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**ANNEXES**

***Annex 1: Environmental and social Screening Form: Guidelines for Screening***

The evaluator will undertake the assignment after:

- Gaining adequate knowledge of baseline information of the area
- Gaining knowledge of proposed project activities for the area
- Having been briefed/trained in environmental and social screening.

The form is to be completed with the consensus of at least three people, knowledgeable of the

Screening processes (such as the Environmental Management Officers)

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 subproject (area, area and scope of rehabilitation, access roads, and landscape), and waste generated (solid, liquid and air).

**2. The Natural Environment**

a) Describe the vegetation/trees in/adjacent to the project area.

.....  
.....

b) Estimate and indicate where vegetation/trees might need to be cleared

.....  
.....

c) Are there any environmentally sensitive areas or threatened species (specify below) that

Could be adversely affected by the project?

Yes .....No .....

i. Natural Forests Yes ..... No .....

ii. National Parks Yes ..... No .....



lii. Rivers Yes ..... No .....

iv. Lakes Yes ..... No .....

v. Wetlands (swamps, seasonally inundated areas)

Yes .....No .....

vi. Habitats of endangered species for which protection is required under Tanzania laws  
And/or international agreements

Yes ..... No .....

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

### 3. River Ecology

Is there a possibility that, due to the installation of structures, such as houses and water systems, 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 the government (national park, natural reserve, world heritage site

Etc.)?

Yes.....No.....

If the project component is outside, but close to, any protected area, is it likely to adversely affect the ecology within the protected areas (e.g., interference with the migration routes of mammals or Birds)?

Yes.....No.....

### 5. Geology and Soils

Based upon visual inspection or available literature, are there areas of possible geologic or soil

Instability (erosion-prone, landslide-prone, subsidence prone)?

Yes.....No.....

Based on visual inspection or available literature, are there areas that are at risk of a large-scale

Increase in soil leaching and/or erosion?

Yes.....No.....

### 6. Landscape/aesthetics

Is there a possibility that the project component will adversely affect the aesthetic attractiveness of the local landscape?

Yes.....No.....

### 7. Invasive Plant species

Is the sub-project likely to result in the spread of invasive plant species?

Yes.....No.....

8. Historical, Archaeological or cultural heritage sites

Based on 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 rehabilitation 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 sTF SRP if necessary).

.....  
.....

14. Did the consultation and participatory process described in 13 above involve the following

Social/ vulnerable groups?

Women: Yes.....No.....

The elderly: Yes.....No.....

Widows/widowers: yes.....No.....

Orphans: Yes.....No.....

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

Yes.....No.....

## **Annex II: EIA process in Zanzibar**

<b>Step</b>	<b>Step</b>	<b>Timeline</b>	<b>Responsibility</b>
1	Registration for EIA. This compulsory step gives notice to ZEMA of the intent of the proponent to embark on the EIA or Environmental Audit process and enables both the proponent and the Authority to keep track of timelines as set out in this document	At the start of the process	Proponent
2	Screening is undertaken	Will be conducted within ten working days of registration for EIA	ZEMA undertakes to screen and invites the proponent or his/her representative to be present
3	Screening Statement produced If an EIA is not necessary, a Letter of Approval will be issued with conditions if there are any, or the project may be refused in a Letter of Refusal that briefly lists reasons for refusing permission for the project to proceed. If the project can proceed pending an EIA	Will be produced within 10 working days after screening	ZEMA
4	If an EIA is determined to be necessary, then a Scoping will need to be undertaken, which culminates in a Scoping Report	Will be done between 10 and 20 working days after the issuance of the screening statement, depending on the size of the project	ZEMA undertakes to scope where the applicant is present; specialist consultants may be invited to undertake the Scoping at the cost of the Proponent; ZEMA or specialist consultants pro-

Step	Step	Timeline	Responsibility
			duce the Scoping Report
5	Preparation of the Terms of Reference	Will be done within 10 to 20 working days after screening	ZEMA can collaborate with other stakeholders to complete the ToR; in cases of large projects ZEMA may require an expert opinion on the cost of the proponent, ZEMA still has the approval
6	Submission of ToR to Proponent (applicant)	Upon completion of ToR	ZEMA
7	Submission of CVs of the Team of Experts. Data information of EIA expertise or company that conducts EIA	Will be done within 10 working days after receipt of the ToR	Proponent to the ZEMA; ZEMA approves
8	Letter of Approval of Experts	Will be done within 10 days of receiving the submission of a team of experts	ZEMA
9	Production of EIS	Should be done between 2 and 6 months period	Proponent to the ZEMA
10	Display and Circulation of EIS to the Public and other institutions	Should be done between 10 working days after submission	ZEMA
	Review of the EIA Report (Environmental Impact Statement - EIS)	Within 20 working days after submission of EIS	ZEMA submission should be done not less than 20 days and not more than 30 working days from the time of effective notice
11	Further information may be requested	Within 5 working days after the re-	ZEMA

Step	Step	Timeline	Responsibility
		view	
12	Further information is supplied as requested	Within 20 days of the request	Proponent
13	The decision whether to issue an EIA Certificate and issuance of the certificate, perhaps with conditions, or a Final Letter of Refusal	Within 14 working days	ZEMA

### ***Annex III: Requirements for ESIA outline***

The consultant shall perform the following tasks while preparing ESIA

Formalization with project documents and, Environmental and Social Screening (ESS) forms

Conduct fieldwork for physical survey, investigation, and social-economic survey. This is intended to facilitate the acquisition of information and data on physical, cultural and social aspects of the project sites and the neighboring area.

Identifying and reviewing key legislative, institutional, regulatory and administrative regimes as well as the World Bank Environmental and Social Standards within which the proposed project will operate

Conducting consultative meetings/interviews with all stakeholders about the project.

Identification of Environmental and Social impacts/issues

Evaluation of Predicted Impacts

Analysis of the Project Alternatives

Preparing Mitigation Measures -For negative impacts, appropriate mitigation measures to make the project environmentally friendly

Developing Monitoring Plan- Specifically, the monitoring section of ESMP shall have a specific description and technical details of the monitoring method, including the indicators to be measured, how they will be measured and by whom, the sampling locations, the frequency of measurements and the definition of thresholds that will signal the need for corrective actions.

Establishing Institutional Arrangements and Responsibilities- this will describe institutional arrangements and responsibility for the implementation of mitigation measures and carrying out the monitoring regime for operations, supervision, enforcement, remedial action, financing, reporting and staff training. Additionally, the ESMP should have an estimate of the costs required to address the mitigation measures and activities to be implemented by different actors.

Finally, the ESIA is envisaged to have the following contents;

#### **Cover Page:**

The cover page must display important information prominently and facilitate referencing. It should therefore contain information such as: -

Title of the Environmental & Social Impact Statement

Location (s) of the proposed Project's activities

Project Proponent

Lead Consultant(s)

Contact Addresses – post office box number, fax and phone numbers, and email

Reviewing Authority

Approving Authority

Date of completion of the report

### **Table of Contents:**

The page of contents should contain the following:

List of major sections of the report

List of Tables

List of figures (including maps, graphs and plates) and illustrations

List of appendices

Page numbers of the report

### **List of Acronyms and Definition of terms**

#### **Definitions of technical terms**

### **Non-Technical Executive summary of the Environmental & Social Impact Statement in both English and Swahili**

#### **Chapter 1: Introduction**

Brief description of the project – name, nature, size, location of the project, its importance and justification, etc.

Land description - Project location, Shehia, District, etc.

Profile of the project proponent, organization, project consultants, etc.

Objectives, Scope, and Study Methodologies

ToR

#### **Chapter 2: Project Description**

Project Feasibility Study and references from Detailed Project Document

Details about the description of the project site, geology, soil, topography, hydrological survey, groundwater survey, wetlands, biodiversity, socio-cultural environment of the surrounding area, the economic aspect of the project for the local communities and for the country, etc. should be included.

Quantity of raw materials involved during the rehabilitation phase along with their source of origin.

The use of existing public infrastructure such as other road networks, water supply lines, electricity lines, built-up environment, etc., in the rehabilitation activities should be elaborated.

The cost and budget, financial projection, etc., of each project component should be highlighted

Details of land acquisition, compensation, resettlement, and incentives.

Resources, manpower and time frame involved, etc.

Monitoring and Evaluation of the rehabilitation phase, etc.

The following maps and drawings must be presented:

Maps specifying project locations

Land Use Map showing activities of the surrounding areas

Site layout plan showing all details of design, construction and operations.

### **Chapter 3. Description of the Environment:**

This section should include detailed biophysical profiles of the project location.

The topography of the proposed site should be clearly stated.

Geology of the proposed site including soil profile and quality;

Meteorological Data of the study area;

Hydrological and Ground water survey of the project sites.

Water quality assessment of surface and groundwater in the project zone.

Soil quality and atmospheric pollution assessment in the zone.

Drainage and watershed survey.

**Biological Environment:** The project is expected to generate positive impacts for biodiversity and High Conservation Value's species both fauna and flora adjacent to the project areas, hence protection of streams, rivers is necessary to allow natural regeneration. The project will protect the defined wildlife corridors which will be important for the long term survival of a range of rampant fauna species. Trees and extensive vegetation clearance shall be avoided. Also biodiversity monitoring plan will



be developed as necessary in collaboration with the nearby Community Conservation Societies.

Socio-economic and occupational health hazards (socio-economic survey, demography of the surrounding human settlements, health status of the communities, existing infrastructural activities, employment status, etc.)

#### **Chapter 4: Policy, Legislative and Regulatory Framework**

This Chapter will cover all the relevant and existing policy, legislative, and regulatory frameworks associated with the proposed project. The project proponent also will be required to show relevant legislative and administrative linkages with other sectorial plans and programs. And other relevant policies, acts, and guidelines as may be required in the process. Moreover, the consultant shall cite national policy provisions and institutional set-up on relevant issues and matters concerning the proposed project activities.

#### **Chapter 5: Public Consultations and Stakeholder Analysis**

The project proponent shall present the findings of all the stakeholders consulted in the stakeholder analysis process. These stakeholders shall include the following:

- Zanzibar Environmental Management Authority (ZEMA)
- Department of Environment, Zanzibar.
- Department of Occupational Health and Safety
- Zanzibar Water Authority (ZAWA)
- Zanzibar Electricity Corporation (ZECO)
- District offices
- Irrigation scheme committees of the subprojects
- Private Sector
- NGOs
- Teachers Associations
- Communities from Shehias are forming boundaries with the proposed site.

#### **Chapter 6: Evaluation of Predicted Impacts**

The following considerations should be included for each identified impact:-

Statement of impact or effect;

Brief description of the impact or effect;

Group(s) affected,

including the land owner(s);

Statement of criteria for determining significance (could include magnitude, geographic extent, duration, frequency, risk or uncertainty, size of the group affected)

Significance of or effect without mitigation

Suggested measures for mitigation or optimization

Significance of impact with mitigation or optimization measures.

The predicted impacts should reflect key issues highlighted during the findings of the ZEMA scoping study.

### **Chapter 7: Analysis of the Project Alternatives**

This chapter should include an analysis of issues such as the design, location, cost-benefit analysis, or any other feasible alternative to the current arrangement.

### **Chapter 8: Mitigation Measures**

This section will show how the mitigation measures proposed against the identified impacts. For each of the environmental effects identified in the evaluation of impacts, the mitigation measure should be elaborated.

### **Chapter 9: Environmental and Social Management Plan**

This section will show how the proponent is committed to implementing the mitigation measures proposed against the identified impacts. Responsibility for carrying out monitoring by other institutions has to be shown under this section as well

### **Chapter 10: Environmental and Social Monitoring Plan**

This section will show how the proponent will finance the implementation of the Environmental and Social Management Plan. For each of the identified environmental effects, the project proponent should show how the mitigation measure should be implemented under specified cost and budget.

### **Chapter 11: Conclusion and Recommendations**

### **Technical Appendices**

Input into the logical framework planning matrix of the project design – intervention logic, indicators, assumptions and preconditions.

Maps of the project area and other illustrative information are not incorporated into the main report.

Other technical information and data, as required.

Records of stakeholder engagement.

### **Other appendices**

Study methodology/work plan (2–4 pages).

Consultants' Itinerary (1–2 pages).

List of stakeholders consulted or engaged (1–2 pages).

List of documentation consulted (1–2 pages).

Curricula vitae of the lead consultants (1 page per person).

ToR

#### ***Annex IV: Generic TOR for preparation of ESMP***

The consultant shall perform the following tasks while preparing ESMP Formalization with project documents and, Environmental and Social Screening (ESS) forms

Conduct fieldwork for physical survey, investigation, and social-economic survey. This is intended to facilitate the acquisition of information and data on physical, cultural and social aspects of the project sites and the neighboring areas.

Identifying and reviewing key legislative, institutional, regulatory and administrative regimes as well as the World Bank Environmental and Social Standards within which the proposed project will operate

Conducting consultative meetings/interviews with all stakeholders about the project.

Identification of Environmental and Social impacts/issues-Preparing Mitigation Measures -For negative impacts, appropriate mitigation measures to make the project environmentally friendly

Developing Monitoring Plan- Specifically, the monitoring section of ESMP shall have a specific description and technical details of the monitoring method, including the indicators to be measured, how they will be measured and by whom, the sampling locations, the frequency of measurements and the definition of thresholds that will signal the need for corrective actions.

Establishing Institutional Arrangements and Responsibilities- this will give a description of institutional arrangements and responsibility for the implementation of mitigation measures and carrying out the monitoring regime for operations, supervision, enforcement, remedial action, financing, reporting and staff training. Additionally, the ESMP should have an estimate of the costs required to address the mitigation measures and activities to be implemented by different actors.

Finally, the ESMPs is envisaged to have the following contents;

List of tables

List of Figures

Executive summary

Introduction

Project description

Environmental and Social Impacts

Environmental and Social Management Plan

Environmental and Social Monitoring Plan

Roles and Responsibilities for Implementation of ESM

Grievance Redress Mechanisms

Conclusion and Recommendations

References

Appendices

**Annex V: Generic Environmental and Social Management Plan (ESMP)**

Impacts/Risks	Mitigation Measure	Project Phase	Responsible Entity	Deadline	Monitoring Frequency	Budget
Occupational Safety and Health impacts	<p><b><u>Project preparatory phase:</u></b>  <b><u>Infrastructure and equipment design and safety</u></b></p> <ul style="list-style-type: none"> <li>Structural elements of a project shall be designed and constructed by competent professionals and certified or approved by competent authorities or professionals. The Structural design shall take into account climate change considerations, as appropriate. However, the project shall not be engaged in a dam construction or related structure and no dam is existing in the proposed subproject sites.</li> <li>Where the project includes new buildings and structures that will be accessed by members of the public, the MAINL shall consider the incremental risks of the public's potential exposure to operational accidents or natural hazards, including extreme weather events. Where technically and financially feasible, the MAINL shall also apply the concept of universal access to the design and construction of such new buildings and structures so that the buildings and structures provide reasonable accommodation for persons with disabilities, women, and older people.</li> <li>There shall be a development of the LMP in line</li> </ul>	Construction phase	MAINL E&S risk and impacts management teams	Before the commencement of the works under component 3	Quarterly monitoring and Verification Report	The cost will be estimated by ESIA/ESMP

Impacts/Risks	Mitigation Measure	Project Phase	Responsible Entity	Deadline	Monitoring Frequency	Budget
	<p>with ESS2 measures and consideration of relevant requirements of the WBH EHS Guidelines to improve occupational safety and avoid health impact of workers and labourers</p> <p><b><u>Project preparatory phase: Safety of services</u></b></p> <ul style="list-style-type: none"> <li>• Where the project involves provision of services to communities, the MAINL shall establish and implement appropriate quality management systems to anticipate and minimize risks and impacts that such services may have on community health and safety. In such circumstances, the MAINL will also apply the concept of universal access, including consideration of a reasonable accommodation into building and structure facilities for persons with disabilities, women, and older people, where technically and financially feasible.</li> </ul> <p><b><u>Project preparatory phase: Emergency Preparedness and Response</u></b></p> <ul style="list-style-type: none"> <li>• MAINL shall conduct a risk hazard assessment (RHA) to projects having potential to generate emergency events, as part of the environmental and social assessment undertaken pursuant to ESS1. Based on the results of the RHA, the</li> </ul>					

Impacts/Risks	Mitigation Measure	Project Phase	Responsible Entity	Deadline	Monitoring Frequency	Budget
	<p>MAINL shall prepare an Emergency Response Plan (ERP) in coordination with the relevant local authorities and the affected community, and shall take into account the emergency prevention, preparedness and response arrangements put into place with project workers under ESS2. ERP shall include, as appropriate: (a) engineering controls (such as containment, automatic alarms, and shutoff systems) proportionate to the nature and scale of the hazard; (b) identification of and secure access to emergency equipment available on-site and nearby; (c) notification procedures for designated emergency responders; (d) diverse media channels for notification of the affected community and other stakeholders; (e) a training program for emergency responders including drills at regular intervals; (f) public evacuation procedures; (g) designated coordinator for ERP implementation; and (h) measures for restoration and cleanup of the environment following any major accident</p> <p><b><u>Construction phase: General Health and Safety issues and mitigation measures</u></b></p> <ul style="list-style-type: none"> <li>• The project shall undertake identification of OHS</li> </ul>					

Impacts/Risks	Mitigation Measure	Project Phase	Responsible Entity	Deadline	Monitoring Frequency	Budget
	<p>mitigation measures which shall be based on the mitigation hierarchy including elimination/substitution measures, engineering controls, administrative controls and PPEs - appropriate working gear (such as nose and mouth masks, ear plugs and clothing) and good construction site management shall be provided,</p> <ul style="list-style-type: none"> <li>• During construction, the contractor shall ensure that the construction site is fenced and hygienically kept with adequate provision of facilities including waste disposal receptacles, sewage, firefighting, and clean and safe water supply.</li> <li>• A well-stocked first aid kit (administered by medical personnel) shall be maintained at the construction site. The medical personnel shall also be responsible for the primary treatment of ailments and other minor medical cases as well as providing health education to the workforce.</li> <li>• Reporting mechanisms for the public to register concerns or complaints regarding perceived risks to their health and safety due to the construction operation shall be put in place.</li> <li>• Emergency contact details in the event of an accident shall be provided.</li> <li>• Training all contractor staff in emergency</li> </ul>					



Impacts/Risks	Mitigation Measure	Project Phase	Responsible Entity	Deadline	Monitoring Frequency	Budget
	<p>planning and spill response.</p> <ul style="list-style-type: none"> <li>• Developing a detailed health and safety plan and training all contractor staff on the plan.</li> <li>• Surfaces, structures, and installations should be easy to clean and maintain, and not allow for accumulation of hazardous compounds.</li> <li>• Buildings should be structurally safe, provide appropriate protection against the climate, and have acceptable light and noise conditions.</li> <li>• Fire resistant, noise-absorbing materials should, to the extent feasible, be used for cladding on ceilings and walls.</li> <li>• Floors should be level, even, and non-skid.</li> <li>• Heavy oscillating, rotating or alternating equipment should be located in dedicated buildings or structurally isolated sections.</li> </ul>					
Community health, safety risks and security from the handling, transport, and disposal of construction wastes	<ul style="list-style-type: none"> <li>• GBV, SEA and sexual harassment training before working on the Project which shall be provided by the Community Social Officers from the LGA and on the Child and Gender desk of the police. This will include information on the GBV reporting mechanisms.</li> <li>• Institute good site practices including preventing public access to the construction site by securing equipment and demarcating project boundaries using warning signs with appropriate text (local</li> </ul>	Construction phase	MAINL E&S risk and impacts management teams assisted by Contractor.	Before the commencement of the works under component 3	Quarterly monitoring and Verification Report	The cost will be estimated by ESIA/ESMP

Impacts/Risks	Mitigation Measure	Project Phase	Responsible Entity	Deadline	Monitoring Frequency	Budget
	<p>language) and graphic displays.</p> <ul style="list-style-type: none"> <li>• Institute traffic management and safety Programme including, training, and testing of heavy vehicles operators and drivers, enforcement of speed limits, maximum loading restrictions and compliance with all Zanzibar transportation law and standards as well as road safety standards in line with ESF requirement</li> <li>• Awareness campaigns/education on HIV and STDs and COVID-19 shall be provided to workers and the community.</li> <li>• Low-skilled workers shall be hired around the project jurisdiction, if necessary, to reduce the population of foreigners.</li> <li>• Protect stockpiles of friable material subject to wind through wetting.</li> <li>• Cover loads with friable material during transportation.</li> <li>• Contractors will be provided with signage on issues such as HIV/AIDS, GBV, COVID 19 etc which will be posted at worksites.</li> <li>• Contractors/workers shall attend awareness education sessions on disease transmission notably HIV/AIDS, COVID-19 and malaria and will implement the control measures needed to protect public health.</li> </ul>					

Impacts/Risks	Mitigation Measure	Project Phase	Responsible Entity	Deadline	Monitoring Frequency	Budget
	<ul style="list-style-type: none"> <li>• Contractors/workers shall ensure good housekeeping arrangements on-site to avoid creating breeding grounds for rodents and insects which can spread diseases.</li> <li>• Contractors shall ensure access to potable water for all workers.</li> <li>• Contractors shall be required to abide by national law about vehicle conditions and movements and behavior of drivers.</li> <li>• Signage shall be erected at construction sites to advise the community of the dangers of entering the site and appropriate barricades (fencing, tape etc) shall be put in place, especially around quarries, trenches, etc</li> <li>• The contractor shall be instructed to ensure waste disposal from construction materials are in line with ESF requirements</li> </ul>					
Road Traffic Impact Management	<ul style="list-style-type: none"> <li>• Develop and implement a road traffic and community safety management plan as part of each work package contract before the commencement of the rehabilitation and or construction works</li> </ul>	Construction phase	MAINL E&S risk and impacts management teams assisted by Contractor.	Before the commencement of the works under component 3	Quarterly monitoring and Verification Report	The cost will be estimated by ESIA/ESMP
Road	<ul style="list-style-type: none"> <li>• Enforcement of speed limits shall be adhered as</li> </ul>	Construct	MAINL	Before the	Quarterly	The cost

Impacts/Risks	Mitigation Measure	Project Phase	Responsible Entity	Deadline	Monitoring Frequency	Budget
accidents resulting from the transportation of materials from the source to the construction site include incident reporting requirements and ESIRT procedures	<p>prescribed by national responsible authorities.</p> <ul style="list-style-type: none"> <li>Contractors shall be required to abide by national law about vehicle conditions and movements and behavior of drivers.</li> <li>Signage will be erected at construction sites to advise the community of the dangers of entering the site and appropriate barricades (fencing, tape etc.) will be put in place, especially around quarries, trenches, etc.</li> <li>The contractor shall be required to prepare and submit report of road incidents with a consideration of ESIRT procedures which shall be oriented to the contractors before engaged into rehabilitation assignments.</li> </ul>	ion phase	E&S risk and impacts management teams assisted by Contractor.	commencement of the works under component 3	monitoring and Verification Report	will be estimated by ESIA/ESMP
Increased incidences of diseases and ill health	<ul style="list-style-type: none"> <li>A safety, health and environment induction course shall be conducted to all workers and contractors, putting more emphasis on HIV/AIDS, which has become a national disaster as well as other emerging pandemics such as COVID-19 and dengue fever.</li> <li>The project shall include an information education and communication component (IEC) in its budget. This will help to raise more awareness of HIV/AIDS, and means to suppress its incidence.</li> <li>Environmental sanitation systems shall be</li> </ul>	Construct ion phase	MAINL E&S risk and impacts management teams assisted by Contractor.	Before the commencement of the works	Quarterly monitoring and Verification Report	The cost will be estimated by ESIA/ESMP

Impacts/Risks	Mitigation Measure	Project Phase	Responsible Entity	Deadline	Monitoring Frequency	Budget
	<p>improved.</p> <ul style="list-style-type: none"> <li>First Aid Kits shall be provided at each subproject to enhance healthcare</li> </ul>					
Increased pressure on social services/ facilities and utilities	<ul style="list-style-type: none"> <li>Measures on conservative use of water, introduction of rainwater harvesting systems, and extraction of groundwater resources shall be explored.</li> </ul>	Construction and operation phase	subproject	Before the commencement of the works and during project implementation	Quarterly monitoring and Verification Report	The cost will be estimated by ESIA/ESMP
Gender-based violence	<ul style="list-style-type: none"> <li>The project shall prepare a GBV Action Plan that ensures a project awareness-raising strategy (for workers and community members), a list of GBV service Providers to which GBV survivors will be referred, revisions to the GRM to ensure it can address GBV complaints, and information on GBV allegation procedures in the workplace. The government of Zanzibar has a regulation that governs gender violence which this project shall adhere to it during its implementation.</li> </ul>	Construction and operation phase	MAINL E&S risk and impacts management teams	Before the commencement of the works	Quarterly monitoring and Verification Report	The cost will be estimated by ESIA/ESMP
Gender discrimination	<ul style="list-style-type: none"> <li>This project shall ensure that there is the involvement of women in project activities.</li> </ul>	Construction and operation phase	MAINL E&S risk and impacts management	Before the commencement of the works	Quarterly monitoring and Verification Report	The cost will be estimated by ESIA/ESMP

Impacts/Risks	Mitigation Measure	Project Phase	Responsible Entity	Deadline	Monitoring Frequency	Budget
			nt teams		Report	MP
Child labour	<ul style="list-style-type: none"> <li>• MAINL shall conduct regular monitoring of project workers about health, working conditions, hours of work, minimum age, and the other requirement of national law.</li> <li>• Work and collaborate with local authorities and irrigation scheme committee in the area to control school dropout</li> <li>• Create awareness raising to the communities on the importance of education for the children,</li> <li>• The local authorities should develop bylaws to control the engagement of children in petty business or work in project-related activities</li> </ul>	Construction phase	MAINL E&S risk and impacts management teams	Before the commencement of the works	Quarterly monitoring and Verification Report	The cost will be estimated by ESIA/ESMP
Increased level of crimes	<ul style="list-style-type: none"> <li>• Establish community-based security in collaboration with Shehas.</li> <li>• The contractor shall establish his security to protect his properties and should establish community policing to support insufficient police force.</li> <li>• The community shall be encouraged to participate in security matters by providing information on suspects.</li> <li>• The cooperation of local people shall be instilled to lessen criminal incidents and maintain the security of people and their properties.</li> </ul>	Construction phase	MAINL E&S risk and impacts management teams	Before the commencement of the works	Quarterly monitoring and Verification Report	The cost will be estimated by ESIA/ESMP

Impacts/Risks	Mitigation Measure	Project Phase	Responsible Entity	Deadline	Monitoring Frequency	Budget
<b><i>Environmental risks and impacts, and mitigation measures</i></b>						
<b><i>Rehabilitation of irrigation of infrastructures, construction of irrigation scheme facilities and borehole drilling works</i></b>						

Impacts/Risks	Mitigation Measure	Project Phase	Responsible Entity	Deadline	Monitoring Frequency	Budget
Vegetation and soil erosion degradation of Exposed Surfaces	<ul style="list-style-type: none"> <li>• Rehabilitation and or construction shall be done as per engineering design and procedure of which a maximum requirement of compaction strength is achieved during the construction. That is the maximum dry density (MDD) specified in the design manual by the consultant.</li> <li>• Contractor should be informed to take extra care to clear vegetation in area where work shall be undertaken to avoid soil erosion. In addition, placement of sediment traps and other relevant mitigation measures to mitigate erosion impacts shall be considered</li> <li>• Where tree(s) necessitate to be cut, to open space or access to machineries (e.g., drilling trucks), tree cutting permits shall be applied from the authorized agency.</li> <li>• Construction of irrigation scheme facilities shall be placed within the scheme boundaries and shall be placed where shall be no critical vegetation to avoid biodiversity loss or hill terrain to avoid erosion.</li> <li>• Maintain gravel fill and/or re-vegetate around the structures.</li> <li>• Unnecessary ground clearance and sensitive re-alignments shall be avoided.</li> <li>• Directing flow to properly designated channels.</li> </ul>	Construction phase	MAINL E&S risk and impacts management teams	Before the commencement of the works	Quarterly monitoring and Verification Report	The cost will be estimated by ESIA/ESMP



Impacts/Risks	Mitigation Measure	Project Phase	Responsible Entity	Deadline	Monitoring Frequency	Budget
	<ul style="list-style-type: none"> <li>All excavation works shall be properly backfilled and compacted. and,</li> <li>Most of the construction activities shall be done during dry weather or season</li> </ul>					
Increased waste generation during rehabilitation and or construction works.	<ul style="list-style-type: none"> <li>There shall be health education on sanitation and solid waste management within the community in order to prevent human health risk and environmental pollution.</li> <li>Workers will be encouraged to collect and store non-usable material at designated site so that can easily be taken and transported into authorized engineered landfill site.</li> <li>Optimum care shall be taken to ensure that no waste is deliberately dumped into the water or open areas in the subproject sites</li> </ul>	Construction phase	MAINL E&S risk and impacts management teams	Before the commencement of the works	Quarterly monitoring and Verification Report	The cost will be estimated by ESIA/ESMP
The exploitation of borrow PCUs/quarries and other natural resources	<ul style="list-style-type: none"> <li>The exploitation of construction materials shall take place from authorized sources only,</li> <li>Restoration of the borrow PCUs/quarries after use constituting of levelling the area and seeding or planting of trees and/or grasses shall be done by Department of Forestry in collaboration with local government. If appropriate, the levelled area shall be left for natural re-vegetation or planted with agricultural crops proposed by district agricultural officer</li> </ul>	Preparatory phase and Construction phase	MAINL E&S risk and impacts management teams	Before the commencement of the works	Quarterly monitoring and Verification Report	The cost will be estimated by ESIA/ESMP

Impacts/Risks	Mitigation Measure	Project Phase	Responsible Entity	Deadline	Monitoring Frequency	Budget
Contamination and /impaired quality of receiving body – land and water.	<ul style="list-style-type: none"> <li>• An efficient collection and disposal system based on the principles of reduction, re-use, and recycling of materials, shall be instituted at project areas.</li> <li>• Introduction of waste disposal bins, and warning notices, posted at strategic points.</li> <li>• No, on-site burial or open burning of solid waste shall be permitted.</li> <li>• Wastes not suitable for incineration and general municipal waste dumping (e.g., plastics, rubbers, tires, etc.) shall be removed for recycling, treatment, and/or disposal by a licensed contractor as appropriate.</li> <li>• Instructions to the contractor to put on his/her methodologies for handling hazardous waste such as oils, lubricants, and non-combustible waste during the bidding process.</li> <li>• The contractor shall be instructed and oriented with ESF to ensure waste disposal requirements are in line with ESF requirements and GIIP.</li> </ul>	Construction phase	MAINL E&S risk and impacts management teams assisted by consultant	Before the commencement of the works	Quarterly monitoring and Verification Report	The cost will be estimated by ESIA/ESMP
Increased Solid waste management problem in project areas	<ul style="list-style-type: none"> <li>• All materials which can be reused shall be reused.</li> <li>• Materials that cannot be reused shall be sent to an authorised dumpsite or Engineered landfill</li> <li>• The contractor shall have adequate facilities for handling the construction waste. Topsoil shall be</li> </ul>	Construction and operation phase	MAINL E&S risk and impacts management teams	Before the commencement of the works	Quarterly monitoring and Verification Report	The cost will be estimated by ESIA/ESMP

Impacts/Risks	Mitigation Measure	Project Phase	Responsible Entity	Deadline	Monitoring Frequency	Budget
	<p>stockpiled and used for reclamation or re-vegetation at the site during landscaping.</p> <ul style="list-style-type: none"> <li>All hazardous waste (including asbestos) shall be handled by registered authorized dealers recognized by ZEMA. The project in collaboration of ZEMA, shall consider the development of specific procedures for the management of asbestos-containing material, if found as an environmental liability issue</li> </ul>		assisted by Contractor.			
Increase in Wastewater Management problems.	<ul style="list-style-type: none"> <li>Sewage (Human liquid waste from toilet): this type of waste shall be treated in the Septic Tank and then disposed into the Soak away pit at site. wastewater discharge standards which are in line with WBG ESH Guidelines shall be applied.</li> <li>The contractor shall be instructed to put in place an acceptable procedure for handling hazardous waste such as oils, lubricants, and non-combustible waste.</li> <li>Training on waste management shall be done to all personnel, operators, and service providers.</li> <li>Contractor shall be instructed that all wastewaters from tested boreholes are well managed and not discharged to settlements or farmers crops to avoid damage to settlements and crops. Wastewater discharge standards in line with WBG ESH Guidelines will be adhered</li> </ul>	Construction and operation phase	MAINL E&S risk and impacts management teams assisted by Contractor.	Before the commencement of the works	Quarterly monitoring and Verification Report	The cost will be estimated by ESIA/ESMP

Impacts/Risks	Mitigation Measure	Project Phase	Responsible Entity	Deadline	Monitoring Frequency	Budget
Dust	<ul style="list-style-type: none"> <li>• Protect stockpiles of friable material subject to wind through wetting.</li> <li>• Cover loads with friable material during transportation.</li> <li>• Restrict speed on loose surface roads to 30 km/hr during dry or dusty conditions.</li> <li>• Douse with water work sites with loose open soil to reduce dust generation when necessary.</li> </ul>	Construction phase	MAINL E&S risk and impacts management teams assisted by Contractor	Before the commencement of the works	Quarterly monitoring and number of complaints against dust and noise	The cost will be estimated by ESIA/ESMP
Impairment of air quality due to emissions	<p>The project shall apply air quality standards which are in line with WBG ESH Guidelines; to ensure this is happening:</p> <ul style="list-style-type: none"> <li>• All equipment shall be maintained in good running condition and equipment, which generates excessive black smoke shall not be used.</li> <li>• Enforce vehicle road restrictions to avoid excessive emissions from engine overloading, where practical switching off engines shall be done when machines are not in use.</li> <li>• There shall be a routine inspection of equipment.</li> <li>• Trucks transporting materials shall be fully covered. and,</li> <li>• Turn off engines to reduce idling.</li> </ul>	Construction phase				The cost will be estimated by ESIA/ESMP
Contribution to climate change	<ul style="list-style-type: none"> <li>• Equipment shall be maintained in good running condition and equipment, which generates</li> </ul>	Construction and	MAINL E&S risk	Before the commencement	Quarterly monitoring	The cost will be

Impacts/Risks	Mitigation Measure	Project Phase	Responsible Entity	Deadline	Monitoring Frequency	Budget
impacts	<p>excessive black smoke shall not be used.</p> <ul style="list-style-type: none"> <li>Enforce vehicle road restrictions to avoid excessive emissions from engine overloading, where practical switching off engines will be done when machines are not in use.</li> <li>There shall be a routine inspection of equipment.</li> <li>Turn off engines to reduce idling.</li> <li>Consider additional risks related to flooding, droughts, and other relevant natural disaster risks</li> <li>Also, application drought resistance varieties', salt tolerance varieties, early maturity varieties' and Smart Climate Agriculture Technologies. Trees and extensive vegetation clearance shall be avoided not to cause drought scheme and other related natural disasters.</li> </ul>	operation phase	and impacts management teams assisted by Contractor	completion of the works after the cessation of construction activities	frequency and number of complaints against dust and noise	estimated by ESIA/ESMP
Increase noise level	<ul style="list-style-type: none"> <li>Vehicles carrying construction materials shall be restricted to work during nighttime only.</li> <li>Machine operators in various sections with significant noise levels shall be provided with noise protective gear.</li> <li>MAINL shall include in tenders, employment contracts, subcontractor agreements and work method statements clauses that assure the minimization of noise and compliance with directions from management to minimize noise.</li> </ul>	Construction phase	MAINL E&S risk and impacts management teams assisted by Contractor.	Before the commencement of the works	Quarterly monitoring and Verification Report	The cost will be estimated by ESIA/ESMP

Impacts/Risks	Mitigation Measure	Project Phase	Responsible Entity	Deadline	Monitoring Frequency	Budget
	<ul style="list-style-type: none"> <li>• Ensure that site managers periodically check the site, nearby residences and other sensitive receptors for noise problems so that solutions can be quickly applied.</li> <li>• Avoiding the use of radios and stereos outdoors and the overuse of public address systems dwellers can be affected.</li> <li>• Avoid shouting, and minimize talking loudly and slamming vehicle doors.</li> <li>• <u>The contractor shall be required to comply with Occupational Health and Safety procedures by ensuring that machinery is well maintained and properly fitted with exhaust mufflers to minimize noise and vibrations from trucks transporting materials. In addition, contractors shall be required to comply with air quality standards which in line with WBG ESH Guidelines</u></li> </ul>					
Groundwater Water pollution	<ul style="list-style-type: none"> <li>• Toilets shall be placed far from underground water sources</li> <li>• Wastewater from irrigation schemes shall be discharged to the natural wastewater treatment system.</li> <li>• Wastewater from toilets shall be treated in the Septic Tank and then disposed into the Soak away pit at site.</li> <li>• All wastewater treatment shall follow the</li> </ul>	Operation phase	MAINL/PCU	During implementation	Quarterly monitoring and Verification Report	The cost will be estimated by ESIA/ESMP

Impacts/Risks	Mitigation Measure	Project Phase	Responsible Entity	Deadline	Monitoring Frequency	Budget
	requirement of WBG EHS guidelines.					
Biodiversity impacts (Loss of flora and fauna)	<ul style="list-style-type: none"> <li>• Clearance of patches of native forest remaining in the neighborhood of the proposed project shall be avoided.</li> <li>• Close supervision of earthworks shall be observed to confine land clearance within the project site.</li> <li>• An appropriate landscaping Programme to help in the re-vegetation of part of the project area after construction shall be designed and implemented.</li> <li>• The site where the proposed activities under project subcomponents 2.1 and 2.2 shall have no impact on natural resources because, all rehabilitation of the irrigation infrastructure will be exercised within the irrigation scheme sites where no new vegetation clearance would take place.</li> <li>• The ESIA process shall consider biodiversity and natural resources during project design and implementation and appropriate mitigation measures adopted in line with ESS6 requirement. In addition, application of the</li> </ul>					

Impacts/Risks	Mitigation Measure	Project Phase	Responsible Entity	Deadline	Monitoring Frequency	Budget
	<p>mitigation hierarchy for the definition of biodiversity mitigation measures and development of Biodiversity Management Plans shall be considered in case of significant impacts.</p> <ul style="list-style-type: none"> <li>• The conducting ESIA will follow the be guidance for the assessment of biodiversity impacts and mitigation measures in line with ESS6 requirements. (Including mitigation hierarchy and development of BMPs in case of significant impacts).</li> </ul>					
Increased storm water generation and overflow	<ul style="list-style-type: none"> <li>• The design of storm water drainage shall be given a high priority.</li> <li>• Where feasible, rainwater harvesting shall be used in proposed project sites to minimize the generation of surface runoff.</li> <li>•</li> </ul>					
<b>A: Positive social risks and impacts, and enhancement measures</b>						
Job creation	<ul style="list-style-type: none"> <li>• Employment shall be on equal opportunities for all genders and priority will be given to the youths and women from the local community.</li> <li>• Youths and women shall be employed as service provider such power tiller operators, transplanter, harvesters, weeders etc.</li> </ul>					



Impacts/Risks	Mitigation Measure	Project Phase	Responsible Entity	Deadline	Monitoring Frequency	Budget
	<ul style="list-style-type: none"> <li>• Increased commercial and social activities around targeted scheme</li> <li>• Provide good security within the project area and area of influence.</li> <li>• Create conducive business opportunities for attracting investments during rehabilitation work</li> </ul>					
<b><i>Negative Social Impacts and mitigation measures</i></b>						
Community Health and Safety	<ul style="list-style-type: none"> <li>• A safety, health and environment induction course shall be conducted for all students and teachers, putting more emphasis on HIV/AIDS, which has become a national disaster as well as other emerging pandemics such as COVID-19 and dengue fever.</li> <li>• The project shall include an information education and communication component (IEC) in its budget. This will help to raise more awareness of HIV/AIDS and means to suppress its incidence.</li> <li>• Environmental sanitation systems shall be improved.</li> <li>• First Aid Kits shall be provided at each subproject irrigation scheme to enhance healthcare</li> </ul>					

Impacts/Risks	Mitigation Measure	Project Phase	Responsible Entity	Deadline	Monitoring Frequency	Budget
Increased pressure on social services/facilities and utilities	<ul style="list-style-type: none"> <li>• Use of water conservatively by instituting technologies and awareness-raising notices to users, etc.</li> <li>• Use existing water resources for use during project rehabilitation exercise and any new extraction of groundwater sources should follow existing laws and regulations as govern by ZAWA.</li> </ul>					
Gender-based violence	<ul style="list-style-type: none"> <li>• The project will prepare a GBV Action Plan that ensures a project awareness-raising strategy (for workers and community members), a list of GBV service Providers to which GBV survivors will be referred, revisions to the GRM to ensure it can address GBV complaints, and information on GBV allegation procedures in the workplace.</li> <li>•</li> </ul>					
Gender discrimination	This project will ensure that there is the involvement of an equal percentage of women and men in project activities. Effluents					

Impacts/Risks	Mitigation Measure	Project Phase	Responsible Entity	Deadline	Monitoring Frequency	Budget
<b><i>Risks and Impacts, and mitigation measures on the physical environment</i></b>						
Groundwater Water pollution	<ul style="list-style-type: none"> <li>• Toilets shall be placed far from underground water sources</li> <li>• Wastewater from irrigation schemes shall be discharged to the natural wastewater treatment system.</li> <li>• Wastewater from toilets shall be treated in the Septic Tank and then disposed into the Soak away pit at site.</li> <li>• All wastewater treatment shall follow the requirement of WBG EHS guidelines.</li> <li>• Project shall prepare IPMP and train farmers on appropriate use agrochemicals to avoid groundwater pollution</li> </ul>					
Increased storm water generation and overflow	<p>The design of storm water drainage will be given a high priority.</p> <p>Where feasible, rainwater harvesting will be used in proposed project sites to minimize the generation of surface runoff.</p> <ul style="list-style-type: none"> <li>•</li> </ul>					
Explore the possibility for desalination	<ul style="list-style-type: none"> <li>• Feasibility studies shall be called in to seek using the saltwater into irrigation schemes to reduce undergrounds water extraction.</li> </ul>					

Impacts/Risks	Mitigation Measure	Project Phase	Responsible Entity	Deadline	Monitoring Frequency	Budget
Contribution to Climate Change	<ul style="list-style-type: none"> <li>• Promote use of renewable energy technologies to minimize carbon dioxide emissions for example use of solar power for water pumping for the use irrigation scheme activities to minimize the use of electricity which sourced from hydropower generation.</li> <li>• Control illegal wood cutting and in case during subproject operations demand trees cut, proper procedure and permits shall be secure prior felling the trees. In addition, application of the mitigation hierarchy for the definition of biodiversity mitigation measures and development of Biodiversity Management Plans shall be considered in case of significant impacts.</li> <li>• Replace removed vegetation where appropriate.</li> </ul>					
	<ul style="list-style-type: none"> <li>•</li> </ul>					
	<ul style="list-style-type: none"> <li>•</li> </ul>					

## ***Annex VI: Code of Conduct***

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

Limited Interactions between contractors/workers and the community including students.

Adhere to a zero alcohol and drug policy during work activities, and refrain from the use of illegal substances at all times.

Treat women, children (persons under the age of 18), and men with respect regardless of race, colour, language, religion, political or another opinion, national, ethnic or social origin, property, disability, birth or another status.

Not use language or behavior towards women, children or men that is inappropriate, harassing, abusive, sexually provocative, demeaning or culturally inappropriate.

Not participate in sexual contact or activity with children including school children around the subproject sites

Not engage in sexual harassment—for instance, making unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct, of a sexual nature, including subtle acts of such behavior.

Not engage in sexual favors—for instance, making promises or favorable treatment dependent on sexual acts—or other forms of humiliating, degrading or exploitative behavior.

Unless there is full consent<sup>5</sup> by all parties involved, not have sexual interactions with members of the surrounding communities. This includes relationships involving the withholding or promise of actual provision of a benefit (monetary or non-monetary) to community members in exchange for sex—such sexual activity is considered “non-consensual”.

Reporting through the GRM any suspected or actual GBV by a fellow worker, whether employed by my company or not, or any breaches of the Code of Conduct.

Sanctions for any breaches in the code of conduct in line with national labour laws.

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<sup>5</sup> Consent is defined as the informed choice underlying an individual’s free and voluntary intention, acceptance or agreement to do something. No consent can be found when such acceptance or agreement is obtained through the use of threats, force or other forms of coercion, abduction, fraud, deception, or misrepresentation. In accordance with the United Nations Convention on the Rights of the Child, the World Bank considers that consent cannot be given by children under the age of 18, even in the event that national legislation of the country into which the Code of Conduct is introduced has a lower age. Mistaken belief regarding the age of the child and consent from the child is not a defense.

## ***Annex VII: Community Health and Safety measures***

- Contractors and workers will participate in any training related to health and saving including but not limited to:
- GBV, SEA and sexual harassment training before working on the Project which will be provided by the Community Social Officers from the LGA and on the Child and Gender desk of the police. This will include information on the GBV reporting mechanisms.
- Institute good site practices including preventing public access to the construction site by securing equipment and demarcating project boundaries using warning signs with appropriate text (local language) and graphic displays.
- Institute traffic management and safety Programme including, training and testing of heavy vehicles operators and drivers, enforcement of speed limits, maximum loading restrictions and compliance with all Zanzibar transportation law and standards.
- Awareness campaigns/education on HIV, STDs and COVID 19 shall be provided to workers and the community.
- Low-skilled workers will be hired around the project jurisdiction if necessary, to reduce the population of foreigners.
- Protect stockpiles of friable material subject to wind through wetting.
- Cover loads with friable material during transportation.
- Contractors will be provided with signage on issues such as HIV/AIDS, GBV etc which will be posted at worksites.
- Contractors/workers will attend education sessions on disease transmission notably HIV/AIDS, and malaria and will implement the control measures needed to protect public health.
- Contractors/workers will ensure good housekeeping arrangements on-site to avoid creating breeding grounds for rodents and insects which can spread diseases.
- Contractors will ensure access to potable water for all workers.
- Contractors will be required to abide by national law about vehicle conditions and movements and behavior of drivers.
- Signage will be erected at construction sites to advise the community of the dangers of entering the site and appropriate barricades (fencing, tape etc) will be put in place, especially around quarries, trenches, etc.

## ***Annex VIII: Terms of Reference for the Contracting the Environmental Expert for the Environmental Management and Supervision of the construction projects***

### **1. Introduction**

### **2. Specific Tasks**

The specific tasks of the Environmental Expert will be:

Supervise the overall environmental management of the project and its subcomponents, provide guidance, support and orientation to increase environmental and social good practices and improve Environmental Management in the project sites in Zanzibar.

Coordinate closely with the Project Coordination teams at the Ministry level, irrigation schemes and agency levels on anything related to the environmental aspects of the project, supervision, monitoring, consultations, stakeholders' involvement, and participation in project development to reduce environmental and social impacts.

Interact and coordinate closely with the Social Experts, hired or appointed by the project to co-lead the Environmental and Social Management of the Project.

Interact and coordinate with other national agencies (NEMC, Ministry of Water, Ministry of Environment and other stakeholders to maintain a clear dialogue between the project, National institutions and local stakeholders.

Provide support in the preparation/review of the Environmental Section of the Operations Manual based on the Project's established ESF instruments (ESMF, SEP, ESCP, and other approved instruments) and the World Bank's environmental health and Safety guidelines.

Prepare and review terms of reference for contracting environmental evaluations, training, capacity building activities as described in the ESMF and the ESCP to increase national, irrigation scheme and agency/institution capacities in environmental management (ESMP, waste and pollution management, waste management plan and manuals, feasibility studies, etc.).

Participate in training workshops for use of the Operations Manual under the Programme.

Provide support in reviewing the Project bidding Documents, Direct Contracts, etc. to ensure the proper environmental and social management of the project by contractors.

Maintain dialogue and report about the project advances and overall development to the community, local stakeholders, national agencies, collaborators, etc.

Supervise contractors during construction and rehabilitation works and monitor

compliance to the ESIA, ESMP and ESMF, National Legislation and the World Bank Environmental and Social Standards.

Monitor timely environmental and social performance of the project, contractors and subcontracts and other parties.

Develop capacity-building activities to increase the environmental management capacity of contractors and counterparts.

Track and verify the performance of the project in the application of achieving the PDO outcomes and the intermediate results.

### **3. Qualifications**

The Environmental specialist will have the following qualifications:

A Master's degree in Environmental Management, Environmental Engineering, Biology, Ecology or a related field;

At least five years of experience in Environmental impact assessment of civil works and working as an environmental supervisor, inspection, monitoring and or coordinator of the environmental management plan;

The experience in the World Bank ESF will be an added advantage;

The professional will be registered in ZEMA and be active to present documentation;

Must have knowledge and experience in the country environmental regulations and permitting processes (civil works, water, waste management, etc.)

Demonstrated ability to work in teams and have leadership skills.

Fluency in English and good communication and writing skills.

Must be an organized person to keep track of many different project activities

### **4. Reporting**

The Environmental expert will report to the PCU. He/She will be required to submit the following reports:

Monthly progress report on the overall work of the portfolio in preparation, construction and operation to project coordinator

Half-year Report to project coordinator

Annual Report to project coordinator



Midterm Review Report to project coordinator

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

## **5. Duration.**

The assignment will be for the duration of Project Implementation expected to last 6 years.

## ***Annex ix: Terms of Reference for the Contracting the OHS Expert for the Health and Safety Management and Supervision of the construction projects***

### **1. Introduction**

#### **Roles and Responsibilities of Health and Safety Specialist**

Coordinate development of Health and safety management system (e.g. formulation of OSH policy, plans, procedures, monitoring and review)

Ensure that the OHS system is implemented in compliance with National Legislations and the World Bank Group Environmental and Social Standards (ESSs) requirements;

Ensure that the necessary permits are obtained;

Keeping accidents records

Ensure the relevant elements of OSH (including budget) are incorporated into final designs;

Include the requirements and mitigation measures from site-specific OSH in the bidding documents and contractor contracts;

Ensure that contractors have Health and Safety Officer (EHS), who is familiar with the compliance requirements, including WB HS guidelines;

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

Ensure contractors/workers will attend education sessions on disease transmission notably HIV/AIDS, COVID 19 and malaria and will implement the control measures needed to protect public health.

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

Contractors will ensure access to potable water for all workers.

Contractors will be required to abide by national law about vehicle conditions and movements and behavior of drivers.

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

Review progress reports by the supervision engineer/consultant during civil works and conduct inspection of the sites;

Send progress reports monthly progress report to Project Coordinator.

### **3. Qualifications**

The Health and Safety specialist will have the following qualifications:

A Master's degree in Environmental Management, Environmental Engineering, or a related field;  
At least five years of experience in health and Safety management and supervision of civil works and working as an Health and Safety specialist, inspection, monitoring and or coordinator of the environmental management plan;  
The experience in the World Bank ESF will be an added advantage;  
The expert should have a professional H and safety certificate and be active to present documentation;  
Must have knowledge and experience in the country regulations on Health and Safety issues  
Demonstrated ability to work in teams and have leadership skills.  
Fluency in English and good communication and writing skills.  
Must be an organized person to keep track of many different project activities

#### **4. Reporting**

The Environmental expert will report to the PCU. He/She will be required to submit the following reports:

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

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

#### **5. Duration.**

The assignment will be for the duration of Project Implementation expected to last 6 years.

## ***Annex X: Terms of Reference for the contracting of the Social Expert for the Social Management and Supervision of the construction project***

### **1. Introduction**

### **2. Specific Tasks**

The specific tasks of the Social Expert will be:

Supervise the overall social management of the project and its subcomponents and associated with the construction activities. This will include providing guidance and support to improve social management in irrigation schemes rehabilitation and operation in Zanzibar

Coordinate closely with the TFSRP Coordination Team to identify and manage social risks and impacts and ensure that these are given the required management attention.

Interact and coordinate closely with the Environmental counterparts hired or appointed by the project to co-lead the Environmental and Social Management of the Project.

Interact and coordinate with other national agencies and other stakeholders to maintain a clear dialogue Between the Project, National institutions and the local stakeholders in collaboration with the environmental counterparts

Provide support in preparation/review of the social section of the Project Operations Manual based on the Project's established ESF instruments (ESMF, SEP, ESCP, RFP and VGPF) and the World Bank's Environmental, Health and Safety Guidelines as well as national legislation.

Prepare and review terms of reference for contracting social evaluations, training, capacity building activities as described in the ESMF and the ESCP to increase national, regional, district and local capacities in social management (resettlement, labour and working conditions, community health (e.g. HIV/AIDS), vulnerable groups etc.)

Participate in training workshops for use of the Operations Manual under the Programme.

Provide support in reviewing the Project bidding documents, direct contracts, etc. to ensure the proper environmental and social management of the project by contractors.

Provide support to undertake engagement in line with the requirements of the Stakeholder Engagement Plan (SEP).

Provide support to beneficiary irrigation schemes to supervise contractors and

monitor compliance with Project and national requirements related to environmental and social management.

Develop and implement capacity-building activities to increase knowledge and Awareness of social management, and tracking and verifying the performance of the project in achieving the PDO outcomes and the intermediate results.

### **3. Qualifications**

The social specialist will have the following qualifications:

A Master's degree in Sociology, Anthropology or a related field.

At least five years of experience in managing social impacts including Resettlement planning and implementation, stakeholder engagement, information and education campaigns etc. on civil works sites.

The experience in international standards for social management ideally the World Bank ESF will be added advantage

Must have knowledge and experience in Zanzibar regulations and permitting processes related to social risk management

Demonstrated ability to work in teams and have leadership skills.

Fluency in Kiswahili and English and good communication and writing skills.

Must be an organized person to keep track of many different project activities.

### **4. Reporting**

The Social Expert will report to the coordinator at the PCU and will work closely with beneficiary irrigation schemes agencies who will implement the Project. She/he will be required to submit the following reports.

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

Half year Report to Project Coordinator and shared with World Bank

Annual Report to Project Coordinator and shared with World Bank

Midterm Review Report to Project Coordinator and share to World Bank

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

### **5. Duration**

The assignment will last for the duration of the Project (expected to be 6 years).

## ***Annex XI: Consultation details***

### **MINUTES OF THE INTERVIEWS/FOCUS GROUP DISCUSSION**

#### **Attendance**

Interviewees from irrigation scheme's committee's/government offices/agencies/ministries/NGO  
MAINL ESMF Consultant Team  
Representative from MAINL

#### **AGENDA**

Opening of discussion  
Projects description  
Getting Stakeholder Issues Recommendations /perspectives /questions  
Response from MAINL ESMF consultant team  
Closing of the discussion

#### **Discussion of The Agenda**

##### **Opening of the meeting/**

The discussions were opened by the MAINL representative introducing the ESMF team. Thereafter self-introduction from respective stakeholder(s) was followed.

##### **Projects description**

The ESMF consultant team leader described the project in terms of;

- Project Rationale
- Key project activities
- Project Time Line
- Implementation arrangements
- Project Scope
- Funding

##### **Stakeholder Issues /Recommendations / Perspectives /Questions**

The consultants requested the respective stakeholders to provide their views, suggestions and comments for the proposed TFSRPTFSRP with emphasis on environmental and social issues. Stakeholders provided their views/questions/recommendations for the proposed project as detailed in Table 9. The consultant team documented the same throughout the discussion.

##### **Response from MAINL ESMF Consultant team**

The consultant Team responded to various issues raised/recommended by the stakeholders. However, follow-up questions were posed for further clarification from the stakeholders. Also MAINL representative had an opportunity to clarify some raised issues and specific comments directed to MAINL where needed. Responses to various issues under discussion were also documented as shown in Table 9.

### **Closing of the Discussions**

The discussion was closed by the consultant team by thanking the stakeholder for their effective participation and comments/recommendations. However, a summary of the discussion was presented to participants to ensure key issues discussed are accommodated. Having agreed, the team requested the flexibility of the stakeholders for future consultations regarding the project. MAINL representatives provided a vote of thanks for providing their valuable time and comments for the respective stakeholders.