THE ENVIRONMENTAL IMPACT STATEMENT REPORT FOR THE PROPOSED CONSTRUCTION OF AGRO-PROCESSING INDUSTRY AND GRAIN MARKET ON PLOTS NO. 174-181 BLOCK 'A' LILAMBO INDUSTRIAL AREA, LILAMBO B MTAA, LILAMBO WARD, SONGEA DISTRICT IN RUVUMA REGION

FINAL REPORT

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SUBMITTED ON: 20th /OCTOBER/2023

EXECUTIVE SUMMARY

Title and Location of the project or undertaking

The title of this subproject is "Environmental and Social Impact Assessment (ESIA) for the proposed establishment of agro-processing industry and grain market at Lilambo industrial area in Songea municipality, Ruvuma region".

Name of the proponent and contact

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Brief Outline of the proposed Project

Project Background

The Government of the United Republic of Tanzania through The President's Office - Regional Administration and Local Development (PO-RALG) has received a credit from the Word Bank towards in implementing projects-financed Tanzania Cities Transforming Infrastructure and Competitiveness Project (TACTIC), which will be, implemented through the President's Office Regional Administration and Local Development (PO-RALG).

NORPLAN Tanzania Ltd was awarded the contract by PO-RALG to conduct; Feasibility Study, Urban Design, Detailed Engineering Design, Environmental and Social Due Diligence, Preparation of Cost Estimates and Bidding Documents for Urban Infrastructure Investments for Songea Municipal Council. This report presents Environmental and Social Impact Assessment for the proposed establishment of Agro-Processing Industry and Grain Market in Songea Municipality-Ruvuma region.

In Tanzania, agriculture markets are characterized by inadequate adherence to product quality standards, grades and post-harvest management, which can limit product access to regional and international markets (GoT, 2011). Private and public food safety standards have been implemented in Tanzania. In urban areas, supermarkets play a large role in the development of private food safety standards particularly as relates to quality attributes of agricultural commodities. Rural and poor households are excluded from the benefits of higher food standards since they tend to shop in traditional open markets where higher hygienic standards are not always applied.

Significant quantities of grains are exported regionally from Tanzania to neighbouring countries in East Africa (Kenya, Rwanda, Burundi, Uganda and the DRC), with occasional flows to Malawi and Zambia. A significant amount of informal grains trade occurs through bush "panya" routes from surplus producing areas to neighbouring importing countries where good quality grains from Tanzanian are generally preferred over other imports.

The most significant domestic principal foods marketing corridor originates from the surplus producing regions of Rukwa, Mbeya, Njombe and Ruvuma with Dar es Salaam as the key destination market. High transportation and market information costs are key factors limiting

the efficient flow of principal foods from surplus producing areas to deficit areas within Tanzania.

TACTIC Project's Objectives

The objective of the proposed TACTIC project is to strengthen urban management performance and deliver improved basic infrastructure and services in participating urban local government authorities. At its core, the project aims to promote economic development of Tanzania's cities and towns and its enabling infrastructure. Investments and technical assistance under the project are intended to promote urban development that is productive, inclusive and resilient. The project will support 45 urban Local Government Associations (LGAs) spread geographically across all regions of Tanzania, ranging in population from 26,402 to 416,442 (2012), divided into three tiers based on population and growth rate.

Subproject's Objective

The overall objective of the proposed subproject initiative is to contribute towards the revolution of the agricultural sector in Songea Municipality and Ruvuma region as a whole and indeed to play its part in boosting Tanzanian's economic growth. The prime objective of the project is to strengthen maize crop marketing systems, to maintain stability of maize price, to reduce maize post-harvest loss, to increase value of maize and to create employment opportunities.

Scope of the study

This study has assessed the social and environmental impacts of the proposed an Agro processing Industry and grain Market on the proposed site. The study was conducted in accordance with the requirement of Environmental Management Act of 2004 and the Environmental Management (EIA & EA) (Amendment) Regulations of 2018. The following components have been covered in this study;

- Baseline information.
- Description of the proposed project including project location, design, components and activities.
- To make consultation with government agencies, local communities and the private sector operating near the project area.
- To assess and quantify the potential environmental impacts resulting from the construction of proposed an Agro processing Industry and Grain Market.
- A review of the policy, legal and administrative framework.
- Assessment of the potential environmental impacts on the project area
- Development of the mitigation measures.
- To develop an Environmental Management Plan (EMP) detailing actions and responsibilities for impacts mitigation and monitoring.

Methodology

The methodology employed in conducting the study is in line with the Environment Impact Assessment and Audit Regulations, 2005 as amended in 2018, GN No.349 of 2005. The study was undertaken based on the checklists developed by NORPLAN Limited for guiding ESIA for the establishment of the proposed Agro processing Industry and Grain Market project.

A multi-disciplinary team of experienced environmentalist, social and RAP expert was assembled to carry out the required resource assessment, generation of baseline data, determination of potential impacts and recommendation of mitigation measures. An interactive approach among the environmental team members and other project professionals was adopted.

Boundaries of the ESIA Study

The study has considered two critical impact zones that define the special boundaries of the project, these are;

The core impact zone - include the area immediately bordering the project considered to be 100m width from the centre line of each proposed project.

The zone of influence - which includes the wider geographical area within Songea Municipal Council

Structure of the Report;

Chapter 1: **Introduction**: This chapter provides the general overview of the project including how the project background and justification, objectives and scope of the study and methodology used for conducting the study.

Chapter 2: Project Description: This chapter details the project components and further outlines activities and materials used in all phases of the project i.e. (mobilization, construction and operation and decommissioning).

Chapter 3: **Policy, Legal & Institutional Framework**: This chapter provides details of important policies, acts and regulations that govern the project.

Chapter 4: **Baseline Environmental and Social Conditions**: This chapter elaborates the project influence area and boundaries. It also describes the baseline / existing conditions of the study area.

Chapter 5: **Stakeholders Identification and Analysis**: Chapter five explains how the stakeholders were involved during the ESIA process and presents their concerns regarding the project.

Chapter 6: **Identification and Assessment of Impacts and Project Alternatives Identification**: This chapter discusses environmental and social impacts associated with the project analyzed according to impacts significance as well as alternative projects that are more suitable to the proposed one while serving the same purpose.

Chapter 7: Environmental & Social Management Plan: The Environmental and Social Management Plan (ESMP) presents how the identified impacts during all project phases will be managed to avoid, minimize or offset any adverse significant impacts of the proposed development.

Chapter8: **Environmental and Social Monitoring Plan**: Environmental and Social Monitoring Plan elaborates how the implementation of the ESMP will be monitored throughout the phases of the project. It is a plan to monitor the efficiency of the proposed project mitigation measures.

Chapter 9: **Cost Benefit Analysis**: In this chapter, the Environmental cost benefit analysis is assessed in terms of the negative versus positive impacts. The potential benefits of the project, in terms of financial and social benefit are substantial.

Chapter 10 Decommissioning: This chapter presents the activities involved when the proposed project is no longer operational and potential impacts to be managed.

Chapter 11: **Summary and Conclusions**

Summary and conclusion summarize findings concerning how feasible, viable and environmentally acceptable the project is and provides recommendations to the proponent on the feasibility of the project

Project Location

The proposed site for Agro Processing Industry and Modern Market is located at Lilambo "B" mtaa in Lilambo ward, Songea Municipality in Ruvuma region. It is approximately 12 km from Songea Municipal headquarter along Songea to Mbambabay highway on the right-hand side as one drives from the town center. The project site is located within Lilambo industrial area.

Existing Situation

The general area is characterized by undulating terrain and the specific area has a gentle slope. The project site has a red brown loam soil with the land surface is covered by different natural vegetation (few scattered short grasses and tree species) few visible faunas observed including birds and insects. Currently, no any site development. In addition, there are no sensitive ecological sites found near the proposed site.

Proposed Subprojects Components

The proposed Agro-Processing Industry & International Grain Market project will have one building which is divided in to two lots; having two (2) main divisions which are:

- Agro-Processing Industry – [comprising of receiving area, raw storage, screening, milling, packaging and finished goods storage area]
- Grain Market – [accommodating retailers and wholesalers' businesses].

Land Acquisition

The proposed project will be established on a plot of land with a total area of 10 hectares. The land is legally owned by Songea Municipal council. The plot has been surveyed and acquisition of the title deed is done.

Compensation and Resettlement Issues

There is neither compensation nor resettlement expected to occur for residential and commercial houses around the proposed establishment of Agro-Processing Industry and Grain Market at Lilambo Industrial area.

Adjacent Land Use

The project site is within area designated for industrial uses. The project site is bordered by undeveloped industrial plots on South at a distant of 50m, Songea to Mbambabay road at a 185m on the East and residential plots on West and North.

Estimated Project Cost & Time Frame

The cost for the proposed establishment of agro-processing industry and grain market at Lilambo industrial area under TACTIC ZONE 3 in Songea is estimated to **Tanzanian shillings 5.3 billion** from preliminary coast benefit of project. The subproject life is expected to be **50 years**.

Project Cycle

During project planning phase only, paper works are involved as summarized below:

- Evaluation of project concepts and alternatives selection,
- Design of all project components,
- Topographic survey
- Geo-technical Investigations;
- Soils and Materials Investigations;
- Carrying out ESIA of the project,
- Tendering for construction works,
- Approval of Engineering designs and Environmental Certification

The following are the main activities to be executed at the sites during mobilization:

- Demolition of the existing infrastructures
- Earthworks (demolition and removal of demolition materials and top soil)
- Building of temporary security fence around the sites, office and storage facilities
- Material transportation and storage
- Abstraction and transportation of water to the construction site
- Collection, storage, transportation, treatment and disposal of wastes generated

The following are the main activities to be executed at the sites during construction:

- Actual construction works

- Paving of surfaces with paving blocks
- Roadways within the project site
- Landscaping and environmental restoration
- Implementation of the ESMP.

All construction will continue under normal construction management and safety procedures. The major structures are including:

- Excavation of foundations
- Building columns & Beams
- Roof Trusses & sheeting
- Road Ways
- Approach Ladders & outside platforms

Once the construction phase is completed, the Agro-Processing Industry & International Grain Market will start to operate to serve the intended purposes. The activities that are expected to be executed during operational phase include:

- Repainting of the structures
- Routine maintenance of utilities (electrical, water supply, sewage management, storm drains, etc.)

Relevant policies and Legislation

Several relevant policies and legal documents have been reviewed to ensure that "Proposed Upgrading of the Agro-Processing Industry & International Grain Market at Songea Municipal meets policy and legislative criteria.

World Bank Policies

World Bank's Environmental and Social Framework and its components [Vision for Sustainable Development, World Bank Environmental and Social Policy for Investment Project Financing, and Environmental and Social Standards].

- Environmental and Social Standard 1: Assessment and Management of Environmental and Social Risks and Impacts
- Environmental and Social Standard 2: Labour and Working Conditions
- Environmental and Social Standard 3: Resource Efficiency and Pollution Prevention and Management
- Environmental and Social Standard 4: Community Health and Safety
- Environmental and Social Standard 5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement
- Environmental and Social Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources
- Environmental and Social Standard 7: Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities
- Environmental and Social Standard 8: Cultural Heritage
- Environmental and Social Standard 10: Stakeholder Engagement and Information Disclosure

The Applicable Sectorial Policies and Law include:

The National Environmental Policy, 1997; The National Land Policy, 1995; The National Gender Policy, 2002; The National Investment Promotion Policy, 1996; The National Water Policy, 2002; Construction Industry Policy (2003) The National Health Policy, 2003; The Environmental Management Act, No. 20 of 2004; The Local Government (Urban Authorities), Cap 288, RE. 2002; The Regional and District Act, No. 9 of 1997; The Water Supply and Sanitation Act, No. 12 of 2009; The Land Act, No. 4 of 1999; The Urban Planning Act, No. 8 of 2007; The Occupational Health and Safety Act, No. 5 of 2003; The

Employment and Labour Relations Act, No. 6 of 2004; The Public Health Act, No. 1 of 2009; The Fire and Rescue Force Act, No 14 of 2007; The HIV and AIDS (Prevention and Control) Act, No. 28 of 2008; The Water Resources Management Act No.11 of 2009; The Land Use Planning Act, No. 6 of 2007; The Road Act, No. 13 of 2007; The Standards Act, No. 2 of 2009; The Engineers Registration Act, No. 15 of 1997; The Contractors Registration Act, No. 17 of 1997; and The Environmental (Solid Waste Management) Regulations, 2009.

International Conventions

The International Conventions/Treaties to be reviewed include:

(i) International Convention on Trade of Endangered Species (CITES);
(ii) Convention on Biological Diversity (1996); and
(iii) United Nations Convention to Combat Desertification (1997);
(iv) Basel Convention on Control on the Trans-Boundary Movement of Hazardous Waste and Disposal.

Project Stakeholders and their Involvement in the study Process

Stakeholder consultation is necessary to be conducted during ESIA study because the impacts of the proposed developments may influence the surrounding in one way or another. It is therefore, compulsory to seek the opinions of the relevant stakeholders in relation to the development of the proposed sub-project. World Bank ESS10 and Section 89 of the Environmental Management Act (EMA, 2004) provides directives on public participation and its importance in the ESIA. Regulation 17 of the EIA Regulations (URT, 2005) provides further details and procedures for public participation in the ESIA process.

Stakeholder engagement enhances the effectiveness, efficiency, and accountability of the ESIA process and the project as required by Stakeholders Engagement Plan (SEP). When undertaken in a transparent, balanced manner, it can reduce conflicts and strengthen the sense of ownership of a project and the project's sustainability

The main stakeholders for upgrading of proposed urban infrastructure during 1st Round Consultations under TACTIC Project in Songea Municipality included;

- Ruvuma region and Songea Municipal (Regional Secretariat and Municipal Council),Government public agencies/institutions (TARURA, TANESCO, SUOWASA, TTCL, Fire and rescue force, Ruvuma and Southern Coast River basin)
- Wards and mitaa committees
- Communities within the proposed agro-processing industry and grain market at Lilambo industrial area
- Non-Governmental Organizations (, women, Community groups, People with Disabilities (SHIVYIWATA))

Some summaries of Issues raised by different stakeholders includes

- Spread of HIV/AIDS and Other Sexually Transmitted Infections
- Gender Based Violence (GBV):
- Growth of streets:.
- Recruitment of employees during Construction Phase
- Insurance of Workforce.
- Noise pollution during Construction
- Maintaining the Culture of Protecting Infrastructures After Construction:
- Environmental Safety

Identification of Environmental and Social Impacts

Identification Methods for Project Impacts includes;

a) Matrices (Activities-Environment Interactions); Interactions between the project activities and the environment were identified for each stage of the project, by using a matrix as indicated on chapter 6

Potential identified impacts

The following are the potential impacts for the proposed project

Construction phase

Job Creation and Increased Income to Local Communities:
Increased Water and Soil Pollution:
Increased Vibration, Air and Noise pollution:
Safety and Health Risks
Increased Wastes:
Likely incidences of Child Labour:
Increased HIV/AIDS Infections and other STIs:
Population influx

Operational phase

Benefits to Community Resulting from Employment
Socio-Cultural Impact/Addictions/Conflicts
Changes in Population Dynamics
Impairment of Environmental Quality due to Solid and Liquid Waste
Increased productivity of the Songea urban

The Project Alternatives

No project alternative: No project alternative means the project will not be carried out in the area. This will affect the nearby community that would have being saved by the project. Also, the existing environment of the site to be developed will remain idle. The employments expected for community will not be there. Generally, the study findings (positives & negatives) on environmental, social and economic aspects will occur although mitigation measure and enhancement measure will be developed.

The preferred project alternatives: The option of having the project carried out is the best alternative compared to other options. The preferred project option has been assessed to ascertain suitable site layout and project activities that will minimize environmental and social impact in the project area.

Environmental and Social Management Plan (ESMP)

This plan describes the mitigation measures, responsible agents, monitoring parameters and frequency of their execution. The plan is proposed as one of measures to help rectify the significant impacts because of the road works project undertaking in Songea municipality.

The environmental and social monitoring plans (ESMP) for this project will be operationalized at a number of levels of the project phases. It is based upon the anticipated impacts, required mitigation measures and degree of follow-up (monitoring) required. It is also advisable that, collaboration with different stakeholders at all levels in some aspects of the project is very important. However, the main responsibilities lie in the hand of the project proponent and contractor

The contractor shall be responsible for overall implementation of the ESMP and will establish an organizational structure with clearly defined lines of authority, areas of responsibility and accountability. Assigned staff at the site shall be responsible for day to day follow-ups (supervision and liaising with key stakeholders). The assigned staff's primary responsibilities will be to ensure that all project activities comply with applicable environmental and social regulations and that ESMP commitments are honoured.

The proponent shall ensure that qualified expertise is provided in a coordinated manner. To a considerable degree, contractor will be responsible for implementing mitigation measures

but, in any case, the ultimate responsibility for ensuring that environmental and social protection elements are being carried out properly is of Songea Municipal Council. Most of the predicted impacts can be reduced or avoided through the application of sound operation management practices.

Monitoring and Auditing

Monitoring shall begin at the start of the project and proceed throughout the construction period. Its purpose is to establish benchmarks so that the nature and magnitude of anticipated environmental and social impacts are continually assessed. Therefore, monitoring will involve the continuous or periodic review of mitigation activities to determine their effectiveness. Consequently, trends in environmental pollution or recovery can be established and previously unforeseen impacts can be identified and dealt with during the construction. The monitoring plan in this report specifies the type of monitoring; who will carry out monitoring and what other inputs such as training are necessary

Cost Benefit Analysis

The EIS presents an assessment of the project, in terms of negative impacts, compared to the socio-economic benefits that will not happen if the road project is not implemented in Songea Municipal. Environmental cost benefit analysis is assessed in terms of the negative versus positive impacts. The potential benefits of the project, in terms of financial and social benefit are substantial. Similarly, the environmental impacts can be reasonably mitigated and the financial resources needed to mitigate negative impacts, when compared to the required investment, are relatively small

Summary and Conclusion

PO-RALG and the World Bank initiated discussions to consider the construction of an Agro-processing Industry and Grain Market at Lilambo Industrial Area in Songea Municipality. This subproject aims at providing reliable processing facility and grain market to the local farmers and adding value to the agricultural products produced in Ruvuma region.

The proposed project has undergone ESIA study as legal requirement under the National Environmental Management Act, 2004 as well as World Bank's requirement as stipulated in Environmental and Social Framework, 2018.

It is, therefore, concluded that, implementation of the proposed subproject will not cause significant impacts provided that the corresponding mitigation measures are adequately and timely addressed in place. The identified adverse impacts shall be managed and positive impact highly enhanced through the proposed mitigation measures and monitoring schedules outlined in chapter seven (7) of this report of the establishment of agro-processing grain market at Lilambo Industrial Area in Songea Municipality-Ruvuma Region.

Acknowledgement

The Songea Municipal Council (The Proponent) wishes to convey heartfelt thanks and appreciation to all stakeholders who in one way or another supported the completion of this work. Special thanks to President's Office – Regional Administration and Local Development (PO-RALG) for their inputs and collaborations. Also, the client would wish to express warm thanks to the different Government departments, ward, and Street leaders who facilitated the ESIA study team to obtain vital information necessary for this report. Lastly but not the least; much appreciations to the consultants team for the good job.

Study Team

This Environmental Impact Assessment report has been prepared by:

NAME	POSITION	SIGNATURE
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Sociologist

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LIST OF ACRONYMS AND ABBREVIATIONS

BOQ	Bills of Quantity
CWIS	Citywide Inclusive Sanitation
DMDP	Dar es Salaam Metropolitan Development Project
ESIA	Environmental and Social Impact Assessment
ESS	Environmental and Social Standards
HQ	Head Quarters
I&Aps	Interest and Affected Parties
LGA	Local Government Authority
PO-RALG	President's Office Regional Administration and Local Government
RAP	Resettlement Action Plan
ROW	Right of Way
SOUWASA	Songea Urban Water Supply and Sanitation Authority
TACTIC	Tanzania Cities Transforming Infrastructure and Competitiveness
TANESCO	Tanzania Electric Supply Company
TANROADS	Tanzania National Roads Agency
TAREF11	Tanzania Reference Framework 2011
TARURA	Tanzania Rural and Urban Roads Agency
TSCP	Tanzania Strategic Cities Project
TTCL	Tanzania Telecommunication Company Limited
ULGSP	Urban Local Government Support Program
UTM	Universal Transverse Mercator
VETA	Vocational Education and Training Authority
WB	Word Bank
WGS84	World Geodetic System 1984

1. INTRODUCTION

1.1 Background

The Government of the United Republic of Tanzania through The President's Office - Regional Administration and Local Development (PO-RALG) has received a credit from the Word Bank towards in implementing projects-financed Tanzania Cities Transforming Infrastructure and Competitiveness Project (TACTIC), which will be, implemented through the President's Office Regional Administration and Local Development (PO-RALG).

NORPLAN Tanzania Ltd in Joint Venture with TYPSA in association with URBAN SOLUTION LTD was awarded the contract by PO-RALG to conduct; Feasibility Study, Urban Design, Detailed Engineering Design, Environmental and Social Due Diligence, Preparation of Cost Estimates and Bidding Documents for Urban Infrastructure Investments for Songea Municipal Council. This report presents Environmental and Social Impact Assessment (ESIA) for the proposed establishment of Agro-Processing Industry and Grain Market in Songea Municipality-Ruvuma region. Songea is among four (4) Municipalities under TACTIC-Zone 3; others include Sumbawanga. Morogoro and Mbeya.

In Tanzania, agriculture markets are characterized by inadequate adherence to product quality standards, grades and post-harvest management, which can limit product access to regional and international markets (GoT, 2011). Private and public food safety standards have been implemented in Tanzania. In urban areas, supermarkets play a large role in the development of private food safety standards particularly as relates to quality attributes of agricultural commodities. Rural and poor households are excluded from the benefits of higher food standards since they tend to shop in traditional open markets where higher hygienic standards are not always applied.

Significant quantities of grains are exported regionally from Tanzania to neighbouring countries in East Africa (Kenya, Rwanda, Burundi, Uganda and the DRC), with occasional flows to Malawi and Zambia. A significant amount of informal grains trade occurs through bush "panya" routes from surplus producing areas to neighbouring importing countries where good quality grains from Tanzanian are generally preferred over other imports.

The most significant domestic principal foods marketing corridor originates from the surplus producing regions of Rukwa, Mbeya, Njombe and Ruvuma with Dar es Salaam as the key destination market. High transportation and market information costs are key factors limiting the efficient flow of principal foods from surplus producing areas to deficit areas within Tanzania.

Like in all other regions in Tanzania, Ruvuma is adversely affected by weak agro industries, poor linkages within the marketing, processing and production chains, poor market orientation and inadequate processing facilities leading to high levels of produce wastage. Given the high potentials in the region, investment in agro processing such as milling and packing of grains' products could boost the sector in the region.

Songea Municipality is among the biggest producers of grains in Tanzania with no reliable facilities for processing and market for processed agricultural products. Proposal to construct and operate Agro-Processing Industry and Grain Market will encourage value chain addition not only for local consumption but also for exports of the agricultural produce as well as increased income to farmers, elimination or minimization of wastage of agricultural produce and encouragement of similar investments and employment and provision of appropriate linkages between the agricultural and industrial sectors in Ruvuma region as a whole.

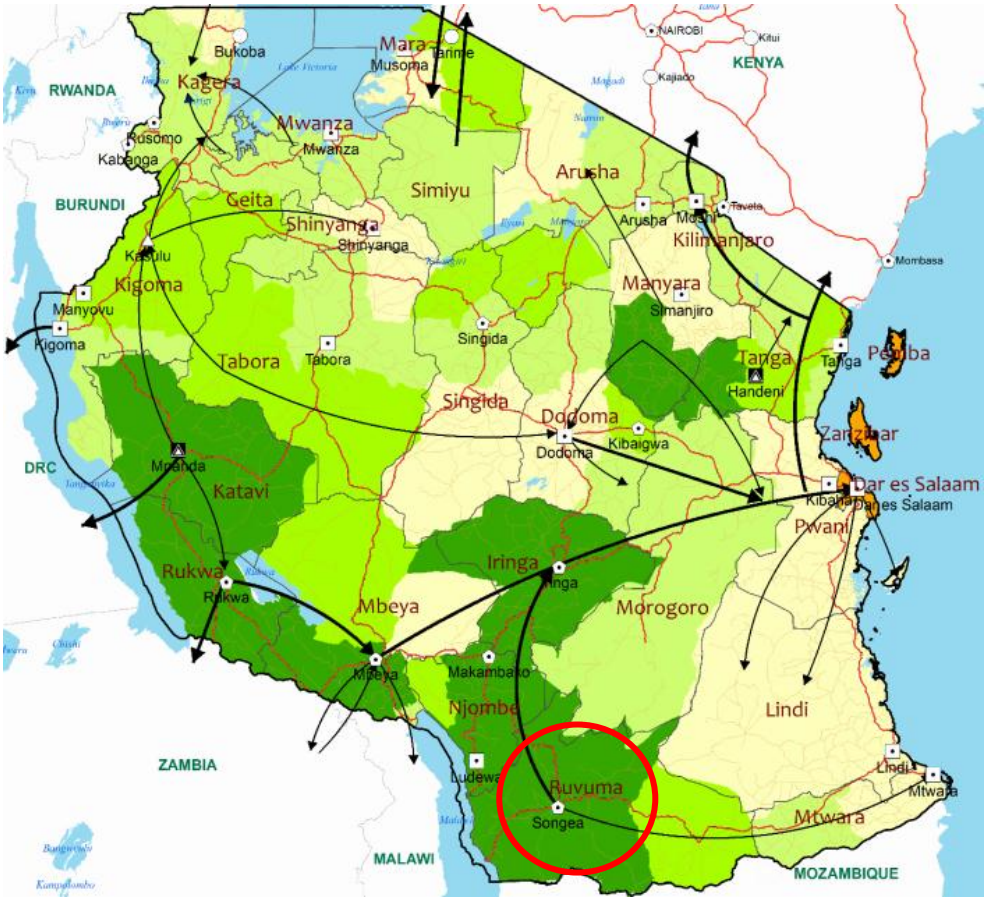


Figure 1-1: Grains Production and Trade Flow Map in Tanzania
Source: Tanzania Market Fundamentals Summary, 2018

The proposed Agro-Processing Industry and Grain Market which is located at Lilambo ward in the Songea Municipality shall; provide reliable market access to farmers in Songea municipality and Ruvuma region at whole, improve food safety standard to locals in Songea and neighbouring areas, increase central and local government revenue, promote value chain for farm produce in Ruvuma and neighbouring regions and provide employment to locals etc. Through TACTIC project, implementation of the facility is the government's commitment to realizing Songea municipality and nearby areas' agricultural potential and to meet goals of the broader National Strategy for Growth and Poverty Reduction (commonly known in Kiswahili 'MKUKUTA').

1.2 Project Objective

The overall objective of the proposed subproject initiative is to contribute towards the revolution of the agricultural sector in Songea Municipality and Ruvuma region as a whole and indeed to play its part in boosting Tanzanian's economic growth. The prime objective of the project is to strengthen maize crop marketing systems, to maintain stability of maize price, to reduce maize post-harvest loss, to increase value of maize and to create employment opportunities.

1.3 Project Rationale

Songea Municipal economy is mainly depending on Agricultural produce especially maize, but famers are generally facing challenges due to lack of processing and storage facilities

(Warehouses), post-harvest loss, price instability, poor cleaning, drying and grading technology, inadequate market facilities. These challenges contribute to low price of maize.
Unreliable grains' prices, lack of market and post-harvest loss keep farmers remain sailing in a vicious cycle of poverty and only middle men profit from the farmers' efforts. This mode of marketing has totally failed to help farmers to benefit from farming.

1.4 Requirements for an ESIA

According to the guidelines by the Environment Management Act (EMA, 2004), Part IV of the EIA Regulations GN No. 349, this Project falls under the list of projects requiring EIA pursuant to the First Schedule made under Regulation 6(1) of the Environmental Impacts Assessment and Audit Regulations, 2005 and Regulation 17 of its amendments of 2018.
In terms of the EIA and Audit Regulations, 2005 read together with amendments of 2018, under regulation 6(1), section 14 (a), The proposed Agro-processing Industry and Grain Market project falls into "Type A" projects which are mandatory to ESIA.
Also, the World Bank requires that all environmental and social risks and impacts of the project be addressed as part of the environmental and social assessment conducted in accordance with ESS1 – Assessment and Management of Environmental and Social Risks and Impacts. ESS2–10 set out the obligations of the Government of Tanzania in identifying and addressing environmental and social risks and impacts that may require particular attention.

1.5 ESIA Study Objectives

The study has been conducted in accordance with the guidelines laid down by the Environment Management Act (EMA, 2004). Part IV of the EIA Regulations GN No. 349 of 2005 as amended in 2018, which provides the general objectives for carrying out the study, among others. The list includes the following

- To ensure that environmental considerations are explicitly addressed and incorporated into the development of decision-making process;
- To anticipate and avoid, minimise or offset the adverse significant biophysical, social and relevant effects of the development proposal;
- To protect the productivity and capacity of natural systems and ecological processes which maintain their functions;
- To promote development that is sustainable and optimises resources use and management opportunities.
- To establish impacts that are likely to affect the environment before a decision is made to authorize the project;
- To enable information exchange, notification and consultations between stakeholders

1.6 Scope of the study

This study has assessed the social and environmental impacts of the proposed an Agro processing Industry and grain Market on the proposed site. The study was conducted in accordance with the requirement of Environmental Management Act of 2004 and the Environmental Management (EIA & EA) (Amendment) Regulations of 2018. The following components have been covered in this study;

- Baseline information.
- Description of the proposed project including project location, design, components and activities.
- To make consultation with government agencies, local communities and the private sector operating near the project area.
- To assess and quantify the potential environmental impacts resulting from the construction of proposed an Agro processing Industry and Grain Market.
- A review of the policy, legal and administrative framework.

- Assessment of the potential environmental impacts on the project area
- Development of the mitigation measures.
- To develop an Environmental Management Plan (EMP) detailing actions and responsibilities for impacts mitigation and monitoring.

1.7 Project Cost

The construction cost the proposed Agro-Processing Industry & Grain Market under TACTIC ZONE 3 in Songea is estimated to **Tanzanian shillings 5.3 billion**. This includes the actual cost of purchasing materials, labor cost and all miscellaneous expenses subjected in the implementation process. The World Bank will finance the proposed subproject.

1.8 Methodology

The methodology employed in conducting the study is in line with the Environment Impact Assessment and Audit Regulations, GN No.349 of 2005 as amended in 2018, . The study was undertaken based on the checklists developed by NORPLAN Company limited for guiding ESIA of proposed construction of Agro Process Grain Industry and Grain Market.

1.8.1 The study Team

A multi-disciplinary team of experienced Environmentalist, Sociologist, and RAP expert was assembled to carry out the required ESIA study including generation of baseline data, determination of potential impacts and recommendation of mitigation measures. An interactive approach among the environmental team members and other subproject's professionals was adopted.

Baseline data for the study area was collected using a combination of;

- Field Studies;
- Analysis of maps and plans;
- Review of previous reports and documents;
- Checklists; and
- Public consultations.

1.8.2 Data collection

Methodology for conducting ESIA study used primary field data collection and secondary information. Information was collected through physical observation, interviews and meetings. Physical observation entails observation of natural environmental and social aspects such as landscape, vegetation, air quality, soils, water supply, land use, economic activities, employment etc.

1.8.3 Consultations

Consultations through meetings and interviews with stakeholders were conducted at Mtaa/street, ward, municipal and regional levels with key informants including community leaders and local people. Interviews and meetings provided an opportunity to learn and share the salient information with stakeholders about the project. The list of all major stakeholders is listed in chapter 5.

1.8.4 Document review

Reviews of additional information were done, this included review of the international policies, conventions and guidelines, policy, legal and administrative framework, project documents such as feasibility study, business plan, social-economic development profiles from municipal, similar study reports to obtain information and data on the various components of the subproject.

1.8.5 Physical observation

Study team visited the subproject area on December 27th and 28th 2021 to conduct the physical assessment on biological and social environment such as vegetation cover, settlement patterns, land use activities and accessibility to site and social services in the area.

1.9 Report structure

This report is organized in eleven chapters as described below;

- **Chapter 1: Introduction**

This chapter provides the general overview of the project including how the project background and justification, objectives and scope of the study and methodology used for conducting the study.

- **Chapter 2: Project Description**

This chapter details the project components and further outlines activities and materials used in all phases of the project i.e. (mobilization, construction and operation and decommissioning).

- **Chapter 3: Policy, Legal & Institutional Framework**

This chapter provides details of important policies, acts and regulations that govern the project.

- **Chapter 4: Baseline Environmental and Social Conditions**

This chapter elaborates the project influence area and boundaries. It also describes the baseline / existing conditions of the study area.

- **Chapter 5: Stakeholders Identification and Analysis**

Chapter five explains how the stakeholders were involved during the ESIA process and presents their concerns regarding the project.

- **Chapter 6: Identification and Assessment of Impacts and Project Alternatives Identification**

This chapter discusses environmental and social impacts associated with the project analyzed according to impacts significance as well as alternative projects that are more suitable to the proposed one while serving the same purpose.

- **Chapter 7: Environmental & Social Management Plan**

The Environmental and Social Management Plan (ESMP) presents how the identified impacts during all project phases will be managed to avoid, minimize or offset any adverse significant impacts of the proposed development.

- **Chapter 8: Environmental and Social Monitoring Plan**

Environmental and Social Monitoring Plan elaborates how the implementation of the ESMP will be monitored throughout the phases of the project. It is a plan to monitor the efficiency of the proposed project mitigation measures.

- **Chapter 9: Cost Benefit Analysis**

In this chapter, the Environmental cost benefit analysis is assessed in terms of the negative versus positive impacts. The potential benefits of the project, in terms of financial and social benefit are substantial.

- **Chapter 10 Decommissioning**

This chapter presents the activities involved when the proposed project is no longer operational and potential impacts to be managed.

- **Chapter 11: Summary and Conclusions**

Summary and conclusion summarize findings concerning how feasible, viable and environmentally acceptable the project is and provides recommendations to the proponent on the feasibility of the project.

In addition, the report presents references and appendices that are attached herein.

2. PROJECT BACKGROUND AND DESCRIPTION

2.1 Overview

This section of the report presents the project rationale and a summarised stage-by-stage description of the proposed project components, activities and logistics. As for this time, it is expected that activities for the project shall be carried out in four (4) stages i.e., Designing, Construction, Operation and Decommissioning. Description of the various project components is provided in the subsequent sections

2.2 Project Location

The proposed site for Agro Processing Industry and Modern Market is located at Lilambo "B" mtaa in Lilambo ward, Songea Municipality in Ruvuma region. It is approximately 12 km from Songea Municipal headquarter along Songea to Mbambabay highway on the right-hand side as one drives from the town center. The project site is located within Lilambo industrial area.

Table 2-1: Corner points coordinates at the proposed project area

Point	Latitude	Longitude
A	-10.666654	35.515163
B	-10.667218	35.515928
C	-10.669744	35.514280
D	-10.668960	35.511733

Source: Field Survey Data, December 2021

2.3 Site Description and Accessibility

2.3.1 Existing Situation

The general area is characterized by undulating terrain and the specific area has a gentle slope. The project site has a red brown loam soil with the land surface is covered by different natural vegetation (few scattered short grasses and tree species) few visible faunas observed including birds and insects. Currently, no any site development. In addition, there are no sensitive ecological sites found near the proposed site.

Figure 2.1: Photos Showing Existing Situation at Project Site
Source; Site visit on December 2021

2.3.2 Accessibility

The project site accessible via Songea to Mbamba bay road through a rough road, either a motorcycle/bicycle or by foot can be used to reach to the site; the site is easily accessible throughout the year. Figure 2.2 shows the site location map.

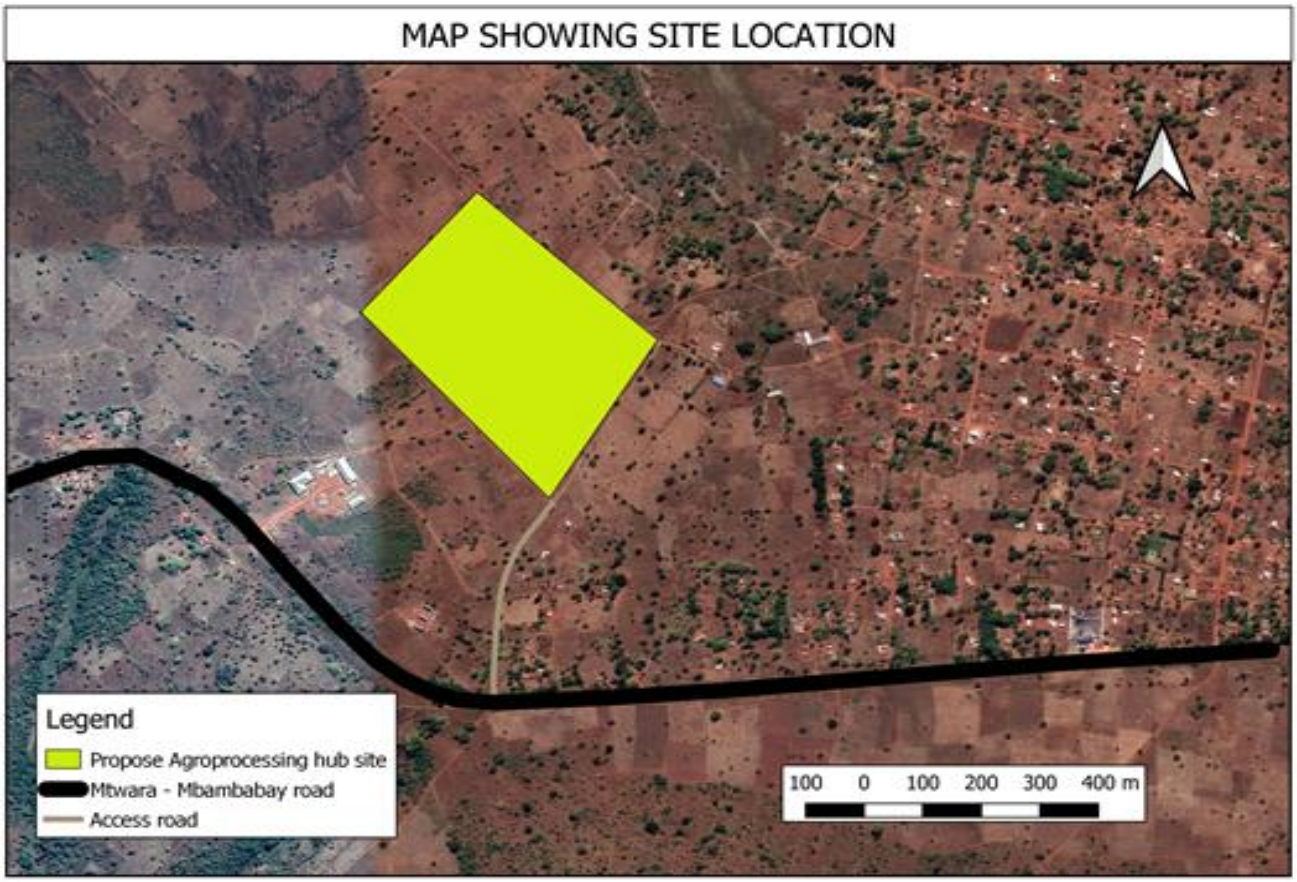


Figure 2-2: A Map Showing the Proposed Site Location
Source: QGIS and Google Earth, December 2021

2.4 Land Ownership

The proposed project will be established on a plot of land with a total area of 10 hectares. The land is legally owned by Songea Municipal council. The plot has been surveyed having plot number 174-181, block number A, size of 23764 sqm and Title Deed No.1605 whereby acquisition of the title deed is attached on *appendix VI*.

2.5 Compensation and Resettlement Issues

There is neither compensation nor resettlement expected to occur for residential and commercial houses around the proposed establishment of agro-processing industry and grain market at Lilambo industrial area.

2.6 Adjacent Land Use

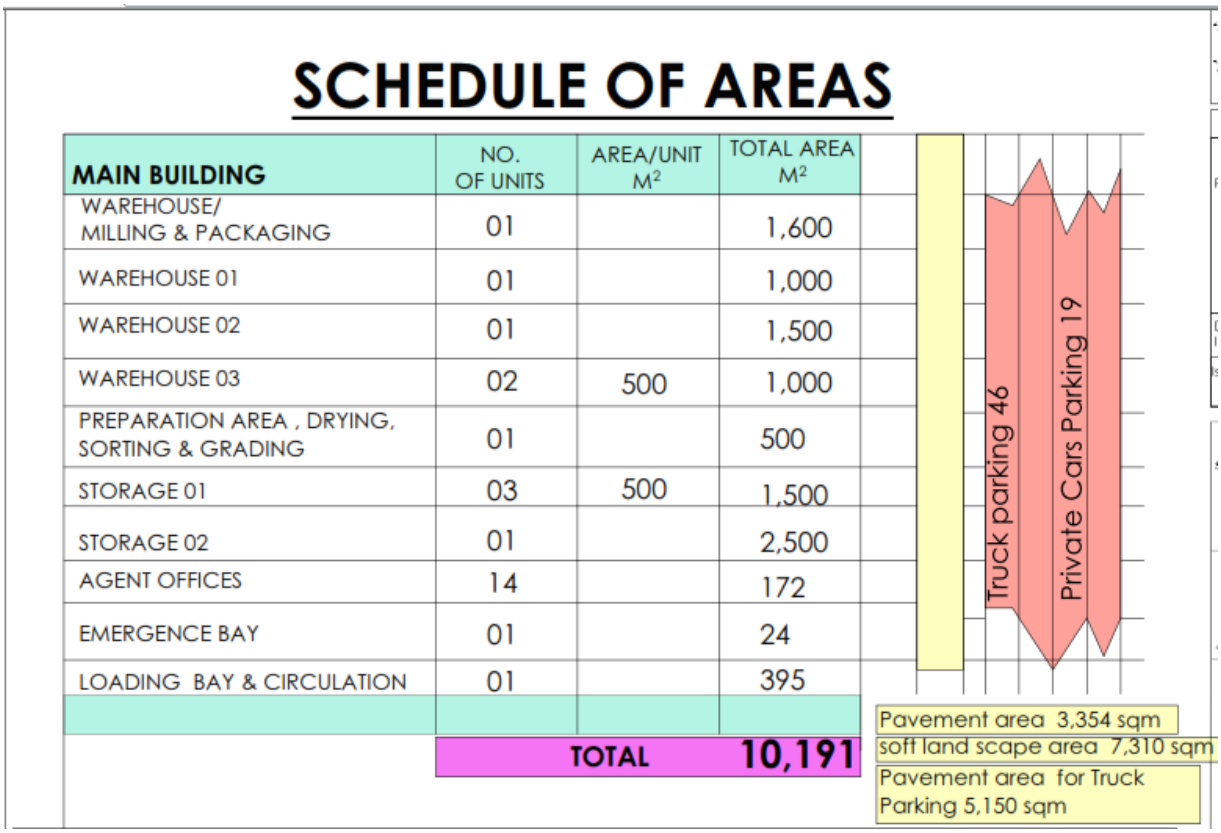
The project site is within area designated for industrial uses. The project site is bordered by undeveloped industrial plots on South at a distant of 50m, Songea to Mbambabay road at a 185m on the East and residential plots on West and North.

2.7 Proposed Sub-Project's Components

The proposed Agro-Processing Industry & International Grain Market project will have one building which is divided in to two lots; having two (2) main divisions which are:

- Agro-Processing Industry – [comprising of receiving area, raw storage, screening, milling, packaging and finished goods storage area]
- Grain Market – [accommodating retailers and wholesalers' businesses].

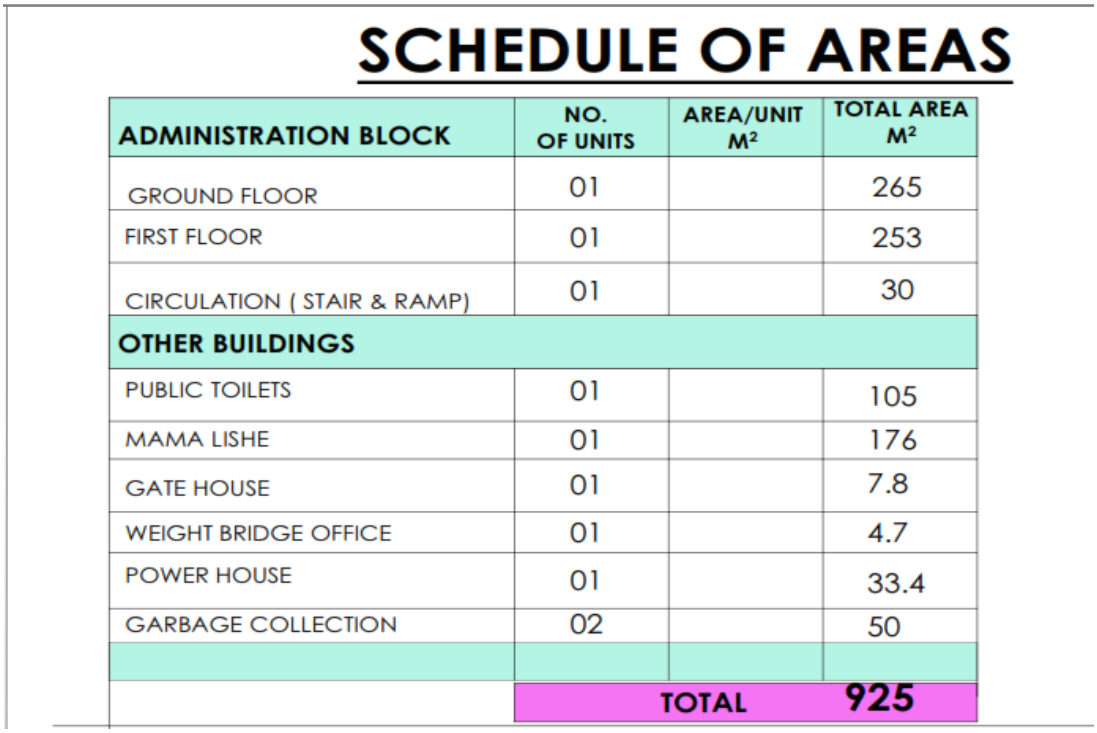
Figure 2-1: Schedule of Area and Building for Agro-Processing Industry



SCHEDULE OF AREAS

MAIN BUILDING	NO. OF UNITS	AREA/UNIT M^2	TOTAL AREA M^2
WAREHOUSE/ MILLING & PACKAGING	01		1,600
WAREHOUSE 01	01		1,000
WAREHOUSE 02	01		1,500
WAREHOUSE 03	02	500	1,000
PREPARATION AREA , DRYING, SORTING & GRADING	01		500
STORAGE 01	03	500	1,500
STORAGE 02	01		2,500
AGENT OFFICES	14		172
EMERGENCE BAY	01		24
LOADING BAY & CIRCULATION	01		395
		TOTAL	10,191

Figure 2-2: Schedule of Area and Building for Grain Market



SCHEDULE OF AREAS

ADMINISTRATION BLOCK	NO. OF UNITS	AREA/UNIT M^2	TOTAL AREA M^2
GROUND FLOOR	01		265
FIRST FLOOR	01		253
CIRCULATION (STAIR & RAMP)	01		30
OTHER BUILDINGS			
PUBLIC TOILETS	01		105
MAMA LISHE	01		176
GATE HOUSE	01		7.8
WEIGHT BRIDGE OFFICE	01		4.7
POWER HOUSE	01		33.4
GARBAGE COLLECTION	02		50
		TOTAL	925

2.8 Other Supporting Infrastructure and Utilities

2.8.1 Project Sanitary Facilities

The proposed project shall comprises seven (7) hands water basin, two (2) bathrooms and six (6) water closets for women in one side while in other side will have four (4) urinal basin, five (5) hands water basin and five (5) water closet for men and to each where will have one toilet for people with disabilities.

2.8.2 Access Doorways

The proposed Agro-processing Grain Market will consist of one gate which used as entrance and exit gate.

2.8.3 Parking Area

The parking area will be provided with facilities such as lights, and signs for easy entry and exit to allow free flow of traffic.

2.9 Project Cycle

2.9.1 Project Planning Phase

Feasibility study, ESIA and RAP, preliminary engineering planning, final engineering planning and construction planning form the planning phase of the proposed subproject. During the planning process, the proposed Agro Processing Industry & Grain Market is given form and details that becomes more and more detailed in phases, adjusted to correspond to land use planning.

Preliminary engineering planning at this phase determines the approximate location of the Agro-Processing Industry & Grain Market and connections to the existing and future networks and land use and the principles underlying the prevention of negative impacts to the environment.

Planning is performed at a level of detail, which ensures that the plan is technically, financially and environmentally feasible. Since Tanzanian legislation requires an environmental and social impact assessment (ESIA), the proposed Agro-processing and Grain Market[s environmental impact is assessed according to the Environmental Management Act, 2004 and its EIA and Audit Regulations, 2005 and amendments of 2018 during the preliminary engineering planning phase. The approval decision is made on the preliminary engineering plan.

During preliminary engineering planning phase, the project design co-parties included Ruvuma Region Secretariat, Songea Municipal Council, environmental authorities and other planning organizations, local residents/communities around the proposed subprojects, traders and farmers.

Final engineering planning determines the precise location of the proposed subproject, areas required for the Agro-Processing Industry & Grain Market, intersections of the proposed infrastructure and other connections and other detailed solutions such as measures necessary to the prevention of negative traffic impacts. The approval decision is made on the final engineering plan.

No compensation is required because there will be no any damage caused to external properties during final engineering or prior to construction. Environmental certification by the National Environment Management Council (NEMC) is also done/finalized at this stage.

During project planning phase only, paper works were involved as summarized below:

- Evaluation of project concepts and alternatives selection,
- Design of all project components,
- Topographic survey
- Geo-technical Investigations;
- Soils and Materials Investigations;
- Carrying out ESIA for the subproject,
- Tendering for construction works,
- Approval of Engineering designs and Environmental and Social Certification

2.9.2 Design Criteria

Space Configurations

- ❖ Be designed with fire protection capacity to accommodate storage of materials with a greater fire hazard, especially needed with high plastic product content or packaging
- ❖ Maximize utilization of space while providing adequate circulation paths for personnel and raw maize handling equipment.
- ❖ Optimize layout and configuration for the warehouse operation, including efficient circulation and maize handling and storage processes.

Durable / Functional

- ❖ Be planned to accommodate loads of stored materials as well as associated handling equipment.
- ❖ Wind uplift can cause great damage to roofs and metal roof copings at the roof edge.

Energy-Efficient

- ❖ Use ceiling mounted fans to reduce heat stratification and provide air movement, thus increasing user comfort during sunny days. Mount fans above highest level for user safety.
- ❖ Consider specifying white painted metal roof decking, thereby increasing ceiling surface reflectivity, lighting efficiency, and worker comfort without any added energy cost.
- ❖ Use energy-efficient fixtures, systems, and appliances wherever feasible.

Safety / Security of Personnel and Material

- ❖ Incorporate proper signage to clearly warn of hazards or to direct personnel to take precaution. The specific strategy for the proposed industry and market signs shall be determined early in the facility design process.

Health/Comfort

- ❖ Provide proper ventilation under all circumstances.
- ❖ Integrate day lighting with the electric lighting system.
- ❖ Allow for natural lighting where possible. Provide lighting controls that turn off lights when sufficient daylight exists. Consider dimming controls that continuously adjust lighting levels to respond to daylight conditions.

Climate Change Adaptation Strategies

Agro-Processing Industry & Grain Market subprojects should include climate change adaptation measures in designs to make buildings and facilities resilient to climate change. Among of adaptation measures including raising of the foundation of buildings for flood preventions, high rise rooms, and large openings improve ventilation so as to avoid contaminations of heat which may weak the buildings. Also, nature-based way to address droughts and flooding is to plant trees or other vegetation around markets as it observed into attached architectural drawings.

2.9.3 Project Mobilization & Construction Phase

PO-RALG will engage a local and registered construction company to construct the proposed subproject. The contactor will be responsible for sourcing of materials, Labor recruitment and actual construction work.

During the operation phase, contractor and management of the project facilities will be the responsibility for maintenance. Due to clearance and other activities during construction a significant amount of spoil material will be generated which will be used as filling materials on existing earth roads in town. The following are the main activities to be executed at the site:

- Earthworks (site clearance and top soil)
- Building of temporary security fence at the project sites, site office and storage facilities
- Material transportation and storage
- Abstraction and transportation of water to the construction site
- Collection, storage, transportation, treatment and disposal of wastes generated
- Actual construction works

- Paving of surfaces with paving blocks
- Access roads and walkways within the project site
- Landscaping and environmental restoration
- Implementation of the ESMP.

All construction will proceed under normal construction management and safety procedures. The major structures are including:

- Building columns & Beams
- Roof Trusses & sheeting
- Access road
- Approach Ladders & outside platforms

During the construction phase, both skilled and unskilled temporary employment opportunities will be created. It is difficult to specify the actual number of employment opportunities that will be created at this stage; however approximately 100 direct and more than 150 indirect employment opportunities are expected to be created during construction phase. It should however be noted that employment during the construction phase will be temporary, whilst very few long-term employments during the operational phase.

As construction progresses towards the end, demobilization phase will begin. Demobilization will be done for proper restoration of the site after completion of construction activities such as removing/spreading top soils' piled around the constructed infrastructure and removing all temporary structures. Other activities shall include clearance of all sorts of wastes including used oil, sewage, solid wastes (plastics, wood, metal, papers, etc.).

This shall also involve collection and deposition of all wastes to the approved Subira dumpsite and termination of employments and subcontracts before handling over the project to Songea Municipal Council for operation.

Sources for Earth Materials

Survey of material sources to be used during construction was carried out in the project area. Potential locations were identified and more will be searched out and investigated. The surveyed materials shall be used on foundation, mortar works and concrete works. Further materials investigation on availability of other sources in addition to these existing ones shall be carried out.

Hard Stone Material

Two sites with hard rock sources were identified. This quarry was investigated and tested. The sites investigated were Mwengemshindo Quarry which located about 9km from the site and Ngilimalitembo Quarry which located about 7km from the site. The sites are legally owned by licenced private individuals.

Aggregates

In Songea Municipality, there are two main sources of aggregates namely Mwengemshindo Quarry which located about 6km from the site and Ngilimalitembo Quarry which located about 7km from the site. The sites are legally owned by licenced private individuals.

Sand

Sand will be sourced from private licensed sand miners at Mwengemshindo alluvial sand deposition located approximately 6km from the proposed site and Subira alluvial sand deposition located approximately 12km from the site.

Source of Water for Construction

Within subproject's area (Lilambo industrial area) water is supplied by SOUWASA, the proposed site will be connected with water during construction phase as well as during operation phase. During operation, the project will require water for different activities including: maize flour processing and domestic purposes i.e., sanitary activities. For the shortage of water the contractor is allowed to use any source of water provides that has all legal permits.

Power Supply for the Project Construction

Power supply for construction activities will be provided by TANESCO through a 3 phase distribution line located at 200m from site. In addition, diesel generators with low emission levels shall be used in case of TANESCO's power outage.

2.9.4 Operation and Maintenance Phase

Once the construction phase is completed, the Agro-Processing Industry & International Grain Market will start to operate to serve the intended purposes. The activities that are expected to be executed during operational phase include:

Agro-Processing Industry

Activities at the Agro-Processing shall undergo six (6) main stages as described below. This particular section is expected to employ an average of 1000 people. During construction 50 people both skilled and unskilled, during operation the number is not exactly know.

Grain Receiving

Grain will be received from different sources i.e., farmers and businessman from different parts of the region and outside.

Grain Cleaning

After receiving of grains, the next process is cleaning, the objective of cleaning is to separate the unwanted materials like straw, chaff, molds, insect residues, stones.

Grain Drying

Drying of grains shall follow after cleaning stage. This is the stage that will be done to reduce the moisture content of the grains to reduce micro-organisms attack.

Grain Sorting or Grading

Then after drying, sorting or grading process will be done, in this stage grains are classified into grades according to specified standards to meet the market needs as well as Adding value to the raw grains.

Grains Milling

The grain is then passed through a flour milling machine where it is grounded up into flour. After the milling, sieving of the flour follows. Flour of the desired quality is retrieved and the residue is returned in the machine for further milling.

Packaging of Finished Products

After milling process, packaging shall be done depending on requirements of the Markets and consumer habits in the various regions/countries based on traditions and habits. Since, the project aims to increase in the movement of goods and commodities on a global scale, its packaging plant shall comply with fundamental conditions and requirements that include:

- Adaptation and standardization of packing sizes and packing units.
- An increase in packing quality
- Improving product protection, shipping & shelf life
- Compliance with consumers and commercial needs
- Quality preservation of packaged products
- Environmentally neutral, recyclable packaging

International Grain Market

The proposed subproject shall provide efficient marketing infrastructure for wholesale, retail and assembly market space, storage facilities essential for cost-effective marketing, to minimize post-harvest losses to reduce health risks. The market will provide an average of 650 business spaces that will have multiplier effect on employments within the project area.

The proposed market shall play an important role for Songea Urban development, income generation, food security, and developing market linkages within the area. The market design meets communities' social and economic needs to avoid under-use or even no use of the

infrastructure constructed. The design also indicates how the market will be managed, operated and maintained.

Due to consistent use of the Agro-Processing Industry and Market during operational phase, there will be routine maintenance as the results of wear and tear of the structures and utilities that will affect its quality. Therefore, the Agro-Processing Industry and Market will require maintenance throughout the project life. Among others, the maintenance works will include:

- Repainting of the structures
- Repairing cracks on the structures,
- Routine maintenance of utilities (electrical, water supply, sewage management, storm drains, etc.)

Water Supply during the Operation Phase

Currently, there is no any system for water supply at the site; the proposed subproject shall be supplied with water from SOUWASA together with construction of 1-storage tank having the capacity of 100m^3 to be used around the whole Lilambo industrial area; the contractor is allowed to use other source of water during construction as long as acquired all the permits. During operation, the project will require water for different activities. The estimate of water consumption per day will be obtaining after knowing the installation of all machine used on project area and if is water used on the processing or not.

Power Supply during the Operation Phase

TANESCO and standby generator in case of outage will provide power supply for operation phase activities. A diesel generator with 250KVa shall be provided/installed

Waste Management

Solid Wastes

The construction activities at proposed site will inevitably generates some wastes of which without management might create unhealthy conditions in the area. Type of wastes expected to be generated include; construction related wastes i.e., spoil related wastes, food left overs (organic wastes) on the channel from cleaning, packaging materials to include cement bags, water bottles for the workers on sites (plastic bottles), etc estimated at daily generation of 50kg.

In this regard, the contractor will establish waste management plan that will define all type of wastes to be generated and their management measures. The plan will include among others; method of waste collection at site (establishment of waste bins), waste haulage from the site and the destination of the wastes either for subsequent transfer to the dump site or on the dump site by the contractor, however due to enforcement of environmental law and regulations such behaviour will be regulated.

During the operation phase all the strategic areas will be provided with waste bins and a main transfer station/collection unit will be provide for the storage of solid waste being collected by the municipal authorized collection agency for final disposal at Subira dumpsite. An average estimate of waste generated during operation is 800kg/day which shall mainly comprise of organic wastes.

The proposed project site will have designated place for collection and sorting of solid waste according to their characteristics. These areas will be provided with large waste collection bins (Skip buckets), these skip buckets will be collected by Songea Municipality Waste Trucks or any other licensed waste collector before disposal at Subira dump site.

Liquid Waste

Currently, there is no sewerage system for wastewater collections, liquid wastes will be generated during construction phase mainly through domestic use at the proposed site. This will result from showers and sanitary conveniences for construction workers at the site. Waste water systems will be designed on the camping areas to ensure wastewater will be collected and disposed through best onsite system.

During operation period, wastewater shall be generated from the sanitary facilities discharged to the onsite septic and soakage pits for partial treatment facilities and then disludged by vacuum trucks to the SOUWASA stabilization ponds for further treatment and disposal.

Storm Water Management

The design of proper drainage system for collecting storm water around the subproject site during construction and operation has included rectangular drains with 40cm width and 60cm depth which shall collect stormwater runoffs and discharge to the road side drainage which ends it water to the Uwawasi stream channel.

2.9.5 Project Schedule and Life

Construction of the proposed Agro-Processing Industry & International Grain Market in Songea Municipal Council shall start soon after approval of all related studies, i.e., feasibility, engineering designs, environmental clearance and construction tender award in mid-year 2022. The project life is expected to be 50 years.

Table 2-22: Schedule of Construction Materials for the Proposed Agro-Processing Industry & Grain Market

S/No	Description of Material	Unit	Quantity	Source
1	Blocks		10000	Licensed local dealers
2	Cement	Tone	50	Licensed local dealers
3	Sand	Tone	90	Licensed local dealers
4	Aggregate	Tone	100	Licensed local dealers
5	Water	M^3	500/ day	SOUWASA

3. POLICY, ADMINISTRATIVE AND LEGAL FRAMEWORK

3.1 Overview

The chapter describe the setting of national policies a law, regulation and World Banks Environmental and Social Standard (ESSs) to guide the undertaking of this subproject. There are a number of policies, legislations and regulatory requirements which are relevant to the proposed construction of Agro-processing Industry and Grain Market.

There are also national standards governing environmental management and protection, health and safety that have been reviewed and included in this chapter. The PO-RALG shall ensure compliance with the following identified policies, national plans/strategies legislations and world banks standards (ESSs).

3.2 World Bank's Environmental and Social Framework

The World Bank Environmental and Social Framework sets out the World Bank's commitment to sustainable development, through a Bank Policy and a set of Environmental and Social Standards that are designed to support Borrowers' projects, with the aim of ending extreme poverty and promoting shared prosperity. This Framework comprises:

- A Vision for Sustainable Development, which sets out the Bank's aspirations regarding environmental and social sustainability;
- The World Bank Environmental and Social Policy for Investment Project Financing, which sets out the mandatory requirements that apply to the Bank; and
- The Environmental and Social Standards, together with their Annexes, which set out the mandatory requirements that apply to the Borrower in case the Tanzania government and TACTIC projects.

This ESIA has reviewed the above framework's components' relevance to this subproject as shown in the below sub sections;

3.2.1 Vision for Sustainable Development

World Bank Group is globally committed to environmental sustainability, including stronger collective action to support climate change mitigation and adaptation, recognizing this as essential in a world of finite natural resources. It recognizes that climate change is affecting the nature and location of projects, and that World Bank-financed projects should reduce their impact on the climate by choosing alternatives with lower carbon emissions.

Equally, social development and inclusion are critical for all of the World Bank's development interventions and for achieving sustainable development.

At the project level, these global aspirations translate into enhancing development opportunities for all, particularly the poor and vulnerable, and promoting the sustainable management of natural and living resources. Therefore, within the parameters of a project, the Bank seeks to

- Address project-level impacts on climate change and consider the impacts of climate change on the selection, siting, planning, design and implementation and decommissioning of projects;
- Maximize stakeholder engagement through enhanced consultation, participation and accountability.

The design of Agro-processing industry and grain Market has observed climate change adaptation strategies for sustainability of the subproject as provided in chapter 2.

3.2.2 World Bank Environmental and Social Policy for Investment Project Financing

This Environmental and Social Policy for Investment Project Financing sets out the mandatory requirements of the Bank in relation to the projects it supports through Investment Project Financing

The Bank is committed to supporting Tanzania government in the development and implementation of projects that are environmentally and socially sustain-able, and to enhancing

the capacity of Borrowers 'environmental and social frameworks to assess and manage the environmental and social risks and impacts of projects.

The Bank will assist Tanzania government in their application of the ESSs to projects supported through Investment Project Financing in accordance with this Environmental and Social Policy for Investment Project Financing (Policy). To carry out this Policy, the Bank will:

- Undertake its own due diligence of proposed projects, proportionate to the nature and potential significance of the environmental and social risks and impacts related to the project;
- As and where required, support the Tanzania government to carry out early and continuing engagement and meaningful consultation with stakeholders, in particular affected communities, and in providing project-based grievance mechanisms;

The Banks shall evaluate the environmental and social risks management plan including the extent of stakeholders' engagement on the project throughout.

The proposed subproject has identified and assessed environmental and social risks and impacts as provided in chapter 6 of this report, in addition, various levels of stakeholders [from Mitaa to National level] have been engaged during consultation as indicated in chapter 5.

3.2.3 World Bank Environmental and Social Standards (ESSs)

3.2.3.1 Environmental and Social Standard 1: Assessment and Management of Environmental and Social Risks and Impacts;

ESS1 sets out the Borrower's (GoT) responsibilities for assessing, managing and monitoring environmental and social risks and impacts associated with each stage of a project supported by the Bank through Investment Project Financing, in order to achieve environmental and social outcomes consistent with the Environmental and Social Standards (ESSs).

The Government of Tanzania through PO-RALG is required to conduct environmental and social assessment of subprojects proposed for Bank financing under TACTIC project to help ensure that subprojects are environmentally and socially sound and sustainable. The environmental and social assessment should be proportionate to the risks and impacts of the subproject. It will inform the design of the subproject, and be used to identify mitigation measures and actions and to improve decision making.

PO-RALG will manage environmental and social risks and impacts of the subproject throughout the project life cycle in a systematic manner, proportionate to the nature and scale of the subproject and the potential risks and impacts.

ESS1 includes the following annexes, which form part of ESS1, and set out certain requirements in more detail:

- ✓ Annex 1: Environmental and Social Assessment;
- ✓ Annex 2: Environmental and Social Commitment Plan; and
- ✓ Annex 3: Management of Contractors

Among the requirements under ESS1 relevant to the Upgrading of Urban Agro Processing & Grain Market subproject include: Conduct an environmental and social assessment of the proposed subproject, including stake holder engagement; Undertake stakeholder engagement and disclose appropriate information in accordance with ESS10; Develop an ESCP, and implement all measures and actions set out in the legal agreement including the ESCP; and Conduct monitoring and reporting on the environmental and social performance of the project against the ESSs.

In addition, the proposed subproject should will apply the relevant requirements of the Environmental Health and Safety Guidelines (EHSGs) once Tanzanian requirements differ from the levels and measures presented in the EHSGs, the GoT will be required to achieve or implement whichever is more stringent.

The proposed Agro-Processing Industry & Grain Market subproject has been conducted with ESIA study and has adequately undertaken stakeholders' engagement as required for the subproject's ownership by the community and sustainability. Since the designs at at draft stage,

feedback to the communities on the proposed designs shall be done through second round consultation in order to proceed with preparation of final designs for subproject's implementation. PO-RALG shall prepare ESCP and sign legal agreement on its implementation.

3.2.3.2 Environmental and Social Standard 2: Labor and Working Conditions;

ESS2 recognizes the importance of employment creation and income generation in the pursuit of poverty reduction and inclusive economic growth. The government of Tanzania is required to promote sound worker-management relationships and enhance the development benefits of a Agro-Processing Industry & International Grain Market subproject under TACTIC project by treating workers in the project fairly and providing safe and healthy working conditions as well as both good working contracts and good/ required working time.

Among ESS2 objectives include:

- To promote safety and health at work
- To promote the fair treatment, nondiscrimination and equal opportunity of project workers
- 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, community workers and primary supply workers, as appropriate.
- To prevent the use of all forms of forced labor
- The provisions of ESS2 regarding primary suppliers and their workers are well addressed in (paras 39 to 42) as;
- 39. As part of the environmental and social assessment, the Borrower will identify potential risks of child labor, forced labor and serious safety issues which may arise in relation to primary suppliers.
- 40. Where there is a significant risk of child labor or forced labor related to primary supply workers, the Borrower will require the primary supplier to identify those risks consistent with paragraphs 17 to 20. The labor management procedures will set out roles and responsibilities for monitoring primary suppliers. If child labor or forced labor cases are identified, the Borrower will require the primary supplier to take appropriate steps to remedy them.
- 41. Additionally, where there is a significant risk of serious safety issues related to primary supply workers, the Borrower will require the relevant primary supplier to introduce procedures and mitigation measures to address such safety issues. Such procedures and mitigation measures will be reviewed periodically to ascertain their effectiveness.
- 42. The ability of the Borrower to address these risks will depend upon the Borrower's level of control or influence over its primary suppliers. Where remedy is not possible, the Borrower will, within a reasonable period, shift the project's primary suppliers to suppliers that can demonstrate that they are meeting the relevant requirements of this ESS.

The subproject's contractor shall adhere to the objectives under regular audits to be conducted by PO-RALG, OSHA and the project Supervising Engineer. However, specific subproject's Labour Management Plan (LMP) has been prepared to guide labour issues during construction and operation of the proposed infrastructure.

3.2.3.3 Environmental and Social Standard 3: Resource Efficiency and Pollution Prevention and Management;

ESS3 recognizes that economic activity and urbanization often generate pollution to air, water, and land, and consume finite resources that may threaten people, eco- system services and the

environment at the local, regional, and global levels The current and projected atmospheric concentration of greenhouse gases (GHG) threatens the welfare of current and future generations At the same time, more efficient and effective resource use, pollution prevention and GHG emission avoidance, and mitigation technologies and practices have become more accessible and achievable. Among ESS3 objectives include:

- To promote the sustainable use of resources, including energy, water and raw materials
- To avoid or minimize adverse impacts on human health and the environment by avoiding or minimizing pollution from project activities
- To avoid or minimize project-related emissions of short and long-lived climate pollutants
- To avoid or minimize generation of hazardous and non-hazardous waste
- To minimize and manage the risks and impacts associated with pesticide use

On pollution prevention and management, the Government of Tanzania through PO-RALG will avoid the release of pollutants or, when avoidance is not feasible, minimize and control the concentration and mass flow of their release using the performance levels and measures specified in national law or the EHSGs, whichever is most stringent.

During construction, operation of machineries, equipment and plant shall contribute on GHG emissions. Contractor shall adhere to all recommended actions to reduce GHG emissions from operating vehicles and plant. The proposed subproject shall install electrically operated milling machines during operation that means generation of GHG shall be reduced. However, provision of diesel generator as an emergency power supply shall be taken into account as GHG contributor. Low emissions generator has been proposed in chapter 2 of this ESIA.

3.2.3.4 Environmental and Social Standard 4: Community Health and Safety;

ESS4 recognizes that project activities, equipment, and infrastructure can increase community exposure to risks and impacts. In addition, communities that are already subjected to impacts from climate change may also experience an acceleration or intensification of impacts due to project activities.

ESS4 addresses the health, safety, and security risks and impacts on project-affected communities and the corresponding responsibility of GoT through PO-RALG to avoid or minimize such risks and impacts, with particular attention to people who, because of their particular circumstances, may be vulnerable. Objectives of the ESS4 include:

- 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.
- To promote quality and safety, and consider actions relating to climate change, in the design and construction of infrastructure, including dams.
- To avoid or minimize community exposure to project-related traffic and road safety risks, diseases and hazardous materials
- 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

ESS4 requires:

The GoT will design, construct, operate, and decommission the structural elements of the project in accordance with national legal requirements, the EHSGs and other GIIP, taking into consideration safety risks to third parties and affected communities.

Where the project involves provision of services to communities, the GoT will 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 GoT will also apply the concept of universal access, where technically and financially feasible.

The provisions of ESS4 regarding security personnel are well addressed in (paras 24 to 27) as;

24. When the Borrower retains direct or contracted workers to provide security to safeguard its personnel and property, it will assess risks posed by these security arrangements to those within and outside the project site. In making such arrangements, the Borrower will be guided by the principles of proportionality and GIIP, and by applicable law, in relation to hiring, rules of conduct, training, equipping, and monitoring of such security workers. The Borrower will not sanction any use of force by direct or contracted workers in providing security except when used for preventive and defensive purposes in proportion to the nature and extent of the threat.

25. The Borrower will seek to ensure that government security personnel deployed to provide security services act in a manner consistent with paragraph 24 above, and encourage the relevant authorities to disclose the security arrangements for the Borrower's facilities to the public, subject to overriding security concerns.

26. The Borrower will (i) make reasonable inquiries to verify that the direct or contracted workers retained by the Borrower to provide security are not implicated in past abuses; (ii) train them adequately (or determine that they are properly trained) in the use of force (and where applicable, firearms), and appropriate conduct toward workers and affected communities; and (iii) require them to act within the applicable law and any requirements set out in the ESCP.

27. The Borrower will review all allegations of unlawful or abusive acts of security personnel, take action (or urge appropriate parties to take action) to prevent recurrence and, where necessary, report unlawful and abusive acts to the relevant authorities

The proposed Agro-Processing Industry & Grain Market subproject has identified, evaluated and shall monitor the potential health and safety risks to workers, affected communities and other users throughout the project life cycle. The ESMP has incorporated technically and financially feasible safety measures into the subproject's design to prevent and mitigate potential safety risks to all users and affected communities.

3.2.3.5 Environmental and Social Standard 5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement;

ESS5 recognizes that project-related land acquisition and restrictions on land use can have adverse impacts on communities and persons Project-related land acquisition or restrictions on land use may cause physical displacement (relocation, loss of residential land or loss of shelter), economic displacement (loss of land, assets or access to assets, leading to loss of income sources or other means of livelihood), or both The term "involuntary resettlement" refers to these impacts Resettlement is considered involuntary when affected per sons or communities do not have the right to refuse land acquisition or restrictions on land use that result in displacement.

Objectives of ESS5 include:

- To avoid involuntary resettlement or, when unavoidable, minimize involuntary resettlement by exploring project design alternatives
- To avoid forced eviction
- To mitigate unavoidable adverse social and economic impacts from land acquisition or restrictions on land use by: (a) providing timely compensation for loss of assets at replacement cost and (b) assisting displaced persons in their efforts to improve, or at least restore, their livelihoods and living standards, in real terms, to pre-displacement levels or to levels prevailing prior to the beginning of project implementation, whichever is higher
- To improve living conditions of poor or vulnerable persons who are physically displaced, through provision of adequate housing, access to services and facilities, and security of tenure

- To conceive and execute resettlement activities as sustainable development programs, providing sufficient investment resources to enable displaced persons to benefit directly from the project, as the nature of the project may warrant
- To ensure that resettlement activities are planned and implemented with appropriate dis closure of information, meaningful consultation, and the informed participation of those affected

Among the requirements of ESS5 include the following:

11. The GoT will demonstrate that involuntary land acquisition or restrictions on land use are limited to direct project requirements for clearly specified project purposes within a clearly specified period of time. Will consider feasible alternative project designs to avoid or minimize land acquisition or restrictions on land use, especially where this would result in physical or economic displacement, while balancing environmental, social, and financial costs and benefits, and paying particular attention to gender impacts and impacts on the poor and vulnerable.

12. When land acquisition or restrictions on land use (whether permanent or temporary) cannot be avoided, the GoT will offer affected persons compensation at replacement cost, and other assistance as may be necessary to help them improve or at least restore their standards of living or live-lihoods, subject to the provisions of paragraph 26 through 36 of this ESS.

13. Compensation standards for categories of land and fixed assets will be disclosed and applied consistently Compensation rates may be subject to upward adjustment where negotiation strategies are employed. In all cases, a clear basis for calculation of compensation will be documented, and compensation distributed in accordance with transparent procedures.

14. Where livelihoods of displaced persons are land-based, or where land is collectively owned, the GoT will offer the displaced persons an option for replacement land in accordance with paragraph 35(a), unless it can be demonstrated to the Bank's satisfaction that equivalent replacement land is unavailable.

15. The GoT will take possession of acquired land and related assets only after compensation in accordance with this ESS has been made available and, where applicable. In addition, livelihood restoration and improvement programs will commence in a timely fashion in order to ensure that affected persons are sufficiently prepared to take advantage of alternative livelihood opportunities as the need to do so arises.

19. The GoT will ensure that a grievance mechanism for the project is in place, in accordance with ESS10 as early as possible in project development to address specific concerns about compensation, relocation or livelihood restoration measures raised by displaced persons (or others) in a timely fashion.

The land proposed for construction of Agro-Processing Industry & Grain Market is legally owned by Songea Municipal Council and thus no resettlement is expected. However, in the action requiring additional land for future development if any, the GoT through PO-RALG shall adhere to the requirements of ESS5 including preparation of Resettlement Action Plan (RAP). Subproject's GRM has been prepared as part of chapter 7 "Environmental and Social Management Plan" that shall guide handling of grievances during construction phase.

3.2.3.6 Environmental and Social Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources;

ESS6 recognizes the importance of maintaining core ecological functions of habitats, including forests, and the biodiversity they support.

This ESS also addresses sustainable management of primary production and harvesting of living natural resources.

ESS6 recognizes the need to consider the livelihood of project-affected parties, including Indigenous Peoples, whose access to, or use of, biodiversity or living natural resources may be affected by a project. The potential, positive role of project affected parties, including Indigenous

Peoples, in biodiversity conservation and sustainable management of living natural resources is also considered

Objective of ESS6 include but not limited to:

- To protect and conserve biodiversity and habitats
- To apply the mitigation hierarchy and the precautionary approach in the design and implementation of projects that could have an impact on biodiversity
- To promote the sustainable management of living natural resources
- To support livelihoods of local communities, including Indigenous Peoples, and inclusive economic development, through the adoption of practices that integrate conservation needs and development priorities

ESS6 requirements include among others:

8. The environmental and social assessment as set out in ESS1 will consider direct, indirect and cumulative project-related impacts on habitats and the biodiversity they support. This assessment will consider threats to biodiversity, for example habitat loss, degradation and fragmentation, invasive alien species, overexploitation, hydrological changes, nutrient loading, pollution and incidental take, as well as projected climate change impacts.

10. Through the environmental and social assessment, the GoT will identify the potential project related risks to and impacts on habitats and the biodiversity that they support.

11. The GoT's assessment will include characterization of baseline conditions to a degree that is proportional and specific to the anticipated risk and significance of impacts.

The provisions of ESS6 regarding primary suppliers and their workers are well addressed in (paras 38 to 40) as;

38. Where a Borrower is purchasing natural resource commodities, including food, timber and fiber, which are known to originate from areas where there is a risk of significant conversion or significant degradation of natural or critical habitats, the Borrower's environmental and social assessment will include an evaluation of the systems and verification practices used by the primary suppliers.

39. The Borrower will establish systems and verification practices which will:

(a) Identify where the supply is coming from and the habitat type of the source area;

(b) Where possible, limit procurement to those suppliers that can demonstrate 21 that they are not contributing to significant conversion or degradation of natural or critical habitats; and

(c) Where possible and within a reasonable period, shift the Borrower's primary suppliers to suppliers that can demonstrate that they are not significantly adversely impacting these areas.

40.The ability of the Borrower to fully address these risks will depend upon the Borrower's level of control or influence over its primary suppliers.

As described in chapter 4, the proposed site has no sensitive biodiversity it supports thus no major impacts are expected as a result of site clearance activities.

3.2.3.7 Environmental and Social Standard 7: Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities;

ESS7 contributes to poverty reduction and sustainable development by ensuring that projects supported by the Bank enhance opportunities for Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities to participate in, and benefit from, the development process in ways that do not threaten their unique cultural identities and well-being.

Among the ESS7 objectives include:

- To ensure that the development process fosters full respect for the human rights, dignity, aspirations, identity, culture, and natural resource-based livelihoods of Indigenous Peoples/ Sub-Saharan African Historically Underserved Traditional Local Communities.

- To improve project design and promote local support by establishing and maintaining an ongoing relationship based on meaningful consultation with the Indigenous Peoples/Sub- Saharan African Historically Underserved Traditional Local Communities affected by a project throughout the project's life cycle.

Among the general requirements of ESS7 include:

11. A key purpose of this ESS is to ensure that Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities present in, or with collective attachment to, the project area are fully consulted about, and have opportunities to actively participate in, project design and the determination of project implementation arrangements The scope and scale of consultation, as well as subsequent project planning and documentation processes, will be proportionate to the scope and scale of potential project risks and impacts as they may affect Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities.

During ESIA study, no Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities were identified in Songea Municipality.

3.2.3.8 Environmental and Social Standard 8: Cultural Heritage;

This ESS sets out general provisions on risks and impacts to cultural heritage from project activities ESS7 sets out additional requirements for cultural heritage in the context of Indigenous Peoples. ESS6 recognizes the social and cultural values of biodiversity. Provisions on Stakeholder Engagement and Information Disclosure are set out in ESS10.

Objectives of the ESS8 include:

- To protect cultural heritage from the adverse impacts of project activities and support its preservation.
- To address cultural heritage as an integral aspect of sustainable development
- To promote meaningful consultation with stakeholders regarding cultural heritage
- To promote the equitable sharing of benefits from the use of cultural heritage

ESS8 requires:

8. The environmental and social assessment, as set out in ESS1, will consider direct, indirect and cumulative project-specific risks and impacts on cultural heritage. Through the environmental and social assessment, the GoT will determine the potential risks and impacts of the proposed activities of the project on cultural heritage.

9. The GoT will avoid impacts on cultural heritage. When avoidance of impacts is not possible, the GoT will identify and implement measures to address impacts on cultural heritage in accordance with the mitigation hierarchy.

During impacts' assessment study and through communities and stakeholders' consultations, no heritage site was identified to be within or near the proposed site for implementation of Agro-Processing Industry and Grain Market.

3.2.3.9 Environmental and Social Standard 10: Stakeholder Engagement and Information Disclosure

This ESS recognizes the importance of open and transparent engagement between the Borrower and project stakeholders as an essential element of good international practice. 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.

Objectives of ESS10 are:

- To establish a systematic approach to stakeholder engagement that will help Borrowers identify stakeholders and build and maintain a constructive relationship with them, in particular project-affected parties

- To assess the level of stakeholder interest and support for the project and to enable stake-holders' concerns to be taken into account in project design and environmental and social performance.
- 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
- 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
- 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

ESS10 requirements among others include:

6. The GoT will engage with stakeholders through- out the project life cycle, commencing such engagement as early as possible in the project development process and in a timeframe that enables meaningful consultations with stakeholders on project design. The nature, scope and frequency of stakeholder engagement will be proportionate to the nature and scale of the project and its potential risks and impacts.

7. The GoT will engage in meaningful consultations with all stakeholders. 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.

8 The process of stakeholder engagement will involve the following, as set out in further detail in this ESS: (i) stakeholder identification and analysis; (ii) planning how the engagement with stakeholders will take place; (iii) disclosure of information; (iv) consultation with stakeholders; (v) addressing and responding to grievances; and (vi) reporting to stakeholders.

The TACTIC project has prepared a specific Stakeholder Engagement Plan (SEP) for the proposed Agro-Processing Industry and Grain Market which guided consultations during the EISA scoping stage as a 1st round stakeholders' engagement and shall also guide during feedback stage/2nd round community/ies engagement. 1st round was purposely for stakeholders to air their comments and concerns on the type of urban Agro-Processing Industry and International Grain Market under TACTIC program as indicated in chapter 5 of this ESIA report. 2nd round consultations shall be conducted as part of SEP to review how the draft design has implemented their aired comments and concerns.

3.2.4 The World Bank ESH Guidelines

Once a member of the World Bank Group is involved in a project, adherence to the EHS Guidelines is mandatory as a matter of policy. The General EHS Guidelines are a set of technical reference documents which addresses "Good International Industry Practices" in four focus areas: 1) Environmental 2) Occupational Health and Safety 3) Community Health and Safety and 4) Construction and Decommissioning

The EHS Guidelines contain the performance levels and measures that are generally considered to be achievable in new facilities by existing technology at reasonable costs. Application of the EHS Guidelines to existing facilities may involve the establishment of site-specific targets, with an appropriate timetable for achieving them. The applicability of the EHS Guidelines should be tailored to the hazards and risks established for each project on the basis of the results of an environmental assessment in which site-specific variables, such as host country context, assimilative capacity of the environment, and other project factors, are taken into account.

The proposed subproject shall implement ESH Guidelines during construction and operation of Agro-Processing Industry and Grain Market.

3.3 National Policies

Environmental awareness in the country has significantly increased in recent years. The government has been developing and reviewing national policies to address environmental management in various sectors. Among others, the objective of these policies is to regulate the development undertaken within respective sectors so that they are not undertaken at the expense of the environment. The national policies that address environmental management as far as this project is concerned and which form the corner stone of the present study include the following

3.3.1 The National Environmental Policy, 2021

The new 2021 National Environmental Policy that comes into force following the review of the 1997 National Environmental Policy also seeks to control use of chemicals, invasive species like weeds and water as well as control of pollution at oil and gas extraction activities in the country

The NEP 1997 aimed at addressing six (6) main environmental challenges namely: land degradation; lack of accessible good quality water for both rural and urban inhabitants; loss of Wildlife Habitats and Biodiversity; deterioration of aquatic systems; deforestation and environmental pollution.

The National Environment Policy 2021 provides a broad range of measures and actions responding to key environmental issues and challenges. It provides the framework for an integrated approach to planning and sustainable management of environment in the country. It also recommends strong institutional and governance measures to support the achievement of the desired objectives and goals.

By undertaking ESIA, PO-RALG has observed the requirements of this policy during the whole cycle of the proposed subproject and conducted consultation meetings meeting as required with various stakeholders.

3.3.2 National Agriculture Policy 2013

Agricultural development depends heavily on good infrastructure, such as roads, communication, energy, marketing facilities and efficient transport services. Good infrastructure and transport systems are essential elements for movement of agricultural produce, goods and services to and from rural areas that are vital stimulants to the development of the rural economy. Infrastructure developments particularly in rural areas are vital determinants of transaction costs in agriculture and hence the absence of good infrastructure in turn affects the sector's competitiveness. Passable roads, adequate energy, efficient communication and marketing infrastructure are important in stimulating agricultural growth and development in rural areas.

To attain agricultural development, the policy in paragraph 3.9.2 requires that rural infrastructure and transport systems improved to reduce transaction costs that affect agricultural growth and competitiveness; and paragraph 3.9.3 i) that Rural Road connectivity for improved agricultural development shall be facilitated in collaboration with the ministry responsible for infrastructure and the Prime Minister's Office-Regional Administration and Local Government (PO-RALG);

Through construction of Agro-Processing Industry and Grain Market, PO-RALG complies with the policy objectives to support agricultural development in Songea Municipality and Ruvuma region as a whole.

3.3.3 Agriculture and Livestock Policy 1997

The agriculture and Livestock Policy aims to assure basic food security for the nation, and to improve national standards of nutrition by increasing output, quality and availability of food commodities and to improve standards of in the rural areas through increased income generation from agricultural and livestock production, processing and marketing.

Agricultural and livestock growth is dependent on the cost of transport, a key ingredient of farm level prices for both procedure and inputs. Therefore, the policy statement in paragraph 3.2 C.(i) demands that the Government will facilitate and support expansion of rural transport network and rehabilitation of existing transport network so as to reduce transport costs; and (ii) Government will facilitate and support investments in other infrastructure for crops and livestock production,

marketing and processing. It will also encourage private sector investments and ownership in processing facilitates.

The proposed Agro-processing Industry and grain market subproject will complement the objectives of this policy as it will facilitate increased output of food production, quality, availability of food commodities and increased income through value addition of grains.

3.3.4 The National Land Policy, 1997

The National Land Policy advocates the protection of land resources from degradation for sustainable development. Among other things the policy requires that project development should take due consideration the land capability, ensures proper management of the land to prevent erosion, contamination and other forms of degradation.

The proposed subproject has been allocated in an area with existing land use plan and the design has followed required plot ratio. The construction and operation activities shall provide measures to control erosion and avoid any accidental spills that will contaminate the land.

3.3.5 The National Investment Promotion Policy, 1996

The National Investment Promotion Policy encourages protection of environment in line with the countries socio-economic policies. Under the policy, investors are required to undertake activities in a manner that best contributes to consumer and environmental protection. The investors are also encouraged to use local raw materials/components where possible.

The project implementation shall abide to the relevant provisions of the policy to ensure environmental protection by preparing and implement environmental management plan. Food safety measures from storage and processing shall be adhered to. The proposed Agro-Processing Industry and Grains Market shall utilize available local materials from licensed sources from various governments' authorities.

3.3.6 The National Employment Policy (2008)

The major aim of this policy is to promote employment, mainly for Tanzania citizens. Relevant sections of this policy are (i) 10, which lays down strategies for promoting employment and section 10.1 is particularly focusing on industry and trade sectors (ii) 10.6 which deals with employment of special groups i.e., women, youth, persons with disabilities and (iii) 10.8 which deals with the tendencies of private industries to employ expatriates even where there are equally competent nationals.

PO-RALG will ensure that, the construction contractor abide to this policy by employing local people in construction and operation phase.

3.3.7 The National Water Policy, 2002

The overall objective of this policy is to develop a comprehensive framework for the sustainable management of the water resources in the country. This framework promotes the optimal, sustainable and equitable development and use of water resources for the benefit of all Tanzanians, based on a clear set of guiding principles. The policy provides for beneficiaries' participation in water supply schemes and addresses cross-sectorial interests in water, watershed management and integrated and participatory approaches for water resources planning, development and management. The policy provides a shift of Government roles from service provider to that of coordination, policy and guidelines formulation, and regulation. Public consultations conducted for the cause of the ESIA for this project brought stakeholder participation in line with the policy objectives

The proposed subproject implementation shall ensure that both surface and ground water sources are protected against pollution by avoiding discharge of any kind of waste/pollutants that is likely to cause pollution/contamination of the sources.

3.3.8 The National Energy Policy of Tanzania (2015)

This policy outlines measures to adopt clean technology and minimize pollution in developing Tanzania's energy sector. It focuses on utilization of various energy resources among others include water, gas, coal, petroleum and wind in a sustainable and environmentally friendly

manner. The policy states that energy is a prerequisite for the proper functioning of nearly all sub-sectors of the economy. It is an essential service whose availability and quality can determine the success or failure of development endeavours.

The policy objectives are to ensure availability of reliable and affordable energy supplies and their use in a rational and sustainable manner.

The proponent will abide this policy by ensuring energy is used wisely and the use of energy saver equipment such as light bulbs, milling machines and others appliances.

3.3.9 The National Gender Policy, 2002

The key objective of this policy is to provide guidelines that will ensure that gender sensitive plans and strategies are developed in all sectors and institutions. While the policy aims at establishing strategies to eradicate poverty, it puts emphasis on gender quality and equal opportunity of both men and women to participate in development undertakings and to value the role-played by each member of society.

PO-RALG shall ensure provision of equal opportunities to both men and women during construction, on allocation of wholesale and retail business spaces at the market and employment in Agro-Processing industry.

3.3.10 The National Construction Industry Policy (2003)

This policy promotes among other things, application of cost effective and innovative technologies and practices to support socio-economic development including utilities and ensure application of practices, technologies and products which are not harmful to both the environment and human health.

Installed machines at the proposed industry shall be of low emission levels and maintenance costs. In addition, workers shall be provided with PPEs during operation for their health's protection.

3.3.11 The National Human Settlements Development Policy (2000)

The overall goals of the National Human Settlements Development Policy are to promote development of human settlements that are sustainable. The main objectives of the policy among others are to improve the level of the provision of infrastructure and social services for sustainable human settlements development; and to protect the environment of human settlements and of ecosystem from pollution, degradation and destruction in order to attain sustainable development.

The Policy further calls for communities to participate in identifying critical environmental issues and in the preparation and implementation of the plans.

Construction of the proposed subproject complies with the policy as it is an infrastructure which facilitates economic growth through provision of social services.

3.3.12 The National Health Policy, 2017

This Policy is a revision of the 1990 Health Policy, which emphasized on the need for increasing community involvement in health development and improved access and equity in health and health services. One of the main objectives of this policy is to ensure that health services are available and accessible to all people wherever they are in the country, whether in urban and rural areas. The policy encourages safe basic hygienic practices in workplaces, promote sound use of water, promotes construction of latrines and their use, encourage maintenance of clean environment; working environment which are conducive to satisfactory work performance.

The proposed subproject shall provide sanitary facilities to workers and users during both construction and operation phase of the project in order to comply with the policy. Wastewater management system shall also be provided on site.

3.3.13 National Policy on HIV/AIDS (2001)

This policy provides a framework for leadership and coordination of the National multisectoral response to the HIV/AIDS epidemic. One of the major objectives of the policy is to strengthen the role of all sectors, public, private, NGOs, faith groups, CBOs and other specific groups to ensure that all stake holders are actively involved in HIV/AIDS work and to provide a framework for

coordination and collaboration. The policy recognizes that HIV infection shall not be grounds for discrimination in relation to education, employment, health and any other social services. Pre-employment HIV screening shall not be required. For persons already employed, HIV/AIDS screening, whether direct or indirect, shall not be required. HIV infection alone does not limit fitness to work or provide grounds for termination. HIV/AIDS patients shall be entitled to the social welfare benefits like other patients among the employees. HIV/AIDS information and education targeting the behaviour and attitudes of employees and employers alike shall be part of HIV/AIDS intervention in the workplace.

The proponent shall adhere to the policy by ensuring that, no discrimination is done to workers regardless of their health status.

3.3.14 The National Cultural Policy (1997)

The policy framework for culture in Tanzania includes the rather broad general Cultural Policy dating back to 1997, which covers heritage, arts and craft and other cultural sectors of activity. The National Strategy for Growth and Reduction of Poverty for Tanzania, MKUKUTA II, recognize the importance of culture in the national development strategy. Its Goal 5 indicates that "National culture and identity are at the heart of development policy". The results targeted within this goal are:

- Social cohesion, belonging, and national identity promoted and enhanced;
- Attitude toward hardworking, self-confidence, and self-esteem, creativity, innovation and Moral integrity promoted and enhanced;
- Culture and heritage of the country preserved and promoted; and
- Principles of cultural diversity and inter-cultural dialogue upheld.

During implementation of proposed subproject, cultural values in the project area should be respected by construction contractor.

3.3.15 The Transport Policy, 2003

The National Transport Policy has several policy statements which encourage the participation of the private sector in the provision of infrastructure and services in the road, railway and maritime transport sub-sectors. The following few statements from the Policy demonstrate this:

- National Transport Policy underlines the need for the private sector participation including the local communities in the planning and rehabilitation of the roads that pass through their area.
- The role of railway transport for efficient inter-modal transit cannot be over emphasized. National Transport Policy underlines the need for further development of modal and inter-modal interface facilities and institutions. For this to happen, involvement of private sector in infrastructure development and operation of railways is considered necessary.

The proponent shall adhere to the policy by ensuring that, the local communities participate in the planning and rehabilitation of the roads within the proposed project area.

3.3.16 The National Trade Policy, 2003

The trade policy recognizes the relationship between trade and the environment under paragraph 4.4.1. Growth and development depend on sustainable and optimal use of the world's renewable and non- renewable resources. This entails judicious exploitation of existing resources and the protection and preservation of the environment. Tanzania attaches great importance to the growing need to protect and conserve the environment and has consistently upheld environmental conservation measures. The push for economic transformation and attainment of higher rates of growth tends to lead to environmentally degrading production practices. This highlights the need for pro-active measures to mitigate against the emergence of environmentally harmful production practices in developing economies. The government will strengthen institutions entrusted with the execution and enforcement of environmental laws and regulation.

The proponent shall adhere to the policy by ensuring that all the required environmental pollution control measures are kept in place.

3.3.17 The National Economic Empowerment Policy, 2004

The National Economic Empowerment Policy aims at addressing various constraints so as to create a more conducive environment for various groups of Tanzanians to participate fully in economic activities. The Policy takes on board farmers, livestock keepers, fishermen, employees, traders as well as other groups of individuals in various economic activities.

The Empowerment of the citizens of Tanzania is among the goals set in the Tanzania Vision 2025. It is envisaged that, by the year 2025, a large segment of the national economy will be owned by Tanzanians. This process will embrace all Tanzanians by availing equal opportunities to all groups to develop themselves, particularly the poor. In addition, a more favourable business environment will be created to foster a strong economy that is capable of competing effectively in a globalised world market as stated in its visions.

The mission (ii) of the policy is to focus on areas that have high potential to generate quick results especially those which directly impact on the lives of individuals with entrepreneurial capability in agriculture, livestock keeping, fishing, forestry, building and construction, trade, tourism, mining, manufacturing, and transportation.

Among its primary objective of this policy is to provide general guidelines which will ensure that the majority of the citizens of Tanzania have access to opportunities to participate effectively in economic activities in all sectors of the economy. In this regard, sector policies will give preferential treatment to nationals where necessary so as to enhance their bargaining position and opportunities. Accordingly, the Policy focuses on:- (i) Creating a favourable business environment for investment and economic growth; (iii) Reviewing laws, rules and regulations from time to time to ensure that they meet the requirements of a market-oriented economy; (v) Improving efficiency in public service delivery; (vii) Raising skills and knowledge levels; (viii) Strengthening economic infrastructure and involving Tanzanians in infrastructure development; (x) Improving the capacity to produce goods of a high quality, provide better and reliable public services, support the establishing of appropriate marketing systems, including the use of government tendering system to assist Tanzanians to access markets. (xii) Using land as a springboard to accelerate empowerment;

The proponent shall adhere to the policy by ensuring all of its requirements n visions, missions and objectives.

3.4 National Development Strategies

3.4.1 Tanzania Development Vision 2025

The Tanzania Vision 2025 was developed in the mid-1980s. It was developed when the government realized that past development policies and strategies were not adequately responding to changing market and technological conditions in the regional and world economy and were also not adapting to changes in the domestic socio-economic conditions.

Consistent with this vision, Tanzania of 2025 should be a nation imbued with five main attributes:-

- High quality livelihood;
- Peace, stability and unity;
- Good governance;
- A well-educated and learning society; and
- A competitive economy capable of producing sustainable growth and shared benefits.
- Through implementation of the proposed agro-processing industry and grain market at Lilambo industrial area under TACTIC, the GoT through PO-RALG will contribute towards realisation of the Vision’s objectives by making conducive environment for all farmers on achieving their goals.

3.4.2 Rural Development Strategy (2001)

The strategies have the primary objectives of stimulating growth in the rural economy by building on gains in the national economy and by empowering rural poor people to overcome poverty through better access to land, water, energy, financial resources and markets.

There is a large population still lacking proper Markers in Tanzania and the proposed project will create an enabling environment for more rural agricultural projects.

3.4.3 The National Strategy for Growth and Reduction of Poverty (NSGRP) II (2015)

The NSGRP-II paper recognizes that reliable infrastructure such as projects is critical for the attainment of the NSGRP II which was launched in 2010 and Sustainable Development Goals which were laid down by the United Nations in 2015. These SDGs are such as Goal No.1 to end poverty, Goal No. 2 on zero hunger, Goal No. 3. to ensure Health life and promote wellbeing for all at all ages, Goal No. 5 on Gender equality and Goal No. 9 on Industry, Innovation and Infrastructure which fosters the importance to build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.

The TACTIC project will focus in the reduction of poverty for both men and women and address issues of gender discrimination and GBV. Once the Industry has been constructed, various activities such as transportation of agricultural products final products/grains to urban areas will be enhanced thereby increasing employment and revenues and eventually improving livelihoods. The NSGRP also recognizes the role of other sectors in poverty eradication and the need for mainstreaming environment as one of the crosscutting issues in the sector.

3.4.4 The National Climate Change Strategy (NCCS) - 2012

The goal of this Strategy is to enable Tanzania to effectively adapt to and participate in global efforts to mitigate to climate change with a view to achieving sustainable economic growth in the context of the Tanzania's national development blueprint, Vision 2025; Five Years National Development plan; and national cross sectoral policies. To achieve the stated goal, the following specific objectives have been set.

- To build the capacity of Tanzania to adapt to climate change impacts.
- To enhance resilience of ecosystems to the challenges posed by climate change.
- To enable accessibility and utilization of the available climate change opportunities.
- To enhance participation in climate change mitigation activities that lead to sustainable development.
- To enhance public awareness on climate change.
- To strengthen information management on climate change.
- To enhance institutional arrangements to adequately address climate change and
- To enhance mobilization of resources in particular finance to address climate change.

Design and implementation of urban subproject under TACTIC shall include climate change adaptation measures for infrastructural resilience to climate change

3.5 Legal Framework

3.5.1 The Environmental Management Act, No. 20 of 2004

The Environmental Management Act (EMA) Cap 191 (2004) seeks to provide for legal and institutional framework for sustainable management of the environment in the implementation of the National Environmental Policy. It gives mandate to the National Environmental Management Council (NEMC) to undertake enforcement, compliance, review and monitoring of environmental impact assessment. Also, NEMC has a role of facilitating public participation in environmental decision making, exercise general supervision and coordinating over all matters relating to the environment. The Act also requires the Council to determine whether a proposed project should be subjected to an ESIA, approves consultants to undertake the ESIA study, invites public comments and also has the statutory authority to review EIS and recommend to the Minister for approval and issuance of ESIA certificate. The Act imposes an obligation on developers to

conduct an ESIA prior to the commencement of the project to determine whether the project may/or is likely to have, or will have significant impacts on the environment. Section 82 makes ESIA mandatory to all projects that fall under the ESIA mandatory list (Schedule 3).
Project proponent has observed important provision of the Act by carrying out this ESIA

3.5.2 The Regional and District Act, No. 9 of 1997

The Act provides for Regional Commissioners to oversee Regional Secretariats, with District Commissioners directly supervising the District Councils. Local authorities oversee the local planning processes, including establishing local environmental policies.
The National Environmental Policy establishes a policy committee on Environment at Regional level chaired by the Regional Commissioner, mirrored by environmental committee at all lower levels, i.e., at the District, Division, Ward and Village or Mtaa Councils. Under the EMA 2004, the Regional Secretariat is responsible for coordination for all advice on environmental management in their respective region and in liaison with the Director of Environment. At Local Government level, an Environmental Management Officer should be designated or appointed by each City, Municipal, District or Town Council. In each City or
Municipality or District Environmental Committees should be established to promote and enhance sustainable management of the Environment. The Village Development Committee is responsible for proper management of the environment in their respective areas. The District Council designates for each administrative area as township, ward, village, sub-street.
PO-RALG shall ensure the contractor and operation activities of the facility observe all local environmental bylaws set by Songea Municipal Council.

3.5.3 The Water Supply and Sanitation Act, No. 12 of 2019

This is also a new legislation that provides for sustainable management and adequate operation and transparent regulation of water supply and sanitation services; provides for establishment of water supply and sanitation authorities as well as community owned water supply organizations; and provides for appointment for service providers. The main aim of this law is to ensure the right of every Tanzanian to have access to efficient, effective and sustainable water supply and sanitation services for all purposes by taking into account among others protection and conservation of water resources and development and promotion of public health and sanitation; and protection of the interest of customers. Under this law, the Minister responsible for water affairs shall establish water authority and cluster water authorities in order to achieve commercial viabilities.
The proponent shall ensure that water is used appropriately for the intended uses only; misuse of water shall be strictly prohibited.

3.5.4 The Land Act, No. 4 Cap 113 of 1999 (R.E 2919)

The basic principles of the Land Act 1999 are adopted from Land Policy 1995. The Act contains provisions of critical environmental importance. One of important fundamental principles of the Land Act is “to ensure that land is used productively and that any such use complies with the principles of sustainable development”.
Subproject’s activities to be conducted during operation are among the productive use of land resource. In order for the proposed subproject to be sustainable, implementation of the Environmental and Social Management Plan as outlined in Chapter 8 of this report shall be done.

3.5.5 The Urban Planning Act, No. 8 of 2007

The law provides for the orderly and sustainable development of land in urban areas, to preserve and improve amenities; to provide for the grant of consent to develop land and powers of control over the use of land and to provide for other related matters. Section 29-(1) of the law states that "Notwithstanding the provisions of any other written law to the contrary, no person shall develop any land within a planning area without planning consent granted by the planning authority or otherwise than in accordance with planning consent and any conditions specified therein".

The proposed subproject's site is located within the planned land use, as required by the act, design drawings shall be processed for approval by planning authority.

3.5.6 The Land Use Planning Act, No. 6 of 2007

An act to provide for procedures for the preparation, administration and enforcement of land use plans, to repel the National Land Use Planning Commission Act and to provide for related matters. The objectives of land use planning to which all persons and authorities excising powers under, applying or interpreting this act shall be:

- Facilitate efficient and orderly management of land use;
- Empower landholders and users to make better and more productive use of their land;
- Promote sustainable land use practices;
- Facilitate the establishment of a framework for the prevention of land use conflicts.

The subproject's development abides to the requirement of the Act since it is compatible with land use of the area.

3.5.7 The Road Act, No. 13 of 2007

For purposes of this project, the Road Act 2007 serves as a guide to the use of the road reserve. Contrary to previous informal understanding, the reserve is exclusive to road related activities that do not include other utilities. However, clause 29 (2) does give provision for the request and terms of approval for use of the road reserve by utilities such as power lines and water pipes.

On land acquisition the Act clearly states in part III, Section 16 that "where it becomes necessary for the road authority to acquire a land owned by any person, the owner of such land shall be entitled to compensation for any development on such land in accordance with the Land Act and any other written law".

PO-RALG shall observe requirements of the act through conservation of the Road Reserve during design, construction and operation phases of Agro-Processing Industry and Grain Market.

3.5.8 The Occupational Health and Safety Act, No. 5 of 2003

The Occupational Health and Safety Act, 2003 was enacted to safe guard all workers from health and safety risks in all working areas. This act is vital since, the project will have several working areas such as, open pit, processing plant, loading/unloading and Transportation in which health and safety awareness guidelines need to be set and adhered to under the guidance of this act and its Regulations.

The project proponent shall ensure the contractor observes the provisions of this Act as outlined in mitigation and ESMP chapters of this EIS. These include: provision of PPEs, clean and safe water, sanitary facilities e.t.c.

3.5.9 The Employment and Labour Relations Act, No. 6 Cap 366 of 2019

The Act makes provisions for core labour rights; establishes basic employment standards, provides a framework for collective bargaining; and provides for the prevention and settlement of disputes and provides.

PO-RALG shall ensure the contractor observes the provisions of this Act accordingly by :proving the employment to the people or community surrounding the proposed subproject, avoids forced labor, do not employ children under 14years and those employed shall not be subjected to hazardous activities, pay NSSF & WCF contributions for the employees.

3.5.10 The Public Health Act, No. 1 of 2009

Made under section 5 duties and functions of authorities, that every authority shall;

(a) Take lawful, necessary and reasonable measures to prevent the occurrence of a deal with any outbreak or prevalence of any infectious or communicable and non-communicable disease

(b) Cause an appropriate environmental health Impact Assessment study conducted for all activities as may be provided for under the Environmental Management Act

(c) Safeguard and promote public health standard

(d) Issues noticed for rectification of any breach of public health standard

(e) Implement and enforce public health standards in its area through by laws

(f) Promote public health standards in its area through creation of awareness and educational campaigns
(g) Carry out inspection and exercise the powers and perform duties in respect of the public health in accordance with this Act or any other written law.
The project proponent shall adhere to the Act in all project phases in order to make sure that the community is safeguarded from the subproject's establishment. All types of wastes (solid and liquid) shall be collected and managed accordingly to prevent occurrence of epidemics.

3.5.11 The Fire and Rescue Force Act, No 14 of 2007

According to the Act, among others, the functions of the force are to: (a) Extinguish fire (b) grade cities, municipalities, townships and villages into various fire and rescues services levels (c) conduct fire inspection and investigations for purposes of obtaining information relating to the causes of fire and loss inflicted by fire (d) Conduct studies on investigation of arson and accidental fire (e) Conduct training for fire department personnel, other officers and voluntary fire fighters (f) Prepare fire statistics and fire service information (g) Conduct fire tests on protection facilities, equipment and materials. In section 3(1)(g) it covers premises of facility used as a place for storage flammable liquids, gas or clothes.
The Act also obliges the owners and managers of the structures to set aside places with free means of escape, and install fire alarm and detection systems, or such other escape and rescue modalities in the event of fire.
PO-RALG shall comply with the above by: conducting training to workers and business owners/traders, providing required capacities and number of fire extinguishers in consultation with fire and rescue force.

3.5.12 The HIV and AIDS (Prevention and Control) Act, No. 28 of 2008

An Act to provide for prevention, treatment, care, support and control of the HIV/AIDS promotion of public health in relation to HIV and AIDS. To provide for appropriate treatment, care and support using available resources to people living with or risk of HIV/AIDS.
The Act impose the duty to every employer to establish and coordinate a work place programme on HIV/AIDS for employees under his control (employer`s control) and such programme shall include provision of gender responsive HIV/AIDS education, distribution of condoms and support to people living with HIV/AIDS. All these have to be done by employer in the consultation with the minister.
PO-RALG shall ensure the contractor abides to the requirements of the act by: providing regular HIV/AIDS awareness trainings to the workers and communities around the proposed subproject, distributing condoms to the workers and providing free HIV testing and counselling..

3.5.13 The Standards Act, No. 2 of 2009

An Act to provide for the promotion of the standardization of specifications of commodities and services, to re-establish the Tanzania Bureau of Standards (TBS) and to provide better provisions for the functions, management and control of the Bureau, to repeal the standards Act, Cap.130 and to provide for other related matters.
The proponent shall ensure that contractor uses materials of required standards during construction and Agro products from the facility shall be of standards for both local and international markets.

3.5.14 The Contractors Registration Act, No. 17 of 2011

The Contractors Registration Act requires contractors to be registered by the Contractors Board (CRB) before engaging in practice. It requires foreign contractors to be registered by the
Board before gaining contracts in Tanzania; proponent shall comply with the law requirement during the recruitment of contractors for project implementation.
The proponent shall ensure that the CRB registered contractor is engaged in the project construction

3.5.15 Architects and Quantity Surveyors Act of 2010

This Act was enacted by the parliament to provide for establishment of a board to regulate the conduct of Architects and Quantity surveyors and architectural and quantity surveying consulting firms in Tanzania. The board is vested with powers to inspect premised or construction sites to verify whether the rules and regulations of carrying out construction projects are adhered by consulting firms. This is aimed at ensuring that appropriate professionals who are registered by the board are involved in undertaking works as required by the law. Therefore, the developer shall abide by this Act.

PO-RALG ensured that the registered Architects and Quantity Surveyors have been engaged in the project preparation and shall do so during implementation.

3.5.16 The Land Acquisition Act, No 47 of 1967

This Act governs compensation and acquisition for public purposes in Tanzania. Sections 4 to 10 provide conditions to be taken into account, specifying requirements prior to the acquisition of the land such as preliminary investigation for the land to be taken, issuing notice of intention to take land and the mode in which notices will be made.

The Act requires that the developer of this subproject to abide with legal acquisition procedures where there is necessity for extra land. Identification, Valuation and Compensation of PAPs shall be done before implementation of the proposed subproject.

3.5.17 The Sexual Offences Special Provisions Act 1998

Under section 138, this Act provides that: - with the consent of the person; with the consent of the other person where the consent has been obtained by use of force, threat, or intimidation or putting that other person in fear of death or of hurt or while that other person was in unlawful detention commits the offence;

The Act, further stipulates that any person who, with intention, assaults or by use of criminal force, sexually harasses another person, or by the use of words or actions, causes sexual annoyance or harassment to such and liable on conviction to imprisonment two hundred thousand shilling or to both the fine and imprisonment, and may also be ordered to pay compensation to whom the offence was committed for any injuries caused to that person.

And whoever, intending to insult the modesty of woman utters any word, makes any sound or gesture, or exhibits any other including any organ whether male or feminine, intending that such word or sound shall be heard, or that the gesture or object shall be seen, by the woman, or intrudes upon the privacy of the woman, commits the offence of sexual harassment.

Also, for the avoidance of doubt, unwelcomed sexual advances by words or action used by a person in authority, in a working place or any other place, shall constitute the offence of sexual harassment. The Act also provides that, no prosecution for an offence under this section shall be instituted or continued where the complaint is made by the alleged victim at any time more than sixty days after the occurrence of the event constituting the offence.

During construction and operation of the proposed subproject, contractor and PO-RALG shall create awareness and enforce the law on any unlawful acts against women.

3.5.18 The Laws of the Child Act 2019

Section 5.-(1) A child shall have a right to live free from any discrimination. (2) A person shall not discriminate against a child on the grounds of gender, race, age, religion, language, political opinion, disability, health status, custom, etlmic origin, rural or urban background, birth, socio-economic status, being a refugee or of other status.

Section 12 A person shall not employ or engage a child in any activity that may be harmful to his health, education, mental, physical or moral development.

Section 77.-(1) A child shall have a right to light work. (2) For the purposes of subsection (1), the minimum age for employment or engagement of a child shall be fourteen years. (3) Subject to subsection (1), "light work" shall constitute work which is not likely to be harmful to the health or development of the child and does not prevent or affect the child's attendance at school,

participation in vocational orientation or training programmes or the capacity of the child to benefit from school work.

The proposed subproject shall not in anyhow employ a child under the stated age as required by the law. In case of employment provision to children, shall not be subjected to hazardous activities.

3.5.19 The Workers Compensation Act, 2015

The Act governs adequate and equitable compensation for all employees on grounds of injury, rehabilitation for occupational illnesses or injury and compensation to dependents and relatives upon fatality. The Act subsumes international standards and frameworks for compensation and promotion for prevention of accidents and occupational diseases.

Employment contracts for all labour engaged in the subsequent stages of the subproject must stipulate compensation arrangements for incidental work-related injury or sickness and contractor shall timely pay monthly workers contributions to WCF

3.5.20 The Income Tax Act, 2004 R.E 2019

Part II under the imposition of income tax section 4 during charges of tax states that, the income tax payable with respect to subsection (1)(a) by a resident individual who is not required to file a return of income under section 92(a)(ii) (and who does not elect to file a return) shall be equal to the sum of the amounts to be withheld under section 81 by the individual's employer or employers from payments made to the individual during the year of income and the sum of instalments paid by the person under section 90(1) with respect to gains realised during the year of income.

Part III under the income tax base section 8-1 Subdivision B: Chargeable Income during Income from business states that, a person's income from a business for a year of income is the person's gains or profits from conducting the business for the year of income.

Part IV under the rules applicable to particular types of persons section 53 Subdivision C: Corporations during Taxation of corporations states that,

(1) A corporation shall be liable to tax separately from its shareholders.

(2) Amounts derived and expenditure incurred jointly or in common by the managers or shareholders for the purposes of a corporation that lacks legal capacity, shall be treated as derived or incurred by the corporation and not any other person.

(3) Assets owned and liabilities owed jointly or in common by the managers or shareholders for the purposes of a corporation that lacks legal capacity shall be treated as owned or owed by the corporation and not any other person.

(4) Subject to this Part and Division II of Part III, arrangements between a corporation and its managers or shareholders shall be recognised.

Part V under special industries section 58-1 Division I: Insurance Business during General insurance business that for purposes of this Act, a person's activities in conducting a general insurance business shall be treated as a business separate from any other activity of the person and the person's income or loss from the business for any year of income shall be calculated separately.

Part VII under tax payment procedure Division I: General Obligations during Types of tax and methods of payment states that;

Section 78.-(1) Tax payable under this Act means-

(a) Income tax imposed under section 4(1), including amounts payable by a withholding agent or withholder under Division II, by an installment payer under Division III and on assessment under Division IV of this Part;

(b) Interest and penalties imposed by assessment Division I of Part VIII;

(c) An amount required to be paid to the Commissioner in collection from a tax debtor under section 112(9) or 128(3); and

(d) an amount required to be paid to the Commissioner in respect of a tax liability of a third party under section 115(2), 116 (3) or (4),117(2) or 118(1) or (3).

Section 78.-(1) (2) Tax shall be paid to the Commissioner in the form and at the place is may be prescribed.
Also, during time for payment of tax states that.
Section-79 Subject to section 55 of the Tax Administration Act, tax shall be payable-
(a) In the case of income tax payable by withholding, at the time provided for in section 84;
(b) In the case of income tax payable by installment, on the date by which the installment is to be paid under section 88 or 90;
(c) In the case of income tax payable on an assessment under section 94, on the date by which the return of income must be filed.
The proponent shall comply with the act by considering the all procedures required by the act

3.5.21 The Engineers Registration Act, 2010

This Act establishes an Engineering Registration Board (ERB) which regulates the conduct of engineers, to provide for their registration and for related matters. The Act provides restriction that no person other than a registered engineer shall engage in professional engineering work or services which includes professional service consultation, planning, designing or responsible supervision of construction or operation in connection with any public or privately owned public utilities, buildings, machines, equipment, processes works or projects where public interest and welfare, or the safeguarding of life, public health or property is concerned or involved, and that requires application of engineering principles and data. Furthermore, the Act stipulates that no person shall employ or continue to employ its professional engineer any person who is not a registered engineer. The proponent shall therefore observe the provisions of the Act when executing its activities.
The proponent of the project development activities involve engineering design and construction works for various designs of project facilities; the proponent ensured its compliance with this Act by employing registered engineer for supervising the project construction.

3.5.22 Energy and Water Utilities Regulatory Authority Cap 414, (2001)

This Act consolidates the laws in relation to energy and water utilities in Tanzania Mainland. Under this Act, the EWURA with prior approval of the Minister, make rules in respect of the regulated goods and services (being the electricity, petroleum, natural gas, water and sewerage sectors). The Act gives EWURA the legal mandates to issue renew and cancel licenses of service providers in the regulated sectors. Existing license holders and potential license applicants may submit their applications to EWURA for a new license or license renewal. EWURA considers license applications and decides whether to grant a license renewal by using fair and non - discriminatory procedures.
Cap 414 further makes it mandatory for EWURA to conduct public inquiry before exercising its powers to issue, renew or cancel a license. The proponent shall comply with the Act during it's project implementations.

3.5.23 Social Security Authority Act Cap 135 R.E 2015

Part III Registration of Schemes, Managers, Administrators and Custodians during Registration Section 14 states that, A person intending to establish or continue to operate a scheme or act as a manager, administrator or custodian shall not operate or act as such unless such person is registered under this Act.

During Conditions for registration of schemes states that,
Section 15.-(1) a scheme shall not be registered under this Act unless
(a) The scheme-
(i) Is established under a written law or an irrevocable trust deed;
(ii) Presents an initial actuarial valuation report; and
(iii) Protects the rights and interests of its members and public; and
(b) The trustees thereof satisfy the requirements specified in the regulations.

Section 15.-(2) any trust deed establishing a scheme shall be approved by authority
During Application for Registration
Section 16.-(1) a person intending to establish a scheme, act as a manager, custodian or administrator shall submit an application to the Authority in a prescribed form.
Section 16.-(2) the application under subsection (1), shall be accompanied by a prescribed fee,
Section 16.-(3) The Authority after receiving the application under subsection (1), shall process the same in the manner prescribed in the regulations.
Under the Register
Section 17.-(I) The Authority shall keep a register for all schemes, managers, administrators and custodians registered under this Act in such form as the Board may determine and shall enter therein such particulars as the Board may specify.
Section 17.-((2) The Board may determine the time or times during which and the extent to which a person may, on payment of the prescribed fee, inspect the register kept under this section or obtain copies thereof.
Under Issuance of certificates
Section 18 The Authority may, subject to the provisions of this Act, register and issue the applicant with a Certificate of registration.
The proponent shall follow all the requirements required under the act during its operational activities.

3.5.24 The Environmental (Solid Waste Management) Regulations, 2009 as amended in 2016

Made under regulations 114 of Environmental management for Solid waste management that for the purpose of ensuring minimization of solid waste in their respective geographical areas of jurisdiction local government authorities shall prescribe as for different types or kind of waste or refuse or garbage to be separated at the source and fail for that made under regulations 45(1) of Solid waste management amended 2016 that person commit an offence and to fine not less than fifty thousand shilling but not exceed two hundred thousand shilling or imprison in term of not less than three month.
The proponent shall provide no waste is discharged to the open environment by applying appropriate onsite waste management system.

3.5.25 The Environmental Management (Water Quality Standards) Regulations, 2007

These regulations have been made under Section 143, 144 and 230 (2) (s) of the Environmental Management Act, 2004. They are aimed at, among other things, setting permissible limits for municipal and industrial effluents, special permissible limits for chrome tanning industries, special tolerance limits for vegetable industry, special tolerance limits for fertilizer industry, taste, colour and smell of potable water and Chemical and physical limits for quality of Drinking Water Supplies.
The project proponent will adhere to the regulation by ensuring that there is better design for waste water management to avoid contamination of the surface and ground water.

3.5.26 The Environmental Management (Registration and Practice of Environmental Experts) Regulations, 2021

Regulations direct Proponents to conduct environmental studies through registered environmental experts. In doing so, this study has been conducted under coordination of registered environmental expert firm.

3.5.27 The Urban Planning (Use Group and Use Classes) Regulations, 2018

At the first schedule under use groups and uses classes (made under regulation 3) at Use Group W use class a – Special Economic Development Area purposes only: For the purposes of planning and the control of development, all uses of land and buildings are categorized in the use groups and use classes in the First Schedule. Hence, the proponent shall comply with the Regulation as its compound planned in both use group and classes.

3.5.28 The Urban Planning (Planning space standards) Regulations, 2018

These regulations shall apply to all planning areas declared by the Minister under section 8 of the Act. Part II under Urban Planning Space Standards Section 4-1 during functional space states that, adequate and functional space shall be allocated in accordance with the Urban Planning Space Standards prescribed in the Schedule to these Regulations.

By considering standards for residential areas, unplanned settlements, building height, building lines and setbacks, floor are, plot coverage and plot ratio, public facilities, parking and road width during the establishment of the project, Hence, proponent shall comply with the Regulation as its compound planned in planning space standards.

3.5.29 The Environmental Management (Fee and charges) Regulations, 2021;

Thee proponent shall pay all fees related to this EIA study as per regulations, these include registration and site verification and review costs. During operation, proponent shall pay Annual Charges for Environmental Monitoring and Audit as required.

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

During the construction expansion and operation of the Tanga port, the contractor and Proponent will incorporate measures in order to control noise and vibration pollution emanating from construction site, vehicles, workshop, and quarries that annoys, disturbs, injures or endangers the comfort, repose, health or safety of others and of the environment. In that case provision of PPEs shall be of priority during all phases of the project.

3.5.31 The Industries and Consumer Chemicals (Management and Control) Regulations, 2015

In these Regulations, unless the context otherwise requires "accidental release" means an unplanned or accidental discharge, emission, explosion, out gassing or other escape of chemicals, or any component or compound evolving from a chemical into the ambient air, water bodies, soil and environment in general;

Part III under Importation and Exportation of Chemicals during Requirements for importation and exportation of chemicals states that,

Regulation 5.-(1) Any person who imports or exports a chemical shall-

(a) Be registered and be issued a certificate;

(b) Register the premises and chemicals;

(c) Create awareness to the public on the inherent risks of indiscriminate use and misuse of chemicals;

(d) Set and adhere to the code of practice and guidelines on the safe use and handling of chemicals;

(e) Apply for chemical importation or exportation permit for every chemical consignment prior to importation or exportation; and

(f) Submit to the Registrar, in writing, the name of an authorized agent.

Regulation (6) A person shall not import any chemical unless that person has submitted to the Registrar a certificate of analysis of a chemical to be imported.

Part VI under Chemical Users and Producers during Requirements for chemical user and producer states that,

Regulation 24.-(1) A person who uses or produces a chemical shall-

(a) Be registered by the Registrar and be issued with a certificate;

(b) Register the company, premises and chemicals;

(c) Create awareness to the public on the inherent risks of indiscriminate use and misuse of chemicals; and

(d) Set and adhere to the code of practice and guidelines on the safe use and handling of chemicals

Part IX Chemical Waste Management during Requirements for management of chemical waste states shat,

Regulation 34 A person or company in possession of a chemical waste shall-

(a) Notify the Registrar in annual basis in the form set out in the Thirteenth Schedule to these Regulations;

(b) Ensure that the employees are made aware on the inherent nature and risks of mismanagement of the chemical waste; and

(c) Set and adhere to the code of practice and guidelines on the safe handling of chemical waste.

During operation, proponent shall comply with provision of the regulation by managing chemicals (if any).

3.5.32 The Fire and Rescue Force (Safety Inspections and Certificate) amendment Regulations, 2012

FIRST SCHEDULE under Fire Levy Scheme Guide to Classification of Properties, the proposed project is classified in Industrial / light services under guide classification of Light to medium manufacturing industry including structural steel, milling machines, laundry etc

THIRD SCHEDULE under Annual contributions of owners of prescribed properties shall pay the Fire levy cost depending upon the group of the classified proposed project size.

Under sub regulation 3 (i) the Certificate issued shall be valid for a period of one year from the date of issue, there after the property owner shall apply for it to be renewed.

sub regulation 3 (ii) By adding immediately after sub regulation 3(3) that would be sub regulation (4) Any owner of the property, premises, vehicle, vessel who fails to renew his Fire Safety Certificate within one month after its expiry will be required to pay the principal amount payable in respect of that property plus penalty of twenty five per centum (25%) for late payment.

During implementations of the proposed project, proponent shall comply with provision of the regulation by considering all required valid certificates are in place.

3.5.33 The Fire and Rescue Force (Fire Precautions in Buildings) Regulations, 2015

PART II means of escape under General provision on means of escape regulation 3.-(1) The provisions of this Part shall apply in determining the design, construction, protection, location, arrangement and maintenance of exit facilities to provide safe means of escape for occupants from all buildings hereafter erected, altered or changed in occupancy.

PART II means of escape under mixed occupancy regulation 6. Where different parts of a building or storey of a building are designed for different types of occupancies or used for different purposes at the same time, the exit requirements of the entire building or storey of the building shall be determined on the basis of that type of occupancy or usage having the strictest exit requirements or the exit requirements for each building section shall be determined separately.

PART IV site planning and external fire fighting provision under General provision on site planning and external fire fighting regulation 155 makes provisions for space around buildings to enable effective mounting of rescue and external firefighting operations

During implementations of the proposed project, proponent shall comply with provision of the regulation by taking all of final drawings to the Fire and Rescue office for approval depending upoon the nature of building and precaution measures considered in the project designs

3.5.34 The Antiquities Act of 1964 and the Antiquities Rules of 1991

The Antiquities Act of 1964 and as amended in 1979, and the Antiquities Rules of 1991 govern archaeological research in Tanzania. Under the Act, all objects (relics) that were made or modified by man before the year 1863 are automatically protected under the law. Section 16 of the 1964 Act gives powers to Local Government Authorities, to pass by-laws (with the approval of the Minister responsible for Antiquities) with respect to the preservation of the archaeological heritage in their areas of jurisdiction. They also have mandates to spearhead developments in districts and urban centres (for cities and municipalities) respectively.

Section 10 (1) provides that Any person who discovers a relic or monument, or any object or site which may reasonably be supposed to be a relic or monument in Tanzania, otherwise than in the course of a search or excavation made in accordance with a license granted under section 13, and the occupier of any land who knows of any such discovery on or under such land, shall forthwith report the same to an administrative officer, the Director, the Conservator or the Curator of the Museum.

During construction, any discoveries of relic or monuments and related items shall be reported to the responsible authority.

3.6 Part III Relics and Protected Objects (SS 8-9):

10. "Discovery of relics and monuments" (1) Any person who discovers a relic or monument, or any object or site which may reasonably be supposed to be a relic or monument in Tanzania, otherwise than in the course of a search or excavation made in accordance with a license granted under section 13, and the occupier of any land who knows of any such discovery on or under such land, shall forthwith report the same to an administrative officer, the Director, the Conservator or the Curator of the Museum.

11. No excavation or collection without a license Act No. 22 of 1979 s. 6

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

(2) Any person who contravenes the provisions of this section commits an offence.

Proposed subproject through contractor shall observe requirements of the act before and during implementation stages.

3.6.1 Valuation and Valuers Registration Act, 2016

48. For the purpose of this act, valuations are categorized into: (a) statutory valuation, which is governed by specific law or whose instructions or procedures are a result of a legal requirement; and (b) non-statutory valuation, which arises out of market demands or specific requirements and are not governed by any law.

This Act stipulates under Section 52 that:

(a) Valuation and valuation report prepared under this Act shall be valid for a specific period of time as may be prescribed; (b) Valuation conducted together with valuation reports prepared under this Act for purposes of compensation shall be valid for the period of two years commencing from the date of endorsement of the valuation report; (c) The endorsement of valuation report shall be effected within six months after the valuation of interest in property of the last person; (d) Where the Chief Valuer has approved a valuation relating to compensation, the person or entity responsible shall be liable to effect prompt payment of compensation to all affected persons; (e) A person or an entity which fails to effect prompt payment of compensation shall, in addition to the principal sum, be liable to pay an interest to be chargeable at the average percentage rate of interest offered by commercial banks on fixed deposits until such compensation is paid; (f) Where the compensation and interest is not settled within two years, the valuation shall not have a legal effect and shall start afresh; and (g) For purposes of this section of the Act, "prompt payment of compensation" means the payment of compensation within six months after approval of valuation by the Chief Valuer.

During planning phase of this subproject, types of valuation were defined and all related legal requirements shall be adhered to.

3.6.2 The Grave (Removal) Act No 9 of 1969

Article 8 of the Act gives the Minister power to approve places to which the graves may be removed in consultation with other responsible authorities. Where the removal of graves is undertaken the compensation may be paid as it will be determined in accordance with the provisions (Article 9).

It stipulates steps required or measures to be taken to reinstate the grave and the re internment of the body. It also covers aspects including the requirement for notice to be given for the intention to remove the graves, the contents of such notice, the right for the Minister to authorize the removal of graves, the conditions under which the graves must be removed and the requirements for approval of the location of the place to which the grave will be moved.

After conducting due diligence for this subproject, no graves encountered within the project site.

3.6.3 Mining Act [CAP.123 of 2019 RE: 2010]

The Act sets out government policy on all forms of mining and is supported by various regulations covering claims, prospecting rights, mining rights, and royalties. Mining license applicants are required to submit plans for environmental protection. Each industry is required to establish realistic resource-recovery standards and to adhere to them. Mining plans must be presented before operations begin.

6.-(1) A person shall not on or in any land to which this Act applies, prospect for minerals or carry on mining operations or processing operations except under the authority of a mineral right granted or deemed to have been granted, under this Act.

Proposed subproject is expecting to consume substantial quantities of earth materials governed by the Mining Act, in order to comply. Implementation of the facility shall acquire materials from licensed sources by the Ministry of Minerals.

3.7 International Agreements, Conventions and Treaties

3.7.1 Africa Convention on the Conservation and Natural Resource (1968)

This convention intends to promote conservation efforts by requiring contracting States to adopt the measures necessary to ensure conservation, utilization and development of soil, water, flora and fauna resources in accordance with scientific principles and with due regard to the best interests of the people. The proponent will support Tanzania's commitment by promoting conservation efforts in all of its operations.

3.7.2 The Minimum Age Convention, No. 138 of 1973

The present report form is for the use of countries which have ratified the Convention. It has been approved by the Governing Body of the International Labour Office, in accordance with article 22 of the ILO Constitution, which reads as follows: "Each of the Members agrees to make an annual report to the International Labour Office on the measures which it has taken to give effect to the provisions of the Conventions to which it is a party. These reports shall be made in such form and shall contain such particulars as the Governing Body may request." The Government may deem it useful to consult the appended text of the Minimum Age Recommendation, 1973 (No. 146), the provisions of which supplement the present Convention and can contribute to a better understanding of its requirements and facilitate its application

Article 1

Each Member for which this Convention is in force undertakes to pursue a national policy designed to ensure the effective abolition of child labour and to raise progressively the minimum age for admission to employment or work to a level consistent with the fullest physical and mental development of young persons

Article 2

1. Each Member which ratifies this Convention shall specify, in a declaration appended to its ratification, a minimum age for admission to employment or work within its territory and on means of transport registered in its territory; subject to Articles 4 to 8 of this Convention, no one under that age shall be admitted to employment or work in any occupation.

2. Each Member which has ratified this Convention may subsequently notify the Director General of the International Labour Office, by further declarations, that it specifies a minimum age higher than that previously specified
3. The minimum age specified in pursuance of paragraph 1 of this Article shall not be less than the age of completion of compulsory schooling and, in any case, shall not be less than 15 years
4. Notwithstanding the provisions of paragraph 3 of this Article, member whose economy and educational facilities are insufficiently developed may, after consultation with the organisations of employers and workers concerned, where such exist, initially specify a minimum age of 14 years.
5. Each Member which has specified a minimum age of 14 years in pursuance of the provisions of the preceding paragraph shall include in its reports on the application of this Convention submitted under article 22 of the Constitution of the International Labour Organisation a statement: (a) that its reason for doing so subsists; or (b) that it renounces its right to avail itself of the provisions in question as from a stated date.

Article 3

1. The minimum age for admission to any type of employment or work which by its nature or the circumstances in which it is carried out is likely to jeopardise the health, safety or morals of young persons shall not be less than 18 years.
2. The types of employment or work to which paragraph 1 of this Article applies shall be determined by national laws or regulations or by the competent authority, after consultation with the organisations of employers and workers concerned, where such exist.
3. Notwithstanding the provisions of paragraph 1 of this Article, national laws or regulations or the competent authority may, after consultation with the organisations of employers and workers concerned, where such exist, authorise employment or work as from the age of 16 years on condition that the health, safety and morals of the young persons concerned are fully protected and that the young persons have received adequate specific instruction or vocational training in the relevant branch of activity.

PO-RALG shall ensure no child under 16years is employed to do any health threatening activities.

3.7.3 The Workmen's Compensation (Accidents) Convention, No.17 of 1925

The present report form is for the use of countries which have ratified the Convention. It has been approved by the Governing Body of the International Labour Office, in accordance with article 22 of the ILO Constitution, which reads as follows "Each of the members agree to make an annual report to the international labour office on the measures which it has taken to give effect to the provisions of convections to which it is a part. These reports shall be made in such form and shall contain such particulars as the Governing Body may request

Article 1

Each member of the International Labour Organization which ratifies this Convection undertakes to ensure that workmen who suffer personal injury due to an industrial accident or their dependants, shall be compensated on terms at least equal to those provided by the convection

Article 2

1. The laws and regulations as to workmen's compensation shall apply to workmen, employees and apprentices employed by any enterprises, undertaking or establishment of whatsoever nature whether public or private
2. It shall nevertheless be open to any Member to make such exceptions in its national legislation as it deems necessary in respect to

a) Persons whose employment is of casual nature and whose are employed otherwise than for the purpose of the employers' trade or business
b) Out workers
c) Member of the employer's family who work exclusively on his behalf and who live in his house

d) Non-manual workers whose remuneration exceeds a limit to be determined by national laws or regulation

Article 5

The compensation payable to the injured workman, or his dependents, where permanent incapacity or death results from the injury, shall be paid in the form of periodical payments, provided that it may be wholly or partially paid in a lump sum, if the competent authority is satisfied that it will be properly utilized

Article 6

In case of incapacity, compensation shall be paid no longer be paid no later than as from the fifth day after the accident, whether it be payable by the employer, the accident insurance institution, or the sickness insurance institution concerned

Article 7

In case where the injury results in incapacity of such a nature that the injured workman must have the constant help of another person, additional compensation shall be provided

PO-RALG and contractor shall ensure all forms of compensations to workers are paid as required by this convention.

3.7.4 The Minimum Wage-Fixing Machinery Convention, No. 26 of 1928

The present report form is for the use of countries which have ratified the Convention. It has been approved by the Governing Body of the International Labour Office, in accordance with article 22 of the ILO Constitution, which reads as follows: "Each of the Members agrees to make an annual report to the International Labour Office on the measures which it has taken to give effect to the provisions of the Conventions to which it is a party. These reports shall be made in such form and shall contain such particulars as the Governing Body may request."

Article 1

1. Each Member of the International Labour Organisation which ratifies this Convention undertakes to create or maintain machinery whereby minimum rates of wages can be fixed for workers employed in certain of the trades or parts of trades (and in particular in home working trades) in which no arrangements exist for the effective regulation of wages by collective agreement or otherwise and wages are exceptionally low.
2. For the purpose of this Convention, the term "trades" includes manufacture and commerce.

Article 2

Each Member which ratifies this Convention shall be free to decide, after consultation with the organisations, if any, of workers and employers in the trade or part of trade concerned, in which trades or parts of trades, and in particular in which home working trades or parts of such trades, the minimum wage-fixing machinery referred to in Article 1 shall be applied.

Article 3

1. Each Member which ratifies this Convention shall be free to decide the nature and form of the minimum wage-fixing machinery, and the methods to be followed in its operation.
2. Provided that:

(a) before the machinery is applied in a trade or part of trade, representatives of the employers and workers concerned, including representatives of their respective organisations, if any, shall be consulted as well as any other persons, being specially qualified for the purpose by their trade or functions, whom the competent authority deems it expedient to consult;

(b) The employers and workers concerned shall be associated in the operation of the machinery, in such manner and to such extent, but in any case in equal numbers and on equal terms, as may be determined by national laws or regulations;

(c) Minimum rates of wages which have been fixed shall be binding on the employers and workers concerned so as not to be subject to abatement by them by individual agreement, nor, except with general or particular authorisation of the competent authority, by collective agreement

Article 5

Each Member which ratifies this Convention shall communicate annually to the International Labour Office a general statement giving a list of the trades or parts of trades in which the minimum wage-fixing machinery has been applied, indicating the methods as well as the results of the application of the machinery and, in summary form, the approximate numbers of workers covered, the minimum rates of wages fixed, and the more important of the other conditions, if any, established relevant to the minimum rates.

Tanzania government through PO-RALG and construction Contractor shall ensure wages to the subproject's workers are not below minimum rates as ratified in this convention.

3.7.5 The Equal Remuneration Convention, 1951 (No. 100)

The General Conference of the International Labour Organisation, Having been convened at Geneva by the Governing Body of the International Labour Office, and having met in its Thirty-fourth Session on 6 June 1951, and Having decided upon the adoption of certain proposals with regard to the principle of equal remuneration for men and women workers for work of equal value, which is the seventh item on the agenda of the session, and Having determined that these proposals shall take the form of an international Convention, adopts this twenty-ninth day of June of the year one thousand nine hundred and fifty-one the following Convention, which may be cited as the Equal Remuneration Convention, 1951:

ARTICLE 1

For the purpose of this Convention-

(a) The term remuneration includes the ordinary, basic or minimum wage or salary and any additional emoluments whatsoever payable directly or indirectly, whether in cash or in kind, by the employer to the worker and arising out of the worker's employment;

(b) The term equal remuneration for men and women workers for work of equal value refers to rates of remuneration established without discrimination based on sex.

ARTICLE 2

1. Each Member shall, by means appropriate to the methods in operation for determining rates of remuneration, promote and, in so far as is consistent with such methods, ensure the application to all workers of the principle of equal remuneration for men and women workers for work of equal value.

2. This principle may be applied by means of-

(a) National laws or regulations;

(b) Legally established or recognised machinery for wage determination;

(c) Collective agreements between employers and workers; or

(d) A combination of these various means

Tanzania government through PO-RALG and construction Contractor shall ensure minimum rates of wages to the subproject's workers for both (Males & Females) are equally paid as ratified in this convention.

3.8 Administrative Framework

The Environmental Management Act Cap 191 of 2004 as amended in 2016 and 2021 gives mandate to NEMC to enforce compliance process. It empowers NEMC to determine whether a proposed project should be subjected to an EIA, approves consultants to undertake the EIA study, invites public comments etc. In carrying EIA review NEMC carries site verification visits, convenes the Technical Advisory Committee (TAC) and advises the responsible Minister to issue Environmental Certificate/approve the EIS. Continuously NEMC is responsible for carrying out monitoring and auditing of environmental performance of the project

Table 3-1Key institutions that have a role to play as far as Installation of the Agro-Processing and Grain Market and its associated project's EIA is concerned

Level	Institution	Role and Responsibility
National level	Vice President's Office (Division of Environment)	• Coordinate various environmental activities in Tanzania • Advise the Government on legislative and other measures for the management of the environment; • Advise the Government on international environmental agreements; • Monitor and assess activities, being carried out by relevant agencies in order to ensure that the environment is not degraded; • Prepare and issue a report on the state of the environment in Tanzania; • Coordinate the implementation of the National Environmental Policy
	National Environment Management Council (NEMC)	• Carry on environmental audit and environmental monitoring; • Carry out surveys which will assist in the proper management and conservation of the environment; • Undertake and co-ordinate research, investigation and surveys in conservation and management; • Review and recommend for approval of environment impact statements; • Enforce and ensure compliance of the national environmental quality standards; • Initiate and evolve procedures and safeguards for the prevention of accidents which may cause environmental • degradation and evolve remedial measures where accidents occur; • Undertake in co-operation with relevant key stakeholders' environmental education and public awareness; • Render advice and technical support, where possible to different stakeholders.
	Ministry of Industry, Trade and Marketing	• Issuing policy guidance; • Providing legal frameworks; • Issuing licenses, provisions of certificates of compliances; • Enforcement of laws and regulations • Setting operation standards for energy generation projects • Project monitoring
	Tanzania Investment Centre (TIC)	• Facilitating investment activities in the country; • Overseeing investment activities
Regional level	Ruvuma Regional Secretariat Office	• Oversee and advice on implementation of national policies at regional level; • Oversee enforcement of laws & regulations; • Advice on implementation of development projects and activities at regional level.
District level	Songea Municipal Council	• Oversee and advice on implementation of national policies at city level; • Oversee enforcement of laws & regulations;

		• Advice on implementation of development projects and activities at city level. • Baseline data on social and economic conditions; • Extension services; • Plan and coordinate activities on community based natural resource and environment management.
Ward Level	Lilambo ward development committee	• Oversee general development plans for the Ward; • Provide information on local situation and Extension services; • Technical support & advice; • Project Monitoring
Project proponent	PO-RALG/SMC	• Carrying out ESIA study; • Project implementation including mitigation measures; • Carrying out regular environmental monitoring and internal auditing

4. ENVIRONMENTAL AND SOCIAL BASELINE

4.1 Overview

Baseline information provides the basis for predicting and monitoring environmental and social effects and assists to identify environmental and social problems and alternative ways of avoiding/minimize them. The identification of environmental and social conditions/issues of particular significance in the planning area provides an opportunity to define key issues for the project and to improve and refine objectives and options. The analysis of environmental and social issues influences the baseline and the ESIA framework, in particular in identifying and selecting indicators and targets.

This section describes the current existing situation and highlights the key issues encounter within the planned area. It does not attempt to cover all the issues but identifies those that are considered a priority in terms of the environmental, social sustainability of the proposed sub-project and climatic change resilience. All the baseline condition data like climatic data are sourced from the regulatory Authority i.e., Tanzania Meteorological Authority as per TMA Act (2019) section 48; (*See appendices 10*)

4.2 Area of Influence

The section presents an overview of the biophysical and socioeconomic characteristics relating to the area in which the development will take place (i.e., within the Project 'footprint') as well as the surrounding areas which may be directly or indirectly affected by the proposed subproject.

This Area of Influence includes the subproject's site (the land to be used for the proposed Agro-Processing Industry and Grain Market, the area surrounding the site of proposed subproject to be potentially affected and nearby communities. The areas of influence for this subproject are defined as:

- The area likely to be affected include
    - (i) the subproject's activities and facilities that are directly owned, operated or managed (including by contractors) and that are components of the subproject;
    - (ii) Indirect subproject impacts on biodiversity or on ecosystem services upon which Affected Communities' livelihoods are dependent.
- Associated facilities, these are facilities that are not part of subproject and that would not have been constructed or expanded if the subproject did not exist and without which the subproject would not be viable
- Cumulative impacts that result from the incremental impact, on areas or resources used or directly impacted by subproject, from other existing, planned or reasonably defined developments at the time the risks and impacts identification process is conducted

4.2.1 Direct Area of Influence

In the context of this report, the Direct Area of Influence includes the proposed Agro-Processing Industry and Grain Market footprint as well as the receiving environment surrounding the proposed subproject likely to be affected by the planned activities during construction, operation, and decommissioning phases within a radius of 100m.

4.2.2 Indirect Area of Influence

The Indirect Area of Influence includes areas within a wider radius of 50km from the subproject site (grain farming areas), which may be affected by the proposed facility.

4.3 Biophysical Environment

4.3.1 Climatic Condition and projection

Temperature

Songea Municipality has a reliable average annual rainfall of about 1200 mm. Rainfall is concentrated during the period of November to April. The dry season occurs between May and October. The average day time temperature is 20°C to 25°C and the night time temperature 11°C to 17°C.

The climate of project areas is identical to the overall climate of the Songea municipality. The average air temperature ranges from 16°C (lowest) in June/July to 36°C (highest) in November. The following bar chart shows the years average weather condition readings covering rain, average maximum daily temperature and average minimum temperature for Songea.

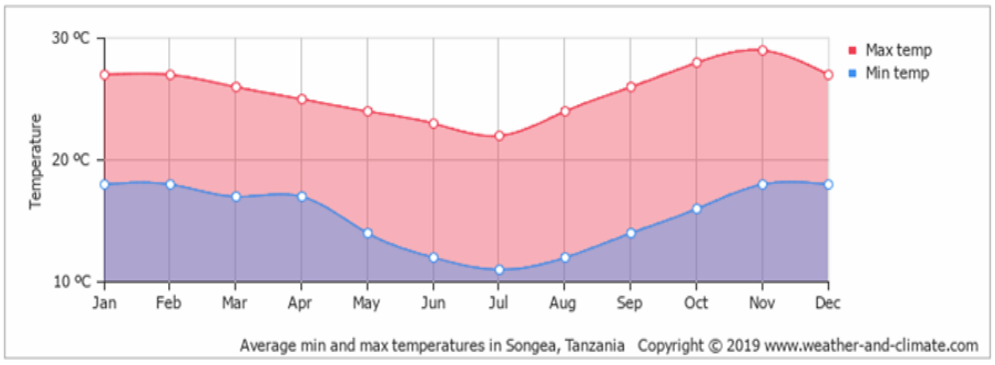


Figure 4-1: Average Monthly Temperature in Songea.

RPC4.5 has been used to project temperature changes during the project's operation period, annual temperatures between 1979-2005 have been considered as reference for projection period of 2020-2040.

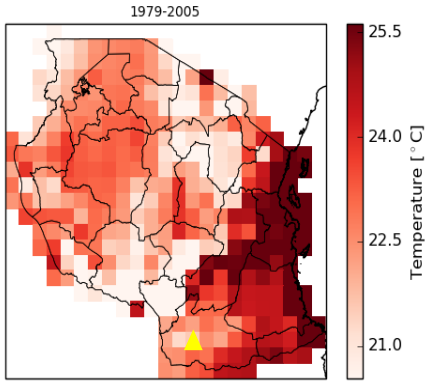


Figure 4-2: Temperature average over the reference period 1979-2005. This map is based on the EWEMBI dataset.
Source: http://regioclim.climateanalytics.org/choices

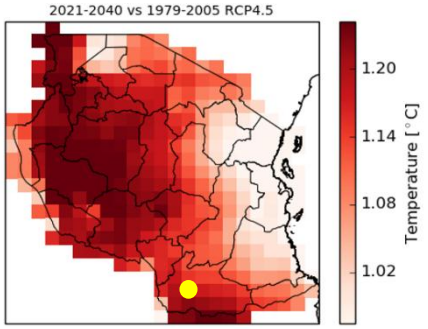


Figure 4-3: Projected change in temperature for 2021-2040 compared to the reference period 1979-2005. Here the ensemble mean of regional climate model projections is displayed. Grid-cells for which a model-disagreement is found are coloured in grey. The projections are based on the emission scenario RCP4.5.

Source: http://regioclim.climateanalytics.org/choices

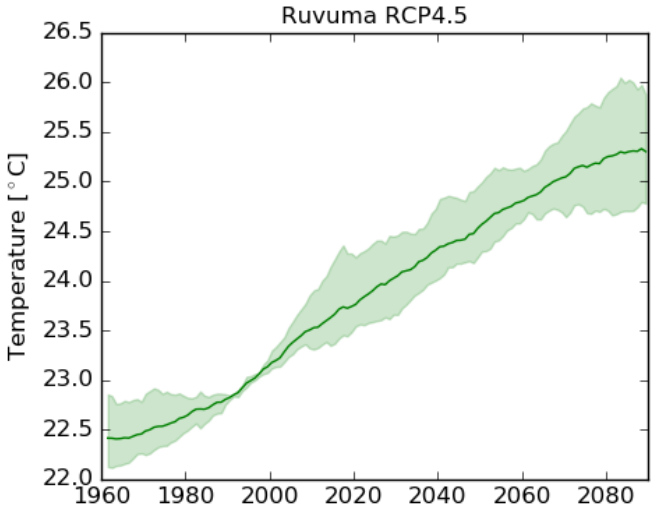


Figure 4-4: Regional climate model projections for temperature displayed as 20 year running mean. The line represents the ensemble mean while the shaded area represents the model spread. The projections are based on the emission scenario RCP4.5.
Source: http://regioclim.climateanalytics.org/choices

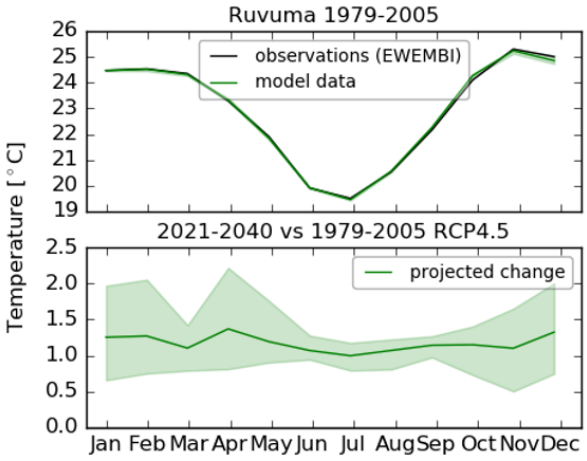


Figure 4-5: Top: Annual cycle of temperature for the period 1979-2005. Bottom: Changes in annual cycle projected for 2021-2040 compared to the reference period 1979-2005. EWEMBI data is shown in black, regional climate model simulations in green. The green line represents the ensemble mean while the shaded area represents the model spread. The projections are based on the emission scenario RCP4.5.
Source: http://regioclim.climateanalytics.org/choices

Temperature is predicted to increase throughout from year 2021 to 2040, figure 6-8 indicates the highest increase of 1.3˚C in April and the lowest of 1.0˚C in July. Notable period of steady temperature increase is between March and April.

Hot Extreme

Hot extreme conditions have been projected for Songea by using RCP4.5 as indicate in figures below.

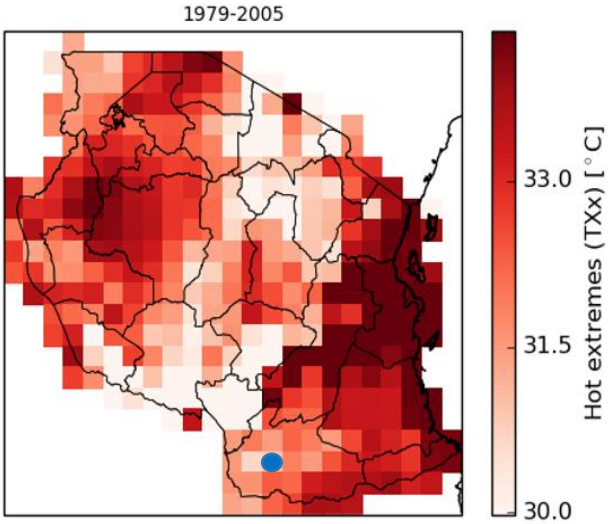


Figure 4-6: Hot extremes (TXx) average over the reference period 1979-2005. This map is based on the EWEMBI dataset.
Source: http://regioclim.climateanalytics.org/choices

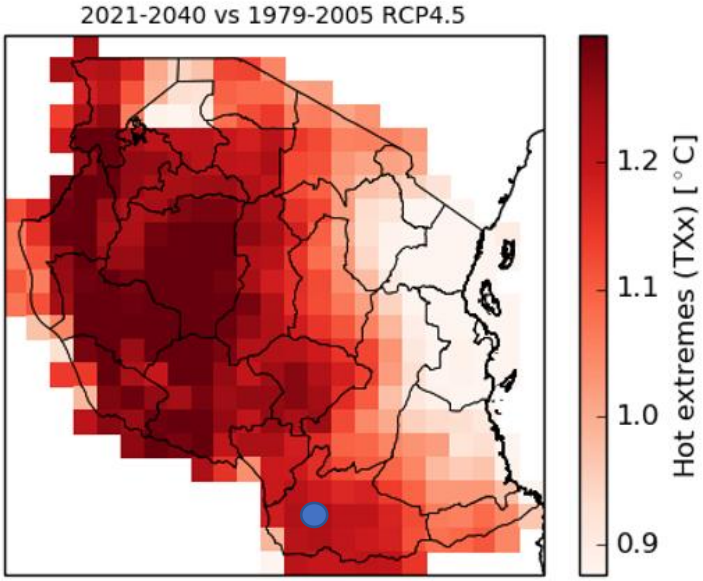


Figure 4-7: Projected change in hot extremes (TXx) for 2021-2040 compared to the reference period 1979-2005. Here the ensemble mean of regional climate model projections is displayed. Grid-cells for which a model-disagreement is found are colored in grey. The projections are based on the emission scenario RCP4.5.
Source: http://regioclim.climateanalytics.org/choices

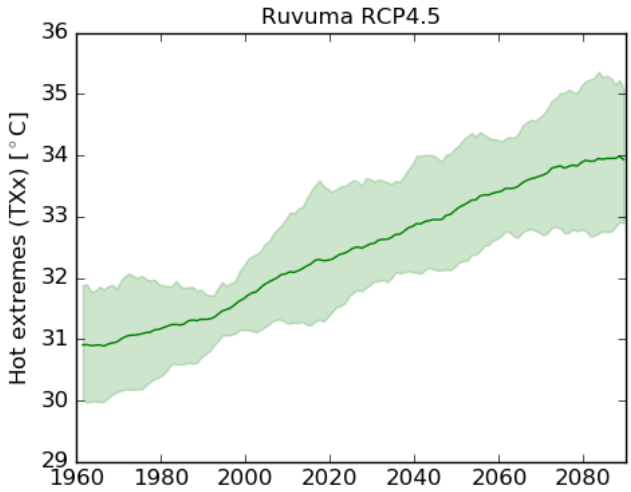


Figure 4-8: Regional climate model projections for hot extremes (TXx) displayed as 20 year running mean. The line represents the ensemble mean while the shaded area represents the model spread. The projections are based on the emission scenario RCP4.5.
Source: http://regioclim.climateanalytics.org/choices

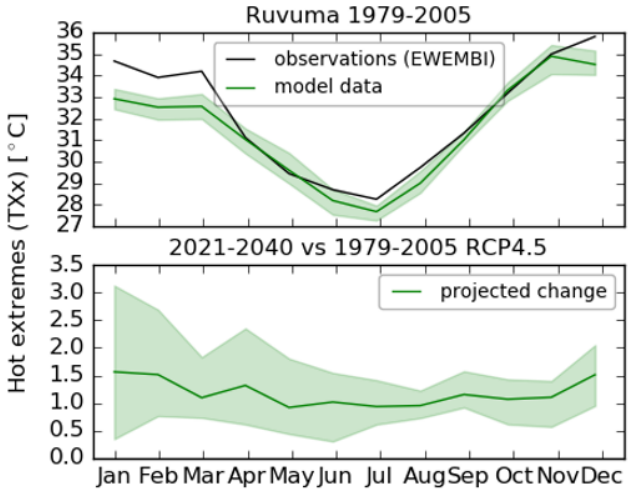


Figure 4-9: Top: Annual cycle of hot extremes (TXx) for the period 1979-2005. Bottom: Changes in annual cycle projected for 2021-2040 compared to the reference period 1979-2005. EWEMBI data is shown in black, regional climate model simulations in green. The green line represents the ensemble mean while the shaded area represents the model spread. The projections are based on the emission scenario RCP4.5.
Source: http://regioclim.climateanalytics.org/choices

Songea Municipality will continue to experience hot weather extremes, currently is experiencing an average of 31.5˚C with projected yearly slight fluctuations, in 2040 hot extreme expected to attain 32.5˚C. Highest hot extreme weather is and shall be experienced in December and January.
Since extreme temperatures are expected in the future, Subproject's structures/buildings will be subjected to temperature loads as a result of their interaction with the surrounding environment and due to their exposure to solar radiation. Such temperature loadings shall lead to thermal stresses which can damage the structures/buildings. Extreme temperatures are also expected to affect performance of machines and other cooling equipment.

Rainfall and temperature

Songea Municipality has a reliable average annual rainfall of about 1200 mm (See Figure 4-2). Rainfall is concentrated during the period of November to May. The dry season occurs between June and October. The average day time temperature is 20 to 25°C and the night time temperature 11 to 17°C.

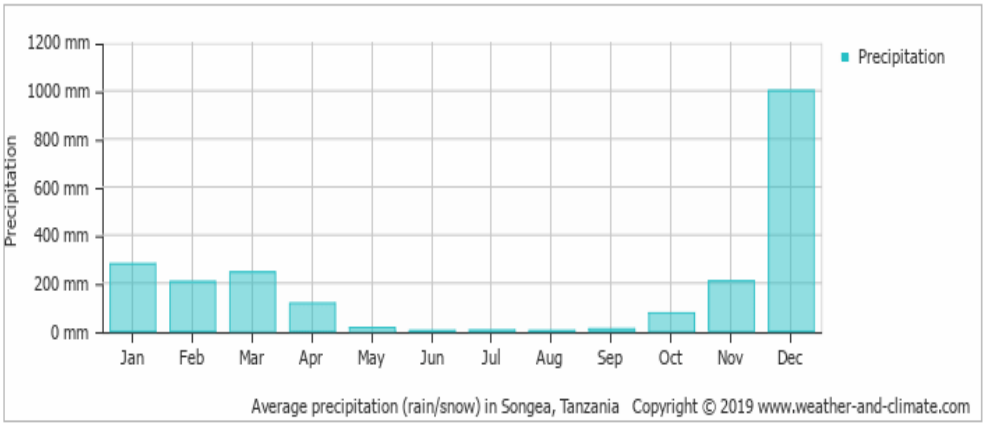


Figure 4-10: Average Monthly Rainfall in Songea (Source: https://weather-and-climate.com/)

Rainfall projection was made with reference period 1979-2005 and projection from 2020-2040.

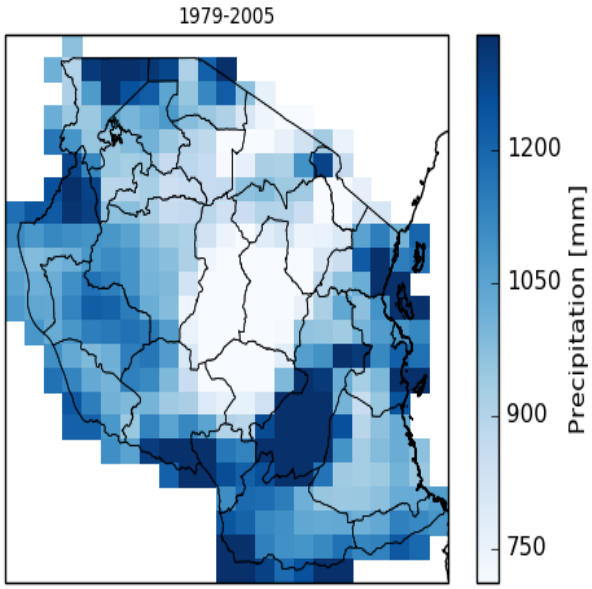


Figure 4-11: Precipitation sum over the reference period 1979-2005. This map is based on the EWEMBI dataset.
Source: http://regioclim.climateanalytics.org/choices

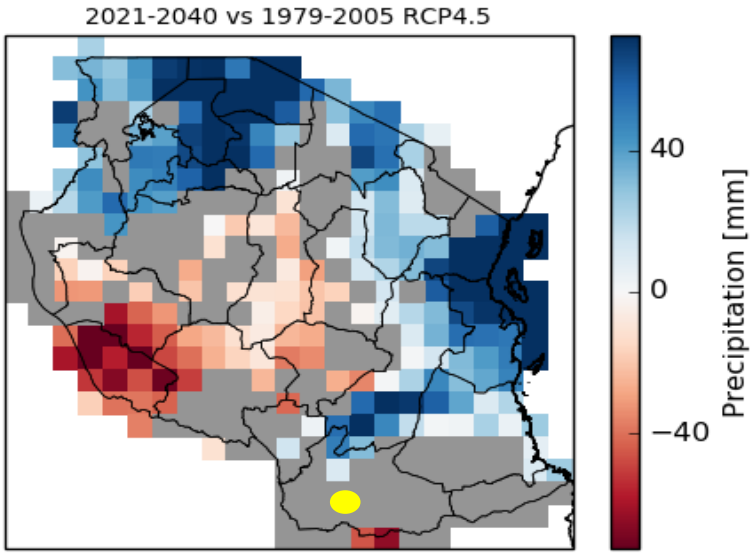


Figure 4-12: Projected change in precipitation for 2021-2040 compared to the reference period 1979-2005. Here the ensemble mean of regional climate model projections is displayed. Grid-cells for which a model-disagreement is found are coloured in grey. The projections are based on the emission scenario RCP4.5.
Source: http://regioclim.climateanalytics.org/choices

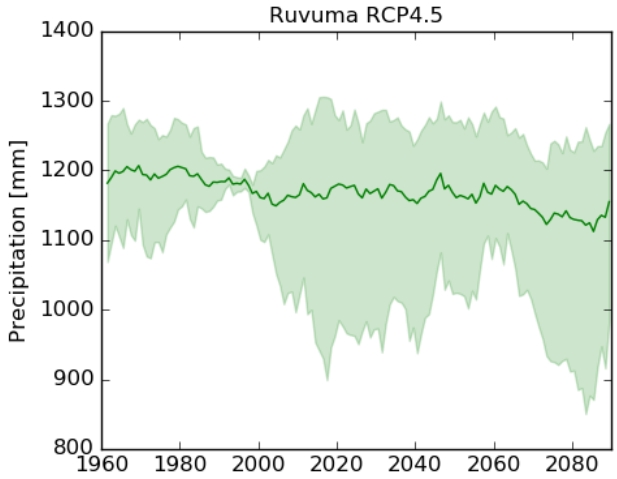


Figure 4-13: Regional climate model projections for precipitation displayed as 20 year running mean. The line represents the ensemble mean while the shaded area represents the model spread. The projections are based on the emission scenario RCP4.5.
Source: http://regioclim.climateanalytics.org/choices

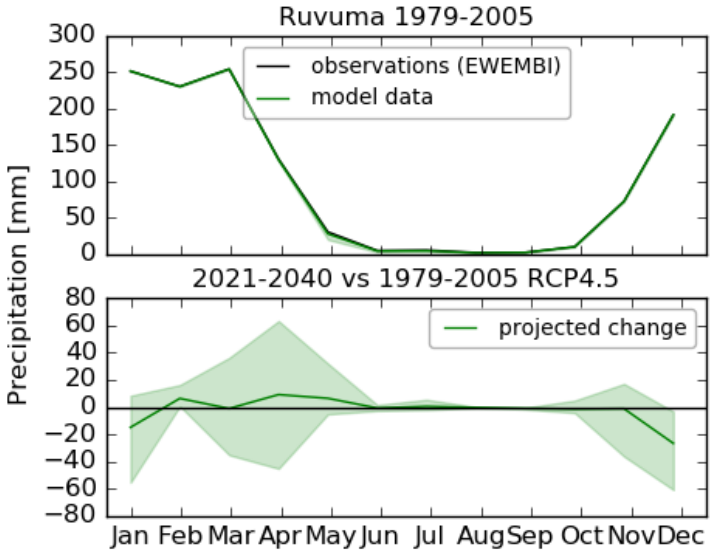


Figure 4-14: Top: Annual cycle of precipitation for the period 1979-2005. Bottom: Changes in annual cycle projected for 2021-2040 compared to the reference period 1979-2005. EWEMBI data is shown in black, regional climate model simulations in green. The green line represents the ensemble mean while the shaded area represents the model spread. The projections are based on the emission scenario RCP4.5.
Source: http://regioclim.climateanalytics.org/choices

From the analysis, the Municipality will experience a rainfall range of 1150mm and 1180mm up to 2040 In comparison with the reference period of 1979-2005, the months of February, April and May will be experiencing an average rainfall increase of 5mm.

Wet Extreme

This indicates much rain falling too fast that can trigger floods in the project area.

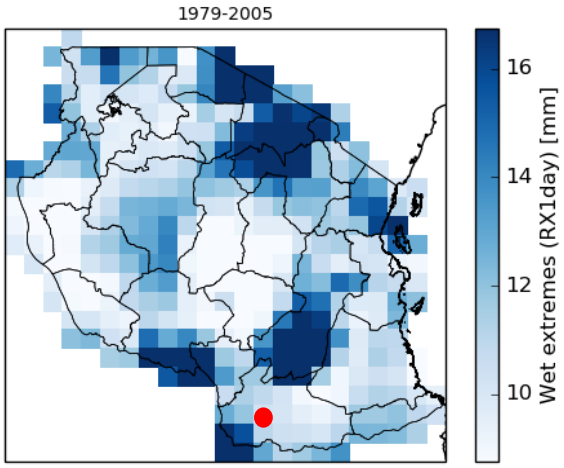


Figure 4-15: Wet extremes (RX1day) average over the reference period 1979-2005. This map is based on the EWEMBI dataset.
Source: http://regioclim.climateanalytics.org/choices

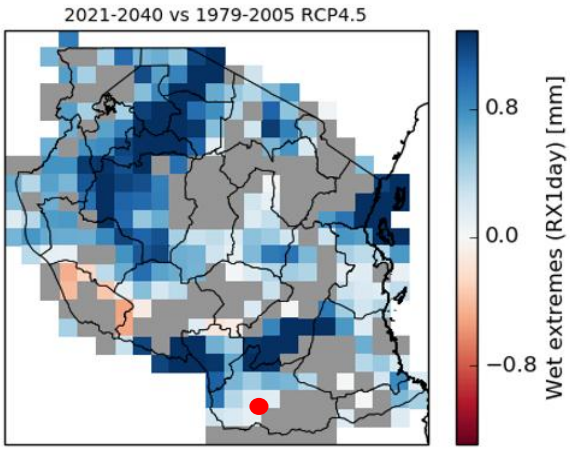


Figure 4-16: Projected change in wet extremes (RX1day) for 2021-2040 compared to the reference period 1979-2005. Here the ensemble mean of regional climate model projections is displayed. Grid-cells for which a model-disagreement is found are coloured in grey. The projections are based on the emission scenario RCP4.5.
Source: http://regioclim.climateanalytics.org/choices

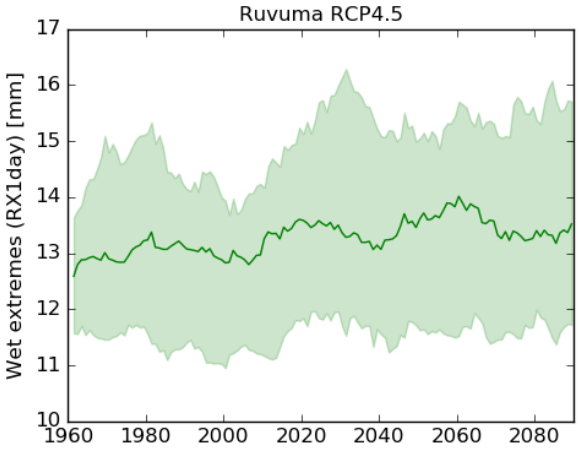


Figure 4-17: Regional climate model projections for wet extremes (RX1day) displayed as 20 year running mean. The line represents the ensemble mean while the shaded area represents the model spread. The projections are based on the emission scenario RCP4.5.
Source: http://regioclim.climateanalytics.org/choices

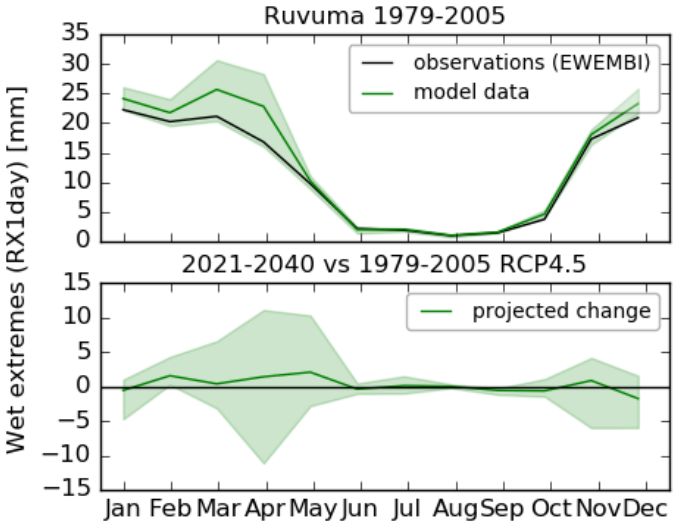


Figure 4-18:Top: Annual cycle of wet extremes (RX1day) for the period 1979-2005. Bottom: Changes in annual cycle projected for 2021-2040 compared to the reference period 1979-2005. EWEMBI data is shown in black, regional climate model simulations in green. The green line represents the ensemble mean while the shaded area represents the model spread. The projections are based on the emission scenario RCP4.5.
Source: http://regioclim.climateanalytics.org/choices

Analysis from the model indicates wet extremes from 2025 to 2030. Extreme precipitation will start decreasing from 2031 towards 2040. Months of February, April and May are expected to be with highest precipitation.

Extreme rainfall shall cause pooling of subproject area and hence general structural failure of buildings and components leading to potential for total collapse and destruction.

Seismicity

Songea Municipality and Ruvuma region as a whole experience weak and non-frequent earthquakes of Richter Scale between 3-5.

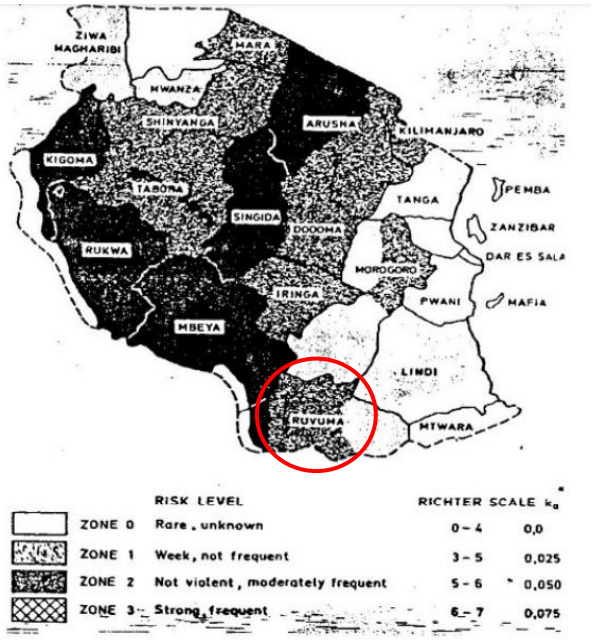


Figure 4-19: Seismic Risk Map of Tanzania. Red Circled Area Is Ruvuma Region
Source: I.A Rutabaruka

Since the project area has weak and non-frequent earthquakes, no impacts are expected during operation of the proposed Agro-Processing and Grain Market.

Wind speed and direction

The average hourly wind speed in Songea experiences significant seasonal variation over the course of the year.

The windier part of the year lasts for 4.6 months, from July 23 to December 9, with average wind speeds of more than 7.7 miles per hour. The windiest month of the year in Songea is October, with an average hourly wind speed of 10.4 miles per hour.

The calmer time of year lasts for 7.4 months, from December 9 to July 23. The calmest month of the year in Songea is February, with an average hourly wind speed of 5.0 miles per hour. Being located in a densely populated area, the proposed subproject is likely not to be affected by wind pressure.

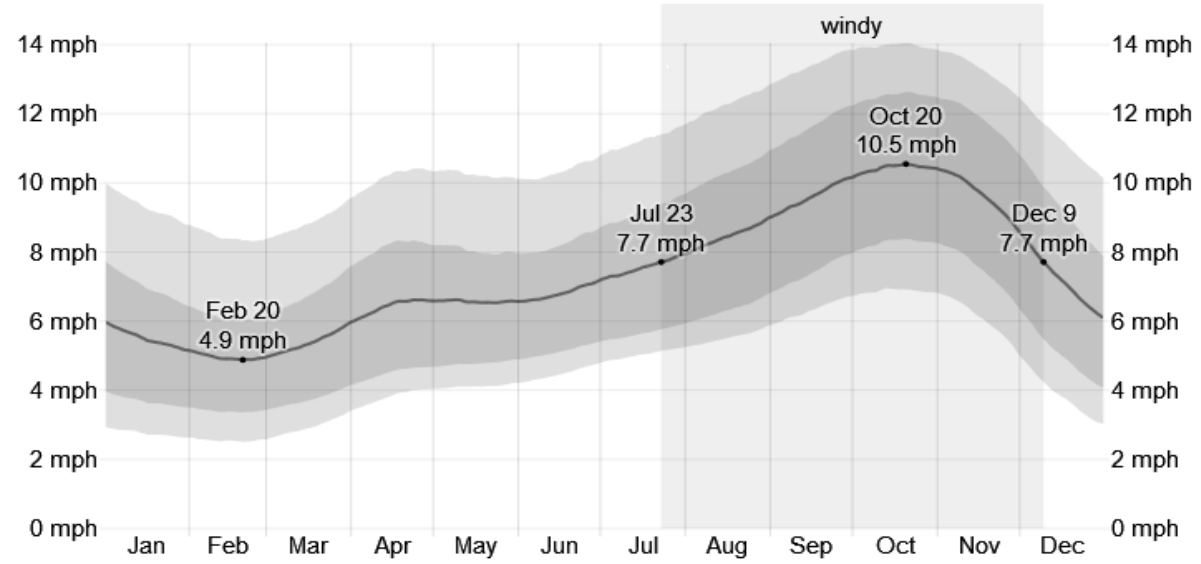


Figure 4-4-20: Average Wind Speed in Songea

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4.3.2 Topography and soil

The project site is within the area characterized by red brown loam soil. Loam is the best soil type for construction due to its ideal combination of silt, sand, and clay. It combines the best of all their qualities into the ideal balance for supporting a foundation. Loam generally does not shift, expand, or shrink drastically and handles the presence of water very well. The one potential drawback that the design team should consider is that, building on loam is the possibility of undecomposed material, which can and should be filtered prior to construction. The general area is characterized by undulating terrain and the specific site has a largely flat topography with gentle slope toward western direction.

Topography of the project site is likely to have effect on storm water runoff collection and disposal and soils type can have impacts on structural stability of the proposed facility.

4.3.3 Flora and Fauna

The project site is covered by vegetation for about 50%, vegetation consists of scattered short grasses, and natural trees found within and nearby the proposed project site.

There are no wild animals found within the subproject area. Birds and insects were reported in the vicinity of the proposed site.

4.3.4 Air Quality & Dust

The proposed project is located at Lilambo area in Songea municipality. The air quality in the projects area depends on the pollutant substances emissions originating from energy consumption mainly households, as well as from traffic. Currently there are no established air quality data in Mbeya region and therefore national and international standards will be used for comparison.

The ambient air quality at all sampling locations were measured in December 2021 using ECO-12 Environmental Air Quality taster with model number L21I-D00277 and Multi-gas monitor TA8421. The devices were placed at a height level of about 1.2 meter from the ground for air quality parameters measurements.

Dust levels in terms of PM10 and PM2.5 were measured by using ECO-12 Environmental Quality taster with model number L211-D00277. The device was placed at breath height of about 1.2 meter from the ground to monitor dust concentrations at each identified point. This position is assumed a relatively breathing zone of people at their respective locality or working

environment. The recorded average values shown in table below compared with prescribed available limit to check their compliance with local and international standards.

During construction, operation and decommission of proposed Agro-Processing Industry and Grain market there will be the effect on air quality and generation of dust resulting from excavation of trench, clearance, concrete preparation and the machine and equipment used during all phase, so the baseline taken will help on monitory to insure the environmental and health of people are protecting

4.3.5 Noise and Vibration

Noise level was measured using IEC 61672-1 Class 2 Data logger. On noise level Meter range: 30 dB – 130 dB (A). On taking measurements, the device-meter scale was set to the 'A' weighed measurement scale, which enables the device to respond in the same manner as human ear. During measurement, the device was fixed/and or held approximately 1.2 meter above the ground and at least 3 m away from hard reflecting surface or objects. The source of noise at the project area was observed to be vehicles and other human activities.

Vibration level was recorded by using digital vibration meter with model number TA8663. On taking measurements the device was set to velocity mode and the probe placed on the ground.

During construction, operation and decommission of proposed Agro-Processing Industry and Grain market there will be the increase of noise level which caused by equipment used in construction, machine used during operation (processing of agro product) such as generator time of power outage, so the base line data measured will help to know the existing conditional of noise and on monitory which will be the best mitigation measure.

On vibration also the baseline data is required because to know the effect which will be resulting during construction by looking the effect of vibration to the near property.

Three readings were recorded at each point and during a day time at the time of scoping exercise, the average value used to represent the value at that particular point.

Table 4-1: Measurement results

COORDINATES (UTM)	STATION NAME	PARAMETERS	AVERAGE CONCENTRATION	STATUS	TBS/WHO STANDARDS
36L 775229E 8819698N	AGRO PROCESSING IND ZONE	Oxygen O_2 (% volume)	20.9		
		Carbon monoxide CO (ppm)	0.0		4
		Hydrogen Sulphide H_2S (ppm)	0.0		
		Combustible Gases LEL (% volume)	17		
		Carbon dioxide CO_2 (ppm)	377		500
		Particulate Matter $PM_{2.5}$ ($\mu g/m^3$)	8		15
		Particulate Matter PM_{10} ($\mu g/m^3$)	8		45
		Noise (dB)	76.8		
		Vibration (mm/s)	3.4		
36L 775231E 8819693N	AGRO PROCESSING IND ZONE ROAD	Oxygen O_2 (% volume)	20.9		
		Carbon monoxide CO (ppm)	0.0		4
		Hydrogen Sulphide H_2S (ppm)	0.0		
		Combustible Gases LEL (% volume)	17		
		Carbon dioxide CO_2 (ppm)	367		500
		Particulate Matter $PM_{2.5}$ ($\mu g/m^3$)	8		15
		Particulate Matter PM_{10} ($\mu g/m^3$)	10		45
		Noise (dB)	72		
		Vibration (mm/s)	2.1		

Source: Consultant Fieldwork, December 2021

4.4 Social Economic Environment

This part discusses the social and economic services in the Songea municipal by covering economic sector, health sector, education sector, water and sanitation. In the health sector, the discussion covers the improvement of health facilities and quality of staff, curative measures in terms of morbidity and mortality status and immunization as a preventive measure for mother and child health. It also covers the prevalence of HIV/AIDS and related diseases as well as its impact to the community.

4.4.1 Land Use

In Songea Municipal, land is used for various activities including farming, settlements, and water bodies. Some lands have single use; for instance, single crops production or forests, while others have multiple uses like mixed farming, livestock rearing and grazing, catchment area and settlements with numerous functions.

The proposed project will be established on a plot of land with a total area of 10 hectares. The land is legally owned by Songea Municipal council. The plot has been surveyed and acquisition of the title deed is attached on *appendix XXXX*.

The proposed project shall be implemented on the lands designated for industrial activities and thus to have no impact on existing land use plan of the area

4.4.2 Population

Like other councils in Ruvuma region, the population of Songea Municipal Council has experienced a significant increase in growth. The council's growth of the population during the 1988 to 2002 census periods was three percent, but increased to 4.4 percent between 2002 and 2012. According to the 2002 and 2012 Population and Housing Censuses the population of the council increased from 148,955 in 2002 before reaching 203,309 in 2012. The proposed project ward (Misufini) has a total population of 10,474 according to the 2012 census. *See Table 4-2.*

Construction of Agro-Processing Industry and Grain Market will result to increase of population in Ward, Municipal as people move from different place to the area for doing various activities. So Agro-Processing Industry and Grain Market will be one among the population attractive things in the ward, districts/Municipal and Region

Table 4-2: Population Distribution by Ward, Songea Municipal Council, 2002 and the 2012 Censuses

Ward	2002 Census		2012 Census	
	Total	Percent of Total	Total	Percent of Total
Mjini	9,224	6.2	9,443	4.6
Majengo	6,654	4.5	7,400	3.6
Misufini	4,275	2.9	4,599	2.3
Mfaranjaki	8,465	5.7	9,115	4.5
Lizaboni	4,304	2.9	14,815	7.3
Matarawe	5,379	3.6	6,949	3.4
Bombambili	19,997	13.4	28,058	13.8
Matogoro	9,537	6.4	5,127	2.5
Ruvuma	9,614	6.5	13,543	6.7
Subira	6,589	4.4	7,662	3.8
Ruhuwiko	3,911	2.6	7,377	3.6
Mshangano	4,254	2.9	8,205	4.0
Mletele	5,104	3.4	5,331	2.6
SeedFarm	4,572	3.1	6,228	3.1
Tanga	7,621	5.1	8,754	4.3
Msamala	7,336	4.9	18,920	9.3
Lilambo	10,474	7.0	11,981	5.9
Mwengemshindo	2,273	1.5	2,601	1.3
Mjimwema	13,093	8.8	12,055	5.9
Mateka	4,829	3.2	13,537	6.7
Ndilimalitembo	1,450	1.0	1,609	0.8
Total	**148,955**	**100.0**	**203,309**	**100.0**

Source: National Bureau of Statistics, Computed Data from 2002 and 2012 Population Censuses Report.

Ethnic Group

Generally, the main ethnic groups in Ruvuma region are Wamatengo, Wangoni, Wayao, Wanyasa, Wandendeule, Wamakua, Wapoto, Wamanda, Wanindi, Wamatambwe and Wabena. While Wamatengo are the main ethnic group in Mbinga district, Wanyasa, Wamanda and Wapoto reside largely along the shores of Lake Nyasa. Wangoni constitutes the major ethnic group in Songea Municipality followed by Wandendeule, Wamanda, Wayao, Wamatengo and Wanyasa.

The proposed Agro-Processing Industry and Grain Market will lead to interaction of people from different area with different ethnic group, so will influence the change of behavior of the origin ethnic group by adapting coming behaviors.

4.4.3 Economic Activities

The majority of inhabitants of Songea municipal are predominantly agriculturalists with agriculture being the main pillar of the municipal economy and livestock keeping as their main economic venture. Other economic activities include; small scale businesses, cross-border businesses and livestock keeping. Small scale businesses include, among others, shops and food stalls. There are also tourism activities, which contribute to the economic growth of the local people.

Proposed construction and operation of Agro-Processing Industry and Grain Market will increase the revenue to government from traders who will process their products at the facility. Also, the market will open up the agricultural product marketing and trading chain at the Municipal, Region and national as whole.

4.4.4 Agriculture

Agriculture is a major economic sector of Songea Municipality, contributing about 87 percent of the Municipal Gross Domestic Product (GDP). About 90 percent of the land in the Municipality is arable in which different food and cash crops can be cultivated. Farming is concentrated in the peri urban wards of Subira, Mletele, Mshangano, Matogoro, Ruhuwiko, Tanga and Lilambo. The main food crops are maize, cassava, paddy, sweet potatoes, legumes, millets and sorghum, while coffee tobacco, cashew-nuts are the major cash crops. Other crops are sunflower, soya beans,

semis, finger millet, and groundnuts. Some of these crops are sold in the markets in Songea, while others are sold in the urban centers of the neighboring regions as well as other regions in the country including Dar es Salaam.

The proposed construction of Agro-Processing Industry and Grain Market will help much the people of Songea and neighbor since they will store, processing and obtain the market of their agriculture products. Also through the Agro-Processing Industry and Grain Market the agriculture sector will rise

4.4.5 Employment

Songea Municipal economy is based on agriculture, livestock keeping trading and small scale industries, with the agriculture sector employing the majority (75 percent) of the urban population. Trading activities, which include small scale industries and petty business, rank the second sector in terms of employment of the Municipal population. However, based on the household socio-economic survey conducted in 2014, about 20 percent of the urban population is unemployed. Data obtained from the Songea Municipal Council indicates that total work force stands at 172, 572 out of the total population of 218, 942 and the dependency ratio is 0.2. The household socio-economic survey conducted further indicates that only 16.6 percent of the households are employed in the formal sectors while majority, 83.4 percent are employed in the informal sectors. This means that large proportion of people in the Municipality is employed in the informal sector.

Most of the youth population are employed in informal petty trading and are largely dominating the trading activities in the urban core. Most of these activities are taking place along the main roads, within the market places, on road reserves and open spaces. Petty trading activities are not regulated; hence, they are haphazardly located in public spaces and adjacent to whole and retail shops in the CBD.

The proposed construction of Agro-Processing Industry and Grain Market will increase the rate of informal petty trading by providing better space for marketing of agricultural products. Hence, increases the number of employment to the surrounding community within the area of the established markets project.

4.4.6 Child Labour

Despite laid down regulations and policies against child, the problem of child labour is in the increase in Tanzania. From activities carried out by the government, with support from ILO's International Program on the elimination of child labour (IPEC) which has been operating in Tanzania since 1995, there are ample evidences indicated that child labour and in particular of hazardous and exploitative nature was becoming rampant. It is estimated that out of 11,965,146 children of the age between 5 – 17 years in Tanzania, 4,735,528 (39.6%) were reported to have worked in economic activities while 5,721,496 (47.8%) were engaged d in domestic activities. The participation rate in economic activities is highest in rural areas (45.7%) compared to Dar es Salaam and other urban areas (20.0%). Integrated Labour Force and Child Labour Survey).

The proposed construction of Agro-Processing Industry and Grain Market will contribute to the increase of child labour rate during construction phase when the contractor fails to comply with recruitment rules and regulations, also during operation of the proposed subproject, child labour may occur when the children will be used as a cheap labour for loading and offloading of grains. However, the proposed construction of Agro-Processing Industry and Grain Market may reduce child labour rate when parents' income grows and they can afford to care for their children.

4.4.7 Gender Based Violence (GBV)

Gender-based violence (GBV) has gained international recognition as a grave social and human rights concern. In Tanzania, GBV and violence against children (VAC) have become major problems due to negative cultural beliefs and practices, existing gender norms, and economic, social, and gender inequalities. Victims of GBV and VAC can be any age and sex, including women, men, girls, and boys. GBV and VAC are related to socially defined norms of gender and

sexual identity and can be carried out by intimate partners, family members, community members, people of authority, and others. These acts can take place at home, in public, or in institutions. GBV incidents with data on child abuse indicate that 155 cases have been reported for the year 2021. The establishment of agro-processing industry and grain market at Lilambo industrial area will make sure no GBV cases may rise during all project phases of its implementations.

4.4.8 Water Supply

There is no doubt about the importance of water to human existence. People need clean and safe water to survive and stay healthy. Lack of clean and safe water contributes to water borne diseases and therefore high mortality rates in children around the world. Water is also critical to a country's development as it is needed not only for agricultural productivity but also for industrial production.

Most of the households in the vicinity of the project area depend more on water from SOUWASA as a main source of water.

At proposed Agro-Processing Industry and Grain Market will depend on SOUWASA water on construction phase as well as operation phase

4.4.9 Health Facilities

Health facilities in Songea Municipality include dispensaries, health centres, and hospitals, which are owned and operated by either the government or the private sector.

Dispensaries

There are 23 dispensaries in Songea Municipality of which 16 are owned by the government and 7 are privately owned. Most of the wards have a dispensary except Ruvuma, Lizaboni and Mateka Wards.

Health Centres

There are 3 health centres in Songea Municipality in which two of them are owned by the government and one is privately owned. The health centres are located at Majengo, Mjimwema and Mshangano Wards.

District Hospital

Songea Municipality has no the hospital which have the district hospital level.

5. STAKEHOLDERS' ENGAGEMENT

5.1 Overview

Stakeholder consultation is necessary to be conducted during ESIA study because the impacts of the proposed developments may influence the surrounding in one way or another. It is therefore, compulsory to seek the opinions of the relevant stakeholders in relation to the development of the proposed sub-project. World Bank ESS10 and Section 89 of the Environmental Management Act (EMA, 2004) provides directives on public participation and its importance in the ESIA. Regulation 17 of the EIA Regulations (URT, 2005) provides further details and procedures for public participation in the ESIA process.

Stakeholder engagement enhances the effectiveness, efficiency, and accountability of the ESIA process and the project as required by Stakeholders Engagement Plan (SEP). When undertaken in a transparent, balanced manner, it can reduce conflicts and strengthen the sense of ownership of a project and the project's sustainability.

5.2 Objectives of Public Consultations and Engagement

Objectives of public consultations and engagement for the proposed subproject under TACTIC are:

- Provide clear and accurate information about the subproject to the communities
- Disseminate information to affected stakeholders to raise their awareness of the proposed subproject.
- Increase stakeholder understanding about the proposed subproject, including its context, aims, opportunities and constraints.
- Accumulate feedback from affected stakeholders to inform project development and ensure that outcomes appropriately meet the relevant needs of those concerned. Consultation will seek to:
- document stakeholders' concerns and preferences;
- identify any issues and constraints existing in the subproject's areas which may affect the design ;
- Assess and document the commonality and relevance of issues and concerns identified through the consultation to feed the ESIA process.
- Provide updates about consultation outcomes to the stakeholders involved, to keep them informed.
- Influence the perception and attitude among stakeholders consulted to enable and obtain acceptable levels of feedback from stakeholders.
- Inform communities along the way leave about the subproject's schedule

Gathering from population and their representatives about main environmental and social concerns and perceptions regarding the establishment of agro-processing industry and grain market at Lilambo industrial area

- Gather opinions and suggestions directly from the communities on their preferred mitigation measures and

Gather opinions and concerns of the various minority groups of women, children, disabled and youth on the proposed roads' upgrading establishment of agro-processing industry and grain market at Lilambo industrial area

5.3 Subproject's Levels of Public Engagement and Consultations

The public engagement and consultations shall be conducted in phases which are; 1st Round Consultation and 2nd Round Communities' Consultation.

1st Round Stakeholders engagement involved: **(a) To Inform:** Provide stakeholders with balanced and objective information to help them understand the project, the problem, and the solution alternatives (**b) To Consult:** Gather feedback on the information given. This was followed by: 2nd Round communities' engagement which: **(a) Involve:** Worked directly with

communities during the process to ensure that their concerns and desired outcomes are fully understood and taken into account and (**b) Collaborate:** Partner with communities on the decision-making, including developing alternative solution ideas and choosing the preferred solution together.

5.4 1st Round Stakeholders Engagement Methodology

a) Stakeholders Identification

The main stakeholders for upgrading of proposed urban infrastructure under TACTIC Project in Songea Municipality included;

- Ruvuma region and Songea Municipal (Regional Secretariat and Municipal Council),Government public agencies/institutions (TANESCO, SUOWASA, TTCL, Fire and rescue force, Ruvuma and Southern Coast River basin)
- Wards and mitaa committees
- Communities along/nearby the proposed project
- Non-Governmental Organizations (women, Community groups and People with Disabilities (SHIVYIWATA))

b) Stakeholders Analysis

After identifying and grouping stakeholders, stakeholder analysis was used to characterize stakeholder groups' interests, how they will be affected by the proposed subproject and to what degree, and how those groups may influence the subproject. The stakeholder analysis process revealed important differences among groups, including their concerns and priorities.

Communities and other stakeholders that will be affected by proposed subproject have to be engaged as early as possible during subproject design. By engaging with stakeholders early, it may be possible to avoid, mitigate, or decrease the subproject's impact. It is generally not practical or feasible to engage with every single stakeholder group at every level.

c) Public Meetings

Dissemination of subproject's information among communities along the proposed/selected agro-processing industry and grain market at Lilambo industrial area

site through MEOs and WEOs and later through meetings was an important aspect of the public participation process, they needed to be appropriately informed about what is planned in their areas.

Each meeting was hosted by local authorities and was conducted for an average of 2hrs; ESIA team of three (3) members present; one to act as moderator, and other to take notes for the minutes of the meeting.

5.4.1 Public Participation Process

Several methodologies were used during the stakeholder consultation process. First, the fieldwork which is necessary to formalize and record public opinion about the potential impacts of the project which was undertaken by ESIA team of experts. Key informant interviews were used to seek the public opinion. The ESIA experts explained the structure of the proposed development to the identified stakeholders and responded to their questions as appropriate. At the same time, the ESIA experts also inquired of the local environmental history of the site and adjacent areas in order to identify potential environmental impacts. The exercise was conducted through interviews with key informants, field surveys and discussions. The table below shows the Study plan and number of informants consulted by wards.

Table 5-1: Public Consultation Schedule at Songea Municipality

S/N	Ward/ Village/ Institution	Date	Focus Group /Consultation	Number
1	Songea Municipality	27/Dec/2021	Acting Municipal director	1
2	General Municipal Meeting	27/Dec/2021	Heads of departments	6
			Officers	35
3	SOUWASA	29/Dec/2021	Technical Manager	1
4	Ruvuma and Southern Coast water basin	29/Dec/2021	Acting Manager	1
			Chemist	1
5	TARURA	29/Dec/2021	Manager	1
			Technical Engineer	2
7	Traffic Police	30/Dec/2021	DTO	1
		31/Dec/2021	I/C traffic Operations Ruvuma Region	1
8	Fire and rescue force	31/Dec/2021	DFO- Songea	1
9	TANESCO	30/Dec/2021	Regional Manager	1
10	TTCL	30/Dec/2021	Ag. Regional Manager	1
11	Lilambo ward (Lilambo Mtaa)	31/Dec/2921	Political Leaders	3
			Ward officials	4
			Influential elder	1
			Women	19
			Special need (disabled)	1
			Men	20
			(transporters) motorcyclists	3
16	SHIVYAWATA (Association of People with Disabilities Tanzania)	01/Jan/2022	People with disability	6
17	Songea Municipal Council Team feedback meeting	02/Jan/2021	Acting Municipal Director	1
			Head of Departments	5

			Municipal officers	10
	TOTAL			**281**

5.5 Public Consultation and Engagement

5.5.1 Focus Group Interview

Group interview was conducted to guide, focus and inform planning and implementation of proposed establishment of agro-processing industry and grain market at Lilambo industrial area and ensuring that the activities undertaken responded to the needs of primary stakeholders and learning their perceptions about the current proposed project activities.

Among other advantages of Focus Group Discussions is Transparency. Everyone see and hear what is going on and those using information can easily understand the results.

Focus Group Interviews place participants in a naturalistic, relaxed setting assisting a higher degree of candour from participants as well as immediate crosschecking of responses from other group members. Focus group interviews give the moderators the opportunity to probe and explore unanticipated issues and diverse experiences.

ESIA expert jointly with LGA team send the invitations through community leaders and required the leaders to form a group of 8-10 participants of similar background and experiences like Traders (entrepreneurs) Women and Children, Community leaders and politician, People with Disabilities, Traffic Police, Government agencies at Ministerial levels and other public authorities.

During the interview/discussion, the team found comfortable and calm place where everyone sat facing each other. Sometimes refreshments were offered where need arise (due to weather conditions) and for interview climate setting purposes.

Open-ended questions were asked /invited everyone/anyone to come with a number of answers. Participants of a similar background or experience like community leaders were used to generate a variety of responses to questions with a comparable body of experiences. Through the discussion the team gained deeper understanding of various issues and constraints related to other infrastructure project they themselves faced and their possible solutions

5.5.2 Consultative Meetings with Municipal Authorities and Other Stakeholders

Consultative meetings at municipal levels included discussions with Council Management Team which comprised of technical staff from all departments and Regional Secretariat. Stakeholders' meetings from other sectors included both managerial and technical staff.

In order to strengthen partnerships, collaboration and linkages stakeholders meeting at Municipal level are of higher importance. It promotes goals, bind the team together with the common interest.

During the Meetings, The ESIA team was able to high-lighten an Overview of Project Justifications (Perspective, Purpose and Goal) Networking and Partnerships issues amongst service institutions (TANESCO, SOUWASA, etc) and pledge to come back for feedback after primary stakeholders consultative meeting (needs assessments and anticipated positive or negative effects of the project.

Figure 5--1: Photos Stakeholders' Consultation
Source; Site Visit on December 2021 to January 2022

5.6 Concerning raised by Stakeholder

The stakeholders in the subproject's areas raised the following issues during Public Meeting and focus group discussion as captured in *Table 5-2*.

Table 5-2: Stakeholders Concern

S/N	Institution/ward/village/NGO	Name	Position	Concern/ issue/ suggestion
1	Municipal Office	Philipo Beno	*Acting Municipal Executive Director *Head of Environmental Management Department	• The municipal will give support and cooperation in the project in all aspects. • The community should be constantly updated on the proceeding of the project to get their opinions • Equal employment opportunities shall be given to the resident within the proposed project area
		Mensa A. Ngelangela	*Head of department Community Development Officer (CDO) *Grieving Officer (GO)	• Songea people have a good, respectable and cooperative culture that the contactor is expected to follow. • My office will open for the community to address their grieving and complain prior to the project and during the construction so as to resolve issues that may arise. • As we always do, shall prepare educative meetings around the proposed project areas educating people on how to prevent themselves from risks of HIV/AIDS. • The community shall be put aware about the project need for labors • The community, potential and active worker through the meetings and announcements will be put aware of their labor rights so that they have expected working conditions and payments • The community also will be oriented constantly on their obligations so that to observe contractors' rights and avoid issues like child labor. • Our office will make follow up so that to ensure priority of employment from community workers to experts is given to locals and residents since is the national's policy to support community development.
		Bertram Njelekela	*Municipal Environmental Management Officer	• We expect the contactor to preserve the environment as required by the law in all expected project • We shall be in position to make consultation with the contactor to discuss on environmental laws observations • Continuous project site assessments will be made to ensure proper disposal of wastes from machinery and displacements • Legal sources of material for construction shall be considered
2	SOUWASA (Songea Urban Water Supply Authority)	Eng. Jafari Yahaya	Technical manager	• We shall provide support to the designing team and contractor to discover water infrastructures that may be affected by the project • If some infrastructures are to be replaced SOUWASA have to be fully consulted.

				• SOUWASA will participate in sites verification • The cost of shifting of the existing water infrastructures along the road will be covered by the contactor • SOUWASA have enough water supplies to accommodate any raising demand which may rise due to the establishment of the proposed project. • In future we expect to get water supply project which will be implemented within 28 towns throughout the county, Songea town being among beneficiaries
3	TARURA (Tanzania Rural and Urban Roads Agencies)	Eng. John M. Ambrose	Municipal Manager TARURA	• TARURA will delegate professionals to follow up Road concern in the three subprojects • All other recommendations given by other institution shall be followed accordingly
4	TANESCO (Tanzania electricity supply Company)	Florence Mwakasege	TANESCO Regional Manager – Ruvuma Region	• In case of temporally or permanent re allocation of electrical infrastructure TANESCO should be informed • Electric equipment installed should be of standard quality
5	TRAFFIC-POLICE	Ins. A. Mwaipopo	DTO	• The construction of subprojects should allow continuation of other social and economic activities • All other recommendations given by other institution shall be followed accordingly
6	Fire and Rescue – POLICE	Police Inspector Jackson Mahali	DFO Songea	• The place shall be registered by our department • All fire-fighting equipment's shall be in place • All workers shall be trained on the use of the equipment's • The design team shall consider the escaping route and assembly area • The final design shall include fire drawing and approved by our department
7	TTCL (Tanzania Telecommunication Company Limited)	Habil Mwaimu	Acting Regional manager	• Contactor should be careful not to destroy the communication infrastructures in areas of construction, that involves to observe warning signs for the presence of fibers (If any) • TTCL will cooperate in these TACTIC sub projects to give detailed information and location of the telecommunication infrastructures • We shall prepare early the cost of reallocation of any communication infrastructure (If any) • All other recommendations given by other institution shall be followed accordingly
8	Lilambo ward	Ajira Kalinga	Ward Council	• The upgrading the proposed project will improve other social/economic activities • There should be positive interaction of the construction workers with the

				Songea community • The employment during the construction phase should follow the national's rules and policy of prioritizing the residents
		Flaviana Henjewele Alphonse	Resident elder	• Projects will trigger development • Employment opportunities shall be considered to our wards
		Damian N. Komba	Fussi street resident	• Our cultural shall be considered and respected by the contractors worker during the proposed project
		Magdalena B. Tweve	MEO	• The project constructor should not employ school children because it is against the law • Girls should not have sexual relationship with contraction workers because they will create unstable family and conflicts
9	SHIVYAWATA (Association Of People with Disabilities Tanzania)	Ally Kipondo	Ruvuma Regional Secretary-SHIVYAWATA	• It is good to have such development projects • Infrastructures in project areas should support the disabled
		Athanas Nguru	Ruvuma regional Chairman SHIVYAWATA	• Education should be given to all people with disabilities for the case of employment and STD's/HIV Issues • Thanks for the Songea people for understanding and respecting the people with disability

5.7 Summary of Issues Raised by Stakeholders

5.7.1 General Concerns to TACTIC Project

Spread of HIV/AIDS and Other Sexually Transmitted Infections: During the construction of the proposed establishmentof agro-processing industry and grain market at Lilambo industrial area in Songea Municipality, the community interaction is expected to increase since there will be new comer workers, which often bring about unsafe and irresponsible sexual interactions that trigger tha spread of HIV/AIDS and other STDs, the stake holders view that the community education should be provided on how to avoid such interactions and their side effects, the social interaction boundaries should be observed, the Municipal and contactor should prepare an open and effective grieving mechanism to allow everybody to report wrong doers (Culprits) such as rapists and oppressors .

1) **Gender Based Violence (GBV)**: Despite that in Songea Municipality there are no significant gender based violence resulting from construction projects, the leaders and the society members expressed their concerns that during construction more people will come to work in the project areas and hence may likely lead togender based violence in their communities as a result of interactions of people from different cultural backgrounds. They call upon the contractor to emphasize employees of the project to respect to human dignity by abiding to traditional customs and norms instead of being the cause of fuelling of GBV related issues in the project areas, the construction managers should observe working time so that the family members can return home in time and avoid such conflicts, the government and contactor are expected to address and resolve any conflict or situations that may cause such conflicts
2) **Recruitment of employees during Construction Phase:** The Public and the Municipal government expected that constructor should give first priority to the local residents in the provision of unskilled and semi-skilled or skilled labourers in the projects. All forms of employment should abide by the rules and policies of Tanzania, avoid child labour. Should therefore adhere to local content policy in executing the project during recruitment of labourers and commodities and services supply chain.
3) **Insurance of Workforce:** Experience gained from other foreign contractors is that they do not provide workplace Insurance for casual laborers. In accordance with existing labour laws, the Government at central and local levels should enforce the contractors to abide with existing laws of the work and labour force in safeguarding safety of entire workforce at the construction site to make them well covered by appropriate insurance policies.
4) **Noise pollution during Construction:** During constructions there is always a lot of noise that disturb people, the constructor is expected to use proper machinery and tools with less noise pollution , use noise filters
5) **Maintaining the Culture of Protecting Infrastructures After Construction:** The stakeholders propose that public should maintain the culture of safe keeping the infrastructures of present and newly constructed subprojects, security should be increased to protect such expensive infrastructures, community security is very important, the community should cooperate and report any destroyed infrastructure.
6) **Environmental Safety;** The construction of subprojects should observe environmental safety and to avoid environmental pollution to the best way possible, the constructor should use safe machines and proper waste disposal, the project supervisors and the government should coordinate to check if environmental safety measures are observed, the contractor should be made clear on the environmental rules and policies in Tanzania and international standards so that to preserve the environment and present organisms
7) **Universal Access (especially if there is mezzanine floor);** the stakeholders suggested that any kind of elevation like mezzanine floor should both flat stairs and step stairs. The stairs shall allow easy movement for the people who use wheel chairs, also the handrails and

balusters of the stairs should be of a height that allows holding while preventing fall off the stairs to the ground

5.7.2 Specific Concerns to Agro-Processing Industry and Grain Market

1) **Market and storage services :** Stakeholders expect the owners of the processing factories (Songea Municipal government) to also have storage facilities (warehouses) to safely keep their raw materials or graded ones, which will be easy in finding the market of such goods
2) **Development of agricultural sector;** As the farmers will be getting enough revenue due elevated quality of their Maize they will engage fully knowing that they have reliable processing and storage facilities and market of their raw materials.
3) **Development of other sectors like transportation and business;** Transporters who carry raw materials or goods will be in position to do business through being subcontracted as carriers by the customers, the business also will be simplified since all sellers and buyers will know where the goods are found.
4) **Facilitation of other businesses around the factory;** The construction of maize processing factories is expected to support other businesses like food sellers, hotels and shops to the customers who come from far

Issues and concerns during meetings and consultations have been captured in Table 5-1 while minutes for meetings held at community levels have been attached as Appendix 3

6. IMPACTS ASSESSMENT AND IDENTIFICATION OF ALTERNATIVES

6.1 Overview

This chapter outlines the potential negative and positive impacts that will be associated with the Agro-processing Industry and Grain Market subproject. The impacts are related to activities to be carried out during construction, operation and decommission phases of the subproject.

The impacts of the project during each of its life cycle stages (construction, operation and decommissioning) have been categorized into: impacts on the biophysical environment, health and safety impacts and socio-economic impacts

6.2 Methodologies for Identification of Impacts

6.2.1 Matrix

For identification of subproject's related impacts the ESIA team used the matrix method (screening matrix), which is based on identifying and qualifying actions of the subproject comparisons with natural and social environmental conditions. This generated an anthropomorphic action with impacts to the environment including health and safety to project's communities. The latter was carried out through the use of a cause-effect relationship matrix

6.2.2 Experts Knowledge

Expert or knowledge-based systems were used to assist diagnosis, problem solving and decision-making.

6.3 Identification of Impacts

6.3.1 Susceptible Impacts' Generating Actions

Definition of actions in each stage of the project was done, which were considered as actions caused by a simple, concrete, well-defined and located cause of the impact.

Table 6-1: Concrete Actions on the Project Phases

Phase	Action
Planning	N/A
Mobilization	Permitting and/Licensing
	Delimitation of working zones
	Land clearing, Setup & construction of contractor's office including provisional facilities (building offices, machinery and equipment and store)
	Transportation of consumables, equipment, materials and Staff
	Storage of materials, equipment and machinery
Construction	Construction of the access roads and walkways
	Sourcing/preparation and transport of construction materials, including aggregates, gravel and sand, preparation of cement, timber, reinforcement bars, etc.
	Site clearing works, including cutting of few trees present
	Earth works including removal of top soils, excavation, cutting/filling, and compaction
	Construction of warehouses and market structures
	Creation of storm water drainage channels
	Collection and disposal of spoil materials removed from construction activities
Operation & Maintenance	Use of warehouses for grain storage and processing Use of market area for grain businesses
	Warehouses and market facilities maintenances
Site Abandonment/ Decommissioning	Dismantling and demolition of structures
	Cleaning and rehabilitation

6.3.2 Impacts' Generating Actions

In this section, key biological, physical, and social receptors were selected from the baseline data. The impacts of the subproject activities on each of these "Environmental Components" were evaluated using a significance ranking process.

The environment complexity and its systemic nature were broken down into several levels to obtain simple and concrete factors:

Table 6-2: Components and Factors of the Environment

Environment	Component		Factor
Abiotic	Climate		Temperature, Rainfall
	Atmosphere		Air Quality
			Dust
	Land		Structure
			Quality
			Relief
	Surface water		Surface drainage (run-off patterns)
			Quality
Biotic	Flora	Terrestria	Habitat
			Distribution
			Species within any category
	Ecosystem		Biodiversity
Landscape	Landscape		Quality-vegetation cover, soil erosion
Socioeconomic	Economic		Change of land use
			Jobs
			Local and Regional Development
	Services Demand		Water
			Energy
			Communication
			Waste management and disposal

6.4 Identification Methodologies for Project Impacts

6.4.1 Matrices (Activities-Environment Interactions)

Interactions between the subproject's activities and the environment were identified for each stage by using a matrix presented below on *table 6-3*

Table 6-3; Project's Impact Interaction Matrix for Markets Construction and Operation

	ENVIRONMENTAL FACTOR/ RESOURCE	EXISTING QUALITY	PLANING PHASE	MOBILIZATION & CONSTRUCTIONAL PHASE					OPERATIONAL & MAINTANANCE PHASE			DECOMMISS PHASE	RESULTANT QUALITY
				Site clearance	Fence erection	Excavation	Transportation	Building erection	Transportation of raw materials	Storage of raw material	Operationa activities		
BIO-PHYSICAL	Air Quality	N	O	SAI	O	SAI	O	M	O	O	SAI	SAI	Localized dust
	Noise	N	O	SAI	SAI	SAI	O	M	O	O	O	SAI	Small increase in noise
	Surface Water Pollution	N	O	O	O	O	O	O	O	O	O	O	Same as existing
	Soil	N	O	SAI	SAI	SAI	O	O	O	O	O	O	Small disturbance
	Climate	N	O	SAI	O	O	O	O	O	O	O	O	Same as existing
	Terrestrial Flora	N	O	SAI	O	SAI	O	O	O	O	O	O	Same as existing
	Biodiversity	N	O	SAI	SAI	SAI	O	O	O	O	O	O	Small disturbance
SOCIAL	Income	P	O	BI	BI	BI	BI	BI	BI	SAI	BI	P	Increase in income
	Employment	P	O	BI	BI	BI	BI	BI	BI	SAI	BI	P	Increase in employment Opportunity
	Culture	N	O	SAI	O	O	O	O	O	O	O	O	Small disturbance
	Population	N	O	SAI	O	O	O	O	SAI	O	O	SAI	Small increase in population
	Accidents	N	O	SAI	SAI	SAI	SAI	M	SAI	O	M	M	Increase in health service
	Land use	N	O	SAI	O	O	O	O	O	O	O	M	Land use development

NB;
N-Normal, P-Poor, SAI-Small Adverse Impact, Mitigation measures are planned, O-No adverse Impact, BI-Beneficial Impact

6.4.2 Impacts Prediction & Evaluation

After identification of impacts as a result of the proposed subproject's activities, their significance was determined, that is, whether they are acceptable or unacceptable and thus require mitigation. The significance of an impact was determined by considering the impact characteristics and the importance (or value) attached to them by the consultant team.

Information provided by the consultant's team of experts was used to calculate an overall impact score by multiplying the product of the nature, magnitude and the significance of the impact by the sum of the extent, duration and probability based on the following equation

Overall Score = (NxMxS) x (E+D+P)

Where:

N = Nature;

E = Extent

M = Magnitude

D = Duration

P = Probability

S = Significance

Table 6-3: Impacts Methodology table

Nature				
Negative		Neutral		Positive
-1		0		+1
Extent				
Site	Local	Regional	National	International
1	2	3	4	5
Magnitude				
Low		Medium		High
1		2		3
Duration				
Short Term (0-5yrs)	Medium Term (5-11yrs)		Long Term	Permanent
1	2		3	4
Probability				
Rare/Remote	Unlikely	Moderate	Likely	Almost Certain
1	2	3	4	5
Significance				
No Impact/None	No Impact After Mitigation/Low		Residual Impact After Mitigation/Medium	Impact Cannot be Mitigated/High
0	1		2	3

The analysis was conducted on a quantitative basis with regard to the nature, extent, magnitude, duration, probability and significance of the impacts. The following definitions and scoring system applied:

Table 6-4: Description of impact

Nature (/Status)
The project could have a positive, negative or neutral impact on the environment.

Extent
• Site – impact within the project site. • Local – extend to the site and its immediate surroundings. • Regional – impact on the region but within the districts. • National – impact on an interregional scale. • International – impact outside of Tanzania.

Magnitude
Degree to which impact may cause irreplaceable loss of resources. • Low – natural and social functions and processes are not affected or minimally affected. • Medium – affected environment is notably altered; natural and social functions and processes continue although in a modified way.

• High – natural or social functions or processes could be substantially affected or altered to the extent that they could temporarily or permanently cease.
Duration • Short term – 0-5 years. • Medium term – 5-11 years. • Long term – impact ceases after the operational life cycle of the activity either because of natural processes or by human intervention. • Permanent – mitigation either by natural process or by human intervention will not occur in such a way or in such a time span that the impact can be considered transient
Probability • Almost certain – the event is expected to occur in most circumstances. • Likely – the event will probably occur in most circumstances. • Moderate – the event should occur at some time. • Unlikely – the event could occur at some time. • Rare/Remote – the event may occur only in exceptional circumstances.
Significance Provides an overall impression of an impact's importance, and the degree to which it can be mitigated. The range for significance ratings is as follows 0 – Impact will not affect the environment. No mitigation necessary. 1 – No impact after mitigation. 2 – Residual impact after mitigation. 3 – Impact cannot be mitigated.

On the other hand, if the nature of an impact is 0 (neutral or no change) or the significance is 0 (no impact), then the impact is 0. Impact Scores will therefore be ranked in the following way:

Table 6-5: Ranking of Overall Impact Score

Impact Rating	Low/Acceptable impact	Medium	High	Very High

Table 6-6: Evaluation of Impacts for Agro-Processing Industry and Grain Market in Songea Municipality

PROJECT PHASE	IMPACT CHARACTERISTIC / IMPACT TYPE	Nature	Magnitude	Extent/ Location	Timing	Duration	Reversibility	Likelihood / (Risk)	Value	Significance
PLANNING	Proper Design of the proposed subproject	Planning	High	Project area	Planning	Project Life	Reversible	Possible	Positive	High Significance
MOBILIZATION &CONSTRUCTION	Noise Pollution	Mobilization/ Construction	Medium	Project area	Mobilization/ Construction	Project Life	Reversible	Possible	Negative	Low Significance
	Workers camp demands	Mobilization	Medium	Project area	Mobilization	Project Life	Reversible	Possible	Negative	Medium Significance
	Employment opportunities	Construction	Medium	Project area	Construction	Project Life	Reversible	Possible	Positive	Medium Significance
	Increase in the income	Construction	Medium	Project area	Construction	Project Life	Reversible	Possible	Positive	Medium Significance
	Possibility of meeting the fundamental social needs for the employees	Construction	High	Project area	Construction	Project Life	Reversible	Possible	Positive	Medium Significance
	Risk of the increase of HIV/AIDS and other STD's	Construction	Low	Project area	Construction	Project Life	Reversible	Possible	Negative	Low Significance
	Risk of the accidents (OHS problems)	Construction	Low	Site	Construction	Project Life	Reversible	Possible	Negative	Low Significance
	Air pollution	Construction	Low	Site	Construction	Project Life	Reversible	Possible	Negative	Low Significance
	Improper Management of solid wastes	Construction	High	Site	Construction	Project Life	Reversible	Possible	Negative	Medium Significance
	Risk of excess soil being eroded	Construction	Low	Site	Construction	Project Life	Reversible	Possible	Negative	Low Significance
	Biodiversity Loss	Construction	Low	Project area	Construction	Project Life	Irreversible	Possible	Negative	Low Significance
	Provision of country/Region with all the needed grain	Operation	Medium	Project area	Operation	Project Life	Reversible	Possible	Positive	Medium Significance
	Job creation	Operation	Medium	Project area	Operation	Project Life	Reversible	Possible	Positive	Medium Significance

	Generation of foreign currency	Operation	Medium	Site	Operation	Project Life	Reversible	Possible	Positive	Medium Significance
OPERATION	Improvement of general welfare	Operation	Medium	Project area	Operation	Project Life	Reversible	Possible	Positive	Medium Significance
	Increased economic activities (Direct/Indirect)	Operation	Medium	Project area	Operation	Project Life	Reversible	Possible	Positive	Medium Significance
	Increase in the income	Operation	Medium	Project area	Operation	Project Life	Reversible	Possible	Positive	Medium Significance
	Possibility of meeting the fundamental social needs	Operation	Medium	Project area	Operation	Project Life	Reversible	Possible	Positive	Medium Significance
	Payment of taxes	Operation	High	Project area	Operation	Project Life	Reversible	Possible	Positive	High Significance
	Effects of fumes and greenhouse gases, effluent	Operation	Low	Project area	Operation	Project Life	Reversible	Impossible	Negative	Low Significance
	Effects of generated solid wastes	Operation	Low	Site	Operation	Project Life	Reversible	Possible	Negative	Low Significance
	Risk of contamination of ground water (effluents)	Operation	Low	Project area	Operation	Project Life	Reversible	Possible	Negative	Low Significance
	Improper management for liquid wastes	Operation	Medium	Site	Operation	Project Life	Reversible	Possible	Negative	Medium Significance
	Risk of noise pollution of machinery and vehicles	Operation	Low	Project area	Operation	Project Life	Reversible	Possible	Negative	Low Significance
	Improper management of Solid wastes	Operation	Medium	Site	Operation	Project Life	Reversible	Possible	Negative	Medium Significance
	Risk of air pollution (Dust emission) of machinery	Operation	Low	Project area	Operation	Project Life	Reversible	Impossible	Negative	Low Significance
	Nuisance/Smell	Operation	Low	Site	Operation	Project Life	Reversible	Impossible	Negative	Low Significance
	Risk of fire accidents (OHS	Operation	Low	Project area	Operation	Project Life	Reversible	Possible	Negative	Low Significance

	problems)									
DECOMMISSIONING	Loss of employment	Closure	High	Project area	Closure	Closure	Irreversible	Possible	Negative	High Significance
	Noise pollution	Closure	Low	Project area	Closure	Closure	Reversible	Possible	Negative	Low Significance
	Air pollution	Closure	Low	Project area	Closure	Closure	Reversible	Possible	Negative	Low Significance
	Improper management of wastes	Closure	High	Project area	Closure	Closure	Reversible	Possible	Negative	Low Significance
	Revenues loss to the Government	Closure	High	Project area	Closure	Closure	Irreversible	Possible	Negative	High Significance

6.5 Impacts Description

6.5.1 Impact during Planning Phase

There are no impacts expected during the planning phase; only paper works are done at this stage.

6.5.2 Impacts during Mobilization and Construction Phase

Impact to the Air Quality

Airborne emissions shall occur during the construction phase. Machines and vehicles operations mobilize large amounts of material, and waste piles containing small size particles are easily dispersed by the wind. The largest sources of air pollution in operations are:

- Particulate matter transported by the wind as a result of excavations, transportation of materials, wind erosion, fugitive dust from tailings facilities, stockpiles, waste dumps. Exhaust emissions from mobile sources (cars, trucks, heavy equipment) raise these particulate levels; and
- Gas emissions from the combustion of fuels in stationary and mobile sources

Once pollutants enter the atmosphere, they undergo physical and chemical changes before reaching a receptor. These pollutants can cause serious effects to people's health and to the environment. All activities during processing, handling, and transport depend on equipment, generators, processes, and materials that generate hazardous air pollutants such as particulate matter, heavy metals, carbon monoxide, sulphur dioxide, and nitrogen oxides.

Mobile sources

Mobile sources of air pollutants shall include heavy vehicles used in excavation operations, cars that transport personnel at the site, and trucks that transport materials. The level of polluting emissions from these sources shall depend on the fuel and conditions of the equipment. Even though individual emissions can be relatively small, collectively these emissions can be of real concern. In addition, mobile sources are a major source of particulate matter, carbon monoxide, and volatile organic compounds that contribute significantly to the formation of ground-level ozone.

Fugitive emissions

Fugitive emissions are "those emissions which could not reasonably pass through a stack, chimney, vent or other functionally-equivalent opening. Common sources of fugitive emissions shall include: storage and handling of materials; construction activities, and roadways associated with project activities; material piles and ponds, these could be a significant source of hazardous air pollutants.

The impact is considered negative of short-term duration and low significance the is referred to the score value of -5 in the Environmental and Social analysis

Land expropriation, loss of property and resettlement

The selected project site for establishment of agro-processing industry and grain market at Lilambo industrial area exist in its current location. In order for this proposed project to be constructed, no part of the structures within/adjacent the existing area has to be removed but (few scattered short grasses and tree species) few visible faunas observed including birds and insects. Hence, no compensation for lost property shall be considered. Currently, no any site development. In addition, there are no sensitive ecological sites found near the proposed site.

This may be negative impact, short term with medium significant as scored in the Environmental and Social analysis

Gender based violence (GBV)

During mobilization and construction phase the GBV will be expecting on the worker employed as other required may require providing sexually corruption in order to be employed, other may use the income get from the job and use to discriminate other group by corrupting i.e., students. This may affect the community and sociality as resulting with diseases such as HIV, breaking of family and un planning pregnancy relation

This can be negative impact, short term with medium significant as scored in the Environmental and Social analysis table 6-7

Sexual exploitation, abuse and harassment (SEAH)

Proposed project for establishment of agro-processing industry and grain market at Lilambo industrial area is one of the Infrastructure project with high-risk environment for incidents of sexual exploitation and abuse and sexual harassment (SEAH). SEAH risks fall under both institutional and programme safeguards and constitute the following:

- **Sexual Exploitation, as** defined by the UN Secretary-General's bulletin ST/SGB/2003/13, constitutes any actual or attempted abuse of a position of vulnerability, differential power or trust for sexual purposes, including profiting monetarily, socially or politically from the sexual exploitation of another. It is a broad term, but it includes transactional sex, solicitation of transactional sex and exploitative relationships.
- **Sexual Abuse, as** defined by the UN Secretary-General's bulletin ST/SGB/2003/13, means the actual or threatened physical intrusion of a sexual nature, whether by force or under unequal or coercive conditions. All sexual activity with children (as defined under the UN Convention on the Rights of the Child as any person under the age of 18) is sexual abuse, regardless of the age of maturity or consent locally. Mistaken understanding of the age of a child is not a defense. "Sexual abuse" is a broad term, which includes a number of acts, including "sexual assault" for example, (rape, attempted rape, forcing someone to perform oral sex / touching) "sexual offence" and "sexual offence against a child".
- **Sexual Harassment** is any form of unwanted verbal, non-verbal or physical conduct of a sexual nature with the purpose or effect of violating the dignity of a person, in particular when creating an intimidating, hostile, degrading, humiliating or offensive environment.

Proposed project has all elements of harbouring SEAH and therefore, measures need to be put in place to avoid it.

Risk of increase in HIV/AIDS prevalence

HIV/ AIDS prevalence in Tanzania is still a problem, the proposed construction project for establishment of agro-processing industry and grain market at Lilambo industrial area will cause influx of workers into projects area from other nearby areas. This will lead to more interaction among workers and community and therefore increases cases of HIV/ AIDS infections. Considering that the proposed project traverses highly populated areas then the impact can be of major impact.

Risk of Exclusion of Local Community

The proposed project will be implemented on existing current location for establishment of agro-processing industry and grain market at Lilambo industrial area, the community surrounding the project form part of the complete proposed project and need to be involved in various phases of the proposed project. The involvement among others is to include them in the consultation and their concern to be part of mitigation measures of design input. Therefore, in case the local community is not fully involved then the project will not be owned by the local community and hence not sustainable.

Increase in Vehicular Traffic

Access to the project area, for personnel, supply of materials, spare parts and other associated materials would take place via the existing public roads particular Mtwara to Mbambabay highway. As transportation materials to the project area will take place in the public roads, if not well planned would cause disturbances to the community and other road users.

The impact is considered to be negative of long-term duration and low significance as scored in the analysis table 6-7

Loss of Biodiversity and destruction of Ecosystem

The construction of the project site will entail clearance of vegetation. This will lead to clearance of vegetation and stripping of the top soil. The clearance that will be undertaken will lead to loss of certain species of flora and fauna.

This impact is considered direct negative, reversible and of low significance as calculated on the ESA table 6-7

Soil erosion and land degradation

Due to construction activities, soil in the area where the subproject will take place will be affected mainly due to excavations works. In this case, the soil with extracts of humus shall be removed. Also, equipment's i.e., caterpillar and excavators to be engaged in activities might cause severe contaminations of soil. This is due to leakage of hydrocarbons. Furthermore, poor arrangements of materials on site may result to land degradation and other soil quality impairment problems.

This impact is considered direct, long term and of high significance as referred from table 6-7 since.

Risk of accidents and injuries

Because of the intensive engineering activities on site, workers will be exposed to risks of accidents and injuries. Such injuries can result from accidental falls from high elevations, injuries from hand tools and equipment cuts from sharp edges of metal sheets and collapse of sections among others.

This impact is considered direct, long term, and of high significance as referred to the value scored in the analysis table

Occupational health and safety of construction workers

Workers safety on site will be endangered as a result of missing appropriates protective gears i.e. safety shoes, helmets, groves, ear plugs, grasses and by eventual accidents at work. Accidents might happen for different reasons in the work with equipment's, trucks and other related equipment. This might be caused by: work without protective equipment and/or safety belt, driving equipment with improper brake system, loss of attention and lack of concentration while working.

This impact is considered direct, long-term and of high significance

Ground Water Contamination

The water resources of the area will be susceptible to contamination. Leakage of fuels, Refuelling and maintenance of vehicles and machines may create the opportunity for accidental spills of hydrocarbons and contaminants could be washed into the environment. If that happens will affect the ecological processes of the area and including water table of the area.

This impact is considered direct, long-term and of medium significance

Employment Opportunities and Income Generation

Employment opportunities during construction will increase the income, skills and knowledge to local labour force. Mostly men will benefit in this respect. If the estimated number 150 people required for the construction activities are deployed from street in the project area and taking cognizant of the fact that most of these have dependents, then the number of people benefiting directly and/or indirectly will be of high significance.

This Impact is considered to be of positive, short-term to long-term and of high significance.

Effect of Child Labour

There is an impact of employed child as expecting on the proposed subproject, the impact may cause by child to hide their really age during apply to the work or contractor will use them as the cheap labour. Also, if it practises the large number of students will stop attending to schools looking for job on project area

The impact is considered to be negative, long term with low significance

Increased Pressure on Water demand

Both workers and the construction work will create an increased demand for water. Water will be mostly used in create mortal, concrete work, curing process and sprinkling to the project area to reduce dust and other related activities involved during construction phase. The water demand will increase due to the additional process of construction will be started

This Impact is considered to be of negative, short-term to long-term and of low significance

Increased Pressure on Materials and Energy

Several building materials will be required for construction of the proposed development and associated facilities. These will include sand, ballast, hard core, timber, cement, clay tiles, metal sheets, electrical gadgets, and steel, plumbing materials, glass and paint among others. Most of these materials will be obtained from the surrounding areas.

The main sources of energy that will be required for construction work will include mainly electricity and fossil fuels (especially diesel). Electricity will be used for welding, metal cutting/grinding and provision of light. Diesel will run material transport vehicles and building equipment/machinery.

This Impact is considered to be of negative, short-term to long-term and of moderate significance

6.5.3 Impacts during Operation & Maintenance Phase

Impact on waste management

The project supporting facilities includes toilets for men and women, bathroom and kitchen. The facility will generate the waste water if there is poor cleanliness of all these facilities invites flies, which are agent of diseases like cholera and diarrhoea. Bad odor and bad visual is the outcome of poor hygienic condition. This impact is negative, long term and of low significance

Fire and Explosion Hazards

Market areas in Tanzania are highly affected by significant risk fire eruption. The fire in the various market areas is caused by electrical short, people use candle and heat source. The damage from fire hazard will affects the whole market in highly and seriously significant to the trader, goods and structure facility. This impact is negative, long term and of high significance

Fire Detection

The fire detection and alarm system comprise of ionized smoke and heat sensors, integral sounder units, manual call points and interface units.

The fire detection and alarm system in the Administration building is centralized system and designed to facilitate accurate identification of the source of heat / smoke / fire in their early stages to minimize occurrences of false alarms due to faulty equipment, electrical transients, system faults etc. Administration Building is designed with analogue addressable system.

For the facility buildings fire detection is design as well. The conventional system is used for the facility buildings with most of the closure building being share the common conventional fire detection panel. However, all facility building will be linked to the main Administration Fire detection system.

The minimum sound level of a sounder device is considered to be not more than 65dB (A) above a background noise (if lasting more than 30 seconds) and at a frequency between 500Hz and 1000Hz. The design also consider that a person should will not travel more than 45m along an escape route to reach a manual call point.

In this design coverage dimensions used for heat and smoke detectors is taken as follows:

- ✓ Smoke: 5m to wall / 10m between detectors overage 100m2.
- ✓ Heat: 3.5m to wall / 7m between detectors
  Coverage 50m2

According to the current version of the BS 5839 Part 1, fire resistant cables are considered for all critical circuits, this includes detection, sounders and mains supply.

Socio-cultural impact/Addictions/Conflicts

Business people and investors are often migrants from other areas and bring along associated problems including prostitution, addictions, violence and a displaced way of life. Increased economic activities and effluence brings in more addictions in the society. Availability of employment opportunities is presently one of the most frequently stated issues in local villages. Any perceptions that jobs have not been allocated fairly may lead to conflict. Population influx to the area could cause an increase in crime, violence and social conflict.

The impact is considered negative of long-term and medium significance.

Changes in population dynamics

Most of people often the managerial, skilled, and semi-skilled manpower required for the project operation and associated activities that will come from outside because such trained manpower is usually not available in ethnic population. In addition, people come to the market areas for trade, etc. Thus, the population dynamics of the area shall undergo a major change over the years resulting in dilution of the ethnic population and their culture and religion, reduction in sex ratio, etc. When the project activities come to an end the population will decrease at a faster rate but their impacts remain. The impact is considered to be negative of long-term and moderate significance

Environmental Pollution

A solid and liquid waste generated on Agro-Processing Industry and Grain Market, if not well managing and lost to the environment will be polluting as a result of improper waste management. The impact is considered to be negative of long-term and medium significance.

Spreading of HIV and STIs

Establishment of the Agro-Processing Industry and Grain Market in the area will be associated with the influx of people from different areas coming to Songea Municipality. Therefore, the interaction of people of different sex may lead to sexual relationships and eventually spreading of HIV and other Sexually Transmitted Infections. The impact is considered to be negative of long-term d and high significance.

Water Scarcity

The operation activities will demand substantial quantity of water during operation that will be sourced from the SUOWASA network. Water will mainly be used for sanitary activities and in processing of agro products. Excessive water use may negatively impact SOUWASA's supplying capacity. The impact is considered to be negative of long-term and moderate significance.

Economic development

This Agro-Processing Industry and Grain Market subproject in the area provides a unique window of opportunity for economic development on a municipality and regional level. For an area such as Songea where economic development has been limited, the successful establishment of commercial market and industrial operations has the potential to have a substantial beneficial long-term impact through:

- Direct employment opportunities to the people;
- Market for agricultural products
- Improvements of social infrastructures i.e., roads

The impact is considered to be positive of long-term and high significance

Increased Surface Water Run-Off

The subproject's site will have an impervious surface thus reducing water infiltration into the ground. This implies that surface runoff from the proposed subproject will increase. The amount of runoff will increase slightly due to lowered infiltration of rainwater into the soil and resulting into pooling of the project site and surrounding environment. These impacts are considered negative, long term and of medium significance

Climatic change risks

During the operation phase there will be the risk on climate change which result on impacts on physical, biological, social, economic and climate change risks. Mostly the change of land use and migration will be occurred. Temperature and rainfall when increases or decrease will affect direct the operation of Agro-Processing and Grain Market in term of structure facility or operation activities.

6.5.4 Decommissioning Phase

Noise Pollution and Vibration Associated with Demolition Activities

The demolition process will entail removal of roofing materials using crowbars and hammers, breaking of walling and reinforced slabs using sledge hammers and/or jack hammers, which utilize compressed air and lowering of materials from high to low levels. The exercise will therefore entail working at high level and all the necessary health and safety measures will be implemented including provision of personal protective equipment such as, safety harnesses, helmets, gloves, respirators, safety shoes,

coveralls, goggles and ear protectors. This is considered to be negative, short-term and of high significance.

Environmental Impairment from Poor Management of Solid Waste Generation During Decommission Phase

Demolished building materials like bricks, stones, metal, and wood materials if stockpiled over the ground surface will ultimately cause solid wastes. If such materials let remain on the site for long period of time may have other side impacts to the environment and human health. Solid wastes to be generated during structures removal include but not limited to; scraps of wood and metals materials. This is considered to be negative, short-term and of high significance.

Air pollution (Dust and exhaust emissions)

Demolition activities will generate dust emissions from tearing of the structures. The dusts may go beyond the subproject's site hence cause nuisance and disturbance to nearby other land users. Furthermore, dust will be caused during transportation of demolished materials. This is considered to be negative, short-term and of medium significance.

Loss of Revenue

During operation phase both local and Central Government will be receiving revenue from the subproject. After decommissioning of the subproject, revenue generation will cease. Loss of revenue is considered negative, long-term, high significance.

Worker's Accidents and Hazards during Demolition

Accident may occur during demolition activities this can caused by vehicle accidents, falling of heavy object, falling of the building, electricity shot during remove of electricity wires, and also accident due to absence of person protective equipment. This is considered to be negative, short-term and of high significance

Loss of Employment

If for whatever reason the project is closed down, the people employed by the project will lose their jobs. This will have significant impact to these people and their families. Loss of Employment is considered negative, long-term, high significance.

6.6 Cumulative Impacts

Cumulative impacts are those that result from the successive, incremental, and/or combined effects of an action, project, or activity (collectively referred to as "developments") when added to other existing, planned, and/or reasonably anticipated future ones. For practical reasons, the identification and management of cumulative impacts are limited to those effects generally recognized as important on the basis of scientific concerns and/or concerns of affected communities. Cumulative impacts considered for the proposed establishment of agro-processing industry and grain market at Lilambo industrial area is;

Air pollution

No Health hazard, poor visibility from elevated levels of ozone or particulates may occur due to establishment of the proposed project

Surface Water

Neither water quality degradation from multiple point-source discharges nor water shortages may occur from uses that exceed capacity

Ground Water

No aquifer depletion may occur due to establishment of the proposed project

Land and Soil

The presence of establishment of the proposed project may not cause change in soil characteristics such as land fertility / productivity

Wetlands

No floods are expected due to over discharges of waste water from the proposed project

Ecosystems

Neither habitat destruction nor Loss of fish and wildlife populations are expected from the proposed project

Socioeconomics

Neither overburden services nor unstable labor markets are expected from the proposed project

Community structure

No permanent changes in community dynamics as a result of displacement of critical community members

Cultural Resource

Neither cultural site degradation / vandalism nor fragmentation of historic district are expected from the proposed project

Hence, there are no cumulative impacts are expected from establishment of the proposed project as assessed in environmental and social aspect by considering

- Physical features, habitats, wildlife populations (e.g., biodiversity),
- Ecosystem services,
- Natural processes (e.g., water and nutrient cycles, microclimate),
- Social conditions (e.g., health, economics), or
- Cultural aspects (e.g., traditional spiritual ceremonies).

6.7 Project Alternatives

Consideration of subproject alternatives is crucial in ensuring that the developer and decision makers have a wider base from which they can choose the most appropriate option. The following alternatives have been considered and are examined hereunder

6.7.1 No project Alternative

The No Action Alternative in respect to the proposed project implies that the status quo is maintained. This option is most suitable alternative from an extreme environmental perspective as it ensures noninterference with the existing conditions. However, the need for such development is high and the anticipated significant environmental impacts resulting from construction and operation have already been experienced at the project site though at smaller scale. This option will, however, involve several losses both to the municipal council, farmers, the community and the government at whole. The area will remain under-utilized or neglected. The No Project Option is the least preferred from the socioeconomic and partly environmental perspective due to the following factors:

- After harvest loss in Songea and nearby districts would remain unchanged.
- No employment opportunities i.e., number of people who will work in the proposed project.
- This will undermine the efforts made to improve the agricultural sector in the country.

From the analysis above, it becomes apparent that the No Project Alternative is not the appropriate alternative. This alternative describes a situation where the proposed development fails to be implemented. In case this happens, positive impacts associated with the proposed development will not be realized. However, from an environmental conservation perspective, this alternative will be beneficial in the sense that any potential negative impacts associated with the subproject will be avoided.

The No Action Alternative should not be adopted, as there is need to encourage development so long as it is undertaken in a sustainable basis as per the environmental management plan developed in this report. In addition, adopting the No action alternative will mean that the existing poor maize crop marketing systems will continue to prevail unabated.

6.7.2 Alternative Site

The selected site for the proposed Agro-Processing Industry and Grain Market has no alternative since the site is located in Industrial Zone and favourable location for transportation. In additional, plans have already been made to supply water and electricity in the area.

6.7.3 Energy Alternatives

The proposed subproject is expecting to use electric power from the National grid and diesel generators. Considerations should also be made on the use of solar power for low power consuming appliances.

6.7.4 Water Supply Alternatives

Water is becoming a scarce resource globally as a result of climate changes. The proposed subproject should foresee alternative water source for future use.

Alternative one: Water supply (surface water) from SOUWASA has to be considered as the major source of water supply to the proposed subproject during construction and operation phases.

Alternative Two: Ground water is another alternative option for water supply and can supplement the water supply to the proposed operations during shortages. Investigation in terms of groundwater quantity and quality has to be thoroughly carried out and ascertained taking into account the area is endowed with groundwater resource.

6.7.5 Sewage Management Alternatives

Alternative first: Use of septic tank and soak pit

This involves the onsite treatment by existing septic tank and soak away pit which allow waste water to be treated biologically by microorganisms through anaerobic fermentation (septic tank) and later released into soil via soak-away pit. Septic tank and soak pits demand little space compared to other options.

Advantage of this option

- This is the option is commonly used in Songea Municipal;
- Operation of this option is cheap;
- There is no sewerage system near the project site.

Disadvantage of this option

- This option needs big space for installation of septic tank and soak pit;

Alternative second: Use of Sewerage system

This involves offsite treatment by collection and transport of wastewater direct through the pipes from the premises (bathrooms and toilets) to designated area for treatment. This is applicable when at propose site are present of sewerage system.

Advantage of this option

- Save the space used. There is no need of big space for installation of septic tank and soak pit;
- Time and offloading Trucks are not needed to offload full septic tanks;
- Operation of this option is cheap;

Disadvantage of this option

- There is no sewerage system near the project site.

6.7.6 Solid Waste Management Alternatives

The proposed subproject will generate solid waste during all phases of construction and operation. An integrated solid waste management system is recommendable

Alternative one: Source reduction

The proponent will give priority to Reduction of solid waste at Source of the materials. This option will demand solid waste management awareness programme.

Alternative two: Recycling

Recycling, of the solid waste is the alternative way of solid waste management by applying the role of separating solid waste at source point of generation in order to recycle or re use the waste

Alternative three: Transportation of waste

- Transfer the collected amount of waste from the special designated area into Subira dump site in Songea municipality. The containers have to be placed at well accessible, strategically chosen sites
- Transport of the loaded containers to the dumpsite and exchange of containers, so as to guarantee permanent disposal capacity at the containers site. The containers are exchanged and the transport vehicles operate continuously between subproject's site and the dumpsite. These are the option mostly used at Songea Municipal council.

7. ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP)

7.1 Overview

Mitigation measures proposed herein are the result of process that took place between the environmental impacts prediction by the ESIA consultant and the engineering design team. Based on environmental impact results, further mitigation measures were incorporated into the design of the Project to ensure the protection of the physical, biological and human environments.

A mitigation measure for this project implies good engineering practice that shall be adhered to during the design and construction phases. The developer (PO-RALG) is committed to the implementation of mitigation measures contained in this report.

7.2 Objective and Components of the ESMP

The basic objectives of the EMSP are to:

- To ensure that all mitigation measures and monitoring requirements will actually be carried out at different stages of project implementation and operation - pre-construction, construction, and operation and maintenance;
- Recommend a plan of action and a means of testing the plan to meet existing and projected environmental and social problems;
- Establish the roles and responsibilities of all parties involved in the project's environmental and social management;
- Describe mitigation measures that shall be implemented to avoid or mitigate adverse environmental and social impacts and maximizing the positive ones;
- Ensure implementation of recommended actions aimed at environmental and social management and its enhancement;
- Ensure that the environment and its surrounding areas are protected and developed to meet the needs of the local people, other stakeholders and safeguard the interests of the common people.
- Ensure sufficient stakeholder engagement activities to mitigate communities and project itself against the various risks; and
- Include specific measures and ensure concerns from vulnerable groups (e.g., children, women, disabled and elderly) have been incorporated into the project's design.

7.3 Institutional Arrangement and Responsibilities for the ESMP Implementation

The overall responsibility of environmental performance including ESMP implementation of the subproject under TACTIC will rest with PO-RALG. Institutional arrangements for ESMP implementation of the Project are given in *table 7-1* below.

Table 7-1: Roles and Responsibilities of Key Parties for EMP Implementation

Institution	Overall Responsibilities	
PO-RALG	The council is responsible for the overall implementation, administration and enforcement of the recommendations of the ESIA and the ESMP Report.	• Ensure that the ESMP provisions are included in tender documents issued for construction work and activities on site and shall monitor/enforce that the Tenderers/Contractors abides by the specifications • Coordinating the implementation of the ESMP among the three district authorities TARURA, SOUWASA TANESCO, MEM and other agencies and contractors; • Conducting training for institutional capacity building; • Provide NEMC with reports on environmental and social compliance as part of their annual progress reports and annual environmental monitoring reports; • Report to World Bank on the status of safeguard matters through submission of annual progress reports.
Songea Municipal Council	The local authorities are crucial for successful implementation of ESMP once some of the mitigation measures are better undertaken by local communities with the support of the local government authorities. It is therefore important that Municipal Councils be involved in the implementation of ESMPs (through the PIU environmental and social specialists and districts' Environmental Management Officers). The PIU environmental specialist has the responsibility to oversee and monitor adherence to, and implementation of ESMP by the Contractors (which includes compliance with the relevant obligations contained in the ESMPs).	Specifically, districts' authorities' responsibilities include the following: • Visit and inspect major project site regularly, to ascertain the level of compliance of works and report back environmental issues; • Maintain inspection reports on files; • Working with the Resident Engineers who have day-to-day interaction through supervisory staff; • Ensures the Contractor/s have all plans, procedures, approvals, and documentation in place to ensure ESMP compliance prior to commencement of any work; • Verifying Environmental compliance and issuing of penalties for contraventions of the ESMPs; • Ordering the removal of person(s) and/or equipment not complying with the ESMP specifications; • Taking decisions in case severe non-compliances to the ESMPs are detected; • Providing input for internal review of the ESMPs; • Stopping works in case of emergency or if significant environmental impacts are apparent or imminent; • Monitoring and verifying that environmental impacts are kept to minimum;
Contractor	The Contractor will be responsible for construction works and ensuring compliance with ESMP requirements. The Contractor shall appoint a Site Engineer.	Contractor shall: • Ensure that the environmental and social specifications of the ESIA and ESMP (including any revisions, additions or amendments) are effectively implemented; • Ensure environmental awareness among his/her employees and subcontractors so that they are fully aware of, and understand the environmental and social requirements and the need for them; • Report and record all accidents and incidents resulting in major injuries or death;

Institution	Overall Responsibilities	
		• Inform SUOWASA, TANESCO TTCL and other relevant agencies of problems arising when implementing the ESMP and ways of improving the ESMP; • Undertake rehabilitation of all areas affected by construction activities in order to restore them to their original state, as determined by the Engineer; • Undertake the required works within the designated working areas. • Contractor shall designate competent environmental, health and safety management staff throughout the construction period, and • Allocate adequate budget for environmental, health and safety management, including self-monitoring.
Construction Supervision Consultant	The Supervision Consultant will be appointed by Municipality and will be responsible for monitoring and supervision of the construction works including implementation of ESMP. The Supervision Consultant will appoint a Resident Engineer. For supervision and monitoring of the implementation of ESMP throughout the construction phase, the implementing agency can engage an Independent Environmental Consultant.	Supervision activities will comprise: • Environmental compliance and monitoring, including checking, verifying and validating the overall environmental performance of the project through regular audits, inspection and review of project submissions. • Monitoring activities by the resident engineer will comprise: • Visual observation during site inspection carried out at the same time as the engineering supervision activities, • Site inspections that will take place with emphasis on early identification of any environmental problems and the initiation of suitable remedial action; • Review of the project GRM, including labour-related mechanism. • Where remedial actions have been required on the part of the Contractor, further checks will need to be made to ensure that these are actually being implemented to the agreed schedule and in the required form.

7.4 Capacity Building & Training

Capacity building programs will be conducted to all the subroject's staff including engineers and relevant stakeholders during initial stages of the subproject implementation to sensitize them on the management of environmental and social issues of the subproject, and to build the requisite capacities.

Within the subproject's area, the municipal's department have got at least one (1) environmental officer who solely deals with environmental issues on daily basis. Otherwise, other staff in these departments and whole Councils has limited knowledge of newly operating WB safeguard requirements and generally lack experience in environmental and social issues

Such low capacity represents a risk to the implementation of environmental and social requirements as contained in the ESMPs and as required by the WB's Environmental and social Framework (ESF) of 2018. It is therefore necessary to address this weakness through capacity building through technical assistance that will support the Songea Municipal Council during the implementation of the ESMPs. The technical assistance will specifically provide the necessary support to LGA in their work with contractors as well as other entities involved in the implementation of the ESMPs.

The technical assistance will include support to experts and training that will cover:

- General knowledge of environmental and social requirements and project procedures, and
- Important specific knowledge in environmental and social procedures and requirements for subproject's staff, consultants, and contractors.

Specifically, the above will include: assistance with the preparation of documents and implementation of training programs on E&S management and monitoring for contractors and relevant Municipal staff to perform their tasks. It will also include assisting Municipal's environment and social staff with the review of contract documents to ensure compliance with the ESMPs. It will further provide general guidance as requested by districts to enhance overall project environmental and social implementation and performance.

Given the nature, locations, and scale of construction, it is anticipated that the safeguard technical assistance support and training will be provided at least during the first 1 year of the subproject implementation. The WB safeguard specialists will support this in the capacity building program, in particular in the training activities as appropriate.

7.5 Awareness and Education

The Contractor should encourage environmental awareness among his foremen before and during implementation of the proposed Agro-Processing and Grain Market. The education will include:

- Provide copies of the ESMP and discuss its contents with all construction foremen
- Discuss techniques and answer questions about erosion and pollution control at regular site safety meetings
- Demonstrate proper housekeeping methods
- Inform the foremen of actions to take in the event of spill of hazardous materials (oil, fuel, and concrete)
- Post sign at key locations reminding foremen how to properly store construction materials, handle and dispose of toxic wastes, dispose of wash water, and similar instructions
- Remind foremen of fines, penalties that may be levied against the project by the local permitting agencies control environmental destruction is not adhered to.

The main Contractor needs to be aware that he/she is responsible for education and informing all Sub-Contractors (if any).

7.6 Gender Based Violence and Sexual Exploitation Abuse/Sexual Harassment

7.6.1 Sexual Exploitation and Abuse/Sexual Harassment (SEA/SH) Response and Prevention Action Plan

To mitigate these risks the project Contractor will develop and implement a Sexual Exploitation and Abuse/Sexual Harassment (SEA/SH) Prevention and Response Action Plan with an Accountability and Response Framework as part of the C-ESMP. The SEA/SH Action Plan will follow guidance on the World Bank's Good Practice Note for Addressing Sexual Exploitation and Abuse and Sexual Harassment (SEA/SH) in Investment Project Financing involving Major Civil Works (February 2020). The SEA/SH Action Plan will include how the project will ensure necessary steps are in place for:

- Prevention of SEA/SH: Integrate provisions related to sexual harassment and sexual exploitation and abuse in the employee Code of Conducts (COCs) and ongoing sensitization of staff on responsibilities related to the COC and consequences of non-compliance; project-level IEC materials.
- Response to SEA/SH: including survivor-centered coordinated multi-sectoral referral and assistance to complainants according to standard operating procedures; staff reporting mechanisms; written procedures related to case oversight, investigation and disciplinary procedures at the project level, including confidential data management.
- Engagement with the community: including development of confidential community-based complaints mechanisms discrete from the standard GRM; mainstreaming of Prevention SEA/SH awareness-raising in all community engagement activities; community-level IEC materials; regular community outreach to women and girls about social risks and their PSEA/SH -related rights.
- Management and Coordination: including integration of prevention and response to SEA/SH in job descriptions, employments contracts, performance appraisal systems, etc.; development of contract policies related to SEA/SH, including whistle-blower protection and investigation and disciplinary procedures; training for all project management; management of coordination mechanism for case oversight, investigations and disciplinary procedures; supervision of dedicated PSEA/SH focal points in the project and trained community liaison officers.
- Ensure clear human resources policy against sexual harassment that is aligned with national law.
- Ensure appointed human resources, environmental, social and health and safety personnel is well trained on PSEA/SH;
- Mandatory and repeated training and awareness raising for the workforce about refraining from unacceptable conduct toward local community members, specifically women;
- Informing workers about national laws that make sexual harassment and gender-based violence a punishable offence which is prosecuted;
- Introducing a Worker Code of Conduct as part of the employment contract, and including sanctions for non-compliance (e.g., termination), and
- Contractor to adopt a policy to cooperate with law enforcement agencies in investigating complaints about SEA/SH.

7.6.2 Prevention and Mitigation of Gender Based Violence (GBV) at the community

The contractor will implement provisions that ensure that gender-based violence at the community level is not triggered by the Project, including:

- Effective and on-going community engagement and consultation, particularly with women and girls;
- Review of specific project components that are known to heighten GBV risk at the community level, e.g., compensation schemes; employment schemes for women; etc.

- Specific plan for mitigating these known risks, e.g., sensitization around gender equitable approaches to compensation and employment; etc

The contractor will ensure adequate referral mechanisms are in place if a case of GBV at the community level is reported related to project implementation

Table 7-2Environmental & Social Management Plan construction of Agro-processing Industry and Grain Market Project

Phase	S/No	Impact	Mitigation Ref #	Proposed Mitigation Measure	Target level/ Standard	Responsibility	Cost/Year TShs	Cost in USD
MOBILIZATION	1	Noise Pollution during Site Clearance	M1.1	Regular maintenance of all used machine like concrete vibrator	As per TZS 932:2006	Songea Municipal Council	6,000,000	2,586.21
			M1.2	Site mobilization works will be on day time only not otherwise		Songea Municipal Council	1,000,000	431.00
			M1.3	Noise protective gear will be provided to workers		Songea Municipal Council	2,000,000	862.00
	2	High demand of basic human needs to workers	M2.1	The area is connected with safe water from SOUWASA,	Minimal basic demand	Songea Municipal Council	1,000,000	431.00
			M2.2	The area is connected with electrical power from TANESCO, and a power generator of 100kVA will be used as alternative,		Songea Municipal Council	1,000,000	431.00
			M2.3	The area is within Songea town, so other basic human need will be obtained easily,		Songea Municipal Council	5,000,000	2,155.12
			M2.4	Toilets and wash room for workers shall be constructed and will be used in all phases		Songea Municipal Council	3,000,000	1,293.10
CONSTRUCTION	3	Noise pollution due to movement of construction equipment	M3.1	Contractor will provide a notice of intended noise to all people within the affected area earlier so as to be aware for what will be done at project site and take preparation for that kind of noise,	As per TZS 932:2006	Songea Municipal Council	1,000,000	431.00
			M3.2	Contractor will ensure that all working machines and trucks delivering construction materials are well inspected and serviced properly as to reduce the noise		Songea Municipal Council	Covered in M1.1	Covered in M1.1
	4	Occupational health and safety hazards to construction workers	M4.1	Establish Workers Safety Management Systems	Zero injuries	Songea Municipal Council	5,000,000	2,155.12
			M4.2	Formulate Occupational Health and Safety Policy		Songea Municipal Council	1,000,000	431.00
			M4.3	Use of water sprinklers to suppress excessive dust during construction;		Songea Municipal Council	2,000,000	862.00

Phase	S/No	Impact	Mitigation Ref #	Proposed Mitigation Measure	Target level/ Standard	Responsibility	Cost/Year TShs	Cost in USD
			M4.4	Workers at the site will be provided with appropriate protective gears such as boots, helmets, masks, etc.		Songea Municipal Council	3,000,000	1,293.10
			M4.5	The contractor shall insist on their workers to use the Personal Protective Equipment properly		Songea Municipal Council	Covered in M4.1	Covered in M4.1
			M4.6	Putting in place the First Aid Kit/s		Songea Municipal Council	1,000,000	431.00
	5	Vibration impact	M5.1	Restricting hours of working to day time only	Minimum vibration	Songea Municipal Council	Covered in M1.2	Covered in M1.2
			M5.2	Early notice to the local community along the area where construction works associated with vibration is likely to occur			Covered in M3.1	Covered in M3.1
	6	Air pollution during construction.	M6.1	Layout of loading materials should be done in order to locate construction materials at an exactly area where dust emission will not affect the community.		Songea Municipal Council	1,000,000	431.00
			M6.2	Contractor or proponent will be ready to use concrete mix which will help to reduce dust emission from mixing materials.	Zero air pollution	Songea Municipal Council	5,000,000	2,155.12
			M6.3	All used trucks will be non-smoke emitter,		Songea Municipal Council	2,000,000	862.00
			M6.4	For the case of present stockpiles, the proponent will cover all stockpiles during non-loading hours		Songea Municipal Council	1,000,000	431.00
	7	Degradation due to Disposal of excess soil/spoil materials from construction	M7.1	Resurface and level debris in the course of compaction and construction of the foundation for the structures,		Songea Municipal Council	2,000,000	862.00
			M7.2	Ensure proper back filling and resurfacing of the construction site, light compaction will be necessary to stabilize the soil.	No spoil materials at project site	Songea Municipal Council	2,000,000	862.00
	8	Degradation at Points of Source of Construction Materials	M8.1	The project proponent shall procure construction material from licensed suppliers to discourage those who may be extracting materials from improper areas such as closed down borrow pits	No improper land degradation	Songea Municipal Council	6,000,000	2,586.21
	9	Spreading of HIV/AIDS and other STIs	M9.1	Raising awareness of the dangers of the HIV/AIDS to workers and the community through seminars		Songea Municipal Council	2,500,000	1,077.59

Phase	S/No	Impact	Mitigation Ref #	Proposed Mitigation Measure	Target level/ Standard	Responsibility	Cost/Year TShs	Cost in USD
			M9.2	Support voluntary HIV counselling and testing by carrying out periodic voluntary testing of workers and surrounding communities	No new case	Songea Municipal Council	1,000,000	431.00
			M.9.3	As part of the campaign, the Contractor will be obliged to make condoms available to his workers free of charge.	Availability of condoms at the site	Songea Municipal Council	1,000,000	431.00
			M9.4	The Contractor shall prepare and implement site specific management plan prior to commencement of construction	Availability of CESMP	Songea Municipal Council	2,000,000	862.00
	10	Sexual Exploitation and Abuse	M10.1	Integrate provisions related to sexual harassment and sexual exploitation and abuse in the employee Code of Conducts (COCs) and ongoing sensitization of staff on responsibilities related to the COC and consequences of non-compliance; project-level IEC materials.	Prevention of SEA/SH	Songea Municipal Council	1,000,000	431.00
			M10.2	Including survivor-centred coordinated multi-sectoral referral and assistance to complainants according to standard operating procedures; staff reporting mechanisms; written procedures related to case oversight, investigation and disciplinary procedures at the project level, including confidential data management.	Response to SEA/SH	Songea Municipal Council	1,000,000	431.00
			M10.3	Including development of confidential community-based complaints mechanisms discrete from the standard GRM; mainstreaming of Prevention SEA/SH awareness-raising in all community engagement activities; community-level IEC materials; regular community outreach to women and girls about social risks and their PSEA/SH -related rights.	Engagement with the community	Songea Municipal Council	2,500,000	1,077.59
			M10.4	Ensure appointed human resources, environmental, social and health and safety personnel is well trained on PSEA/SH;	Presence of a qualified HSE personnel	Songea Municipal Council	2,500,000	1,077.59
			M10.5	Mandatory and repeated training and awareness raising for the workforce about refraining from unacceptable conduct toward local community members, specifically women;	Number of training conducted	Songea Municipal Council	1,000,000	431.00
			M10.6	Informing workers about national laws that make sexual harassment and gender-based violence a punishable offence which is prosecuted;	Education to National laws to workers	Songea Municipal Council	1,000,000	431.00
			M10.7	Introducing a Worker Code of Conduct as part of the employment contract, and including sanctions for non-compliance (e.g., termination)	Company code of conduct	Songea Municipal Council	1,000,000	431.00

Phase	S/No	Impact	Mitigation Ref #	Proposed Mitigation Measure	Target level/ Standard	Responsibility	Cost/Year TShs	Cost in USD
			M10.8	Contractor to adopt a policy to cooperate with law enforcement agencies in investigating complaints about SEA/SH.	Company policy	Songea Municipal Council	1,000,000	431.00
	11	Gender Based Violence	M11.1	Effective and on-going community engagement and consultation, particularly with women and girls;	Community engagement	Songea Municipal Council	1,000,000	431.00
			M11.2	Review of specific project components that are known to heighten GBV risk at the community level, e.g. employment schemes for women; etc.	Availability of specific GBV risk	Songea Municipal Council	1,000,000	431.00
			M11.3	Development and implementation of GBV action plan	Availability of GBV action plan	Songea Municipal Council	1,000,000	431.00
			M11.4	The contractor shall ensure adequate referral mechanisms are in place if a case of GBV at the community level is reported related to project implementation	Reporting style for the case of GBV	Songea Municipal Council	1,000,000	431.00
	12	Child abuse and forced labour	M12.1	Contractor comply with the labour laws of Tanzania that prohibits employing people of the age below 18 years e.g. Employment and Labor Relations Act, 2004 Part II Sub-part A Child Labor;	Employment and Labor Relations Act, 2004	Songea Municipal Council	1,000,000	431.00
			M12.2	The Contractor is required to prepare and sign a code of conduct which has clear prohibitions on Child Abuse and Exploitation and a Code of Conduct for Gender Based Violence and report on its implementation in the course of project implementation;	Company code of conduct	Songea Municipal Council	1,000,000	431.00
			M12.3	Contractor to develop and implement a Children Protection Strategy that will ensure minors are protected against negative impacts associated by the Project;	Company Policy	Songea Municipal Council	1,000,000	431.00
			M12.4	Abstain from hiring children for domestic or other labor, which is	Company code of conduct	Songea Municipal Council	1,000,000	431.00
				inappropriate given their age, or developmental stage, which interferes with their time available for education and recreational activities, or which places them at significant risk of injury		Songea Municipal Council		
OPERATION	13	Injuries from Occupational health and safety hazards during operational phase of the proposed project	M13.1	Premises shall have a first aid kit and trained first aider to respond in case of accident	Zero accidents	Songea Municipal Council	3,000,000	1,293.10
			M13.2	Providing fire fighting equipment at work place		Songea Municipal Council	3,000,000	1,293.10

Phase	S/No	Impact	Mitigation Ref #	Proposed Mitigation Measure	Target level/ Standard	Responsibility	Cost/Year TShs	Cost in USD
	14	Impairment of environment due to solid waste mismanagement	M14.1	Ensuring proper systems/routes for collection, storage, sorting, transportation and final disposal of solid wastes. Records shall be taken weekly	Clean environment	Songea Municipal Council	3,000,000	1,293.10
			M14.2	Ensuring availability of sufficient waste bins at appropriate locations		Songea Municipal Council	1,000,000	431.00
			M141.3	Put the collected wastes at the proposed collection chambers/areas before being transported to municipal dumpsite.		Songea Municipal Council	1,000,000	431.00
			M14.4	Induction training shall be given to all staffs on solid waste sorting at source as well as community around the market area		Songea Municipal Council	1,000,000	431.00
			M14.5	Ensure daily empties of the waste chamber		Songea Municipal Council	1,000,000	431.00
	15	Spreading of HIV and other STIs in the municipal	M15.1	Raising awareness of the dangers on HIV/AIDS to workers and communities through seminars	No new cases	Songea Municipal Council	1,000,000	431.00
			M15.2	Support voluntary HIV counselling and testing by carrying out periodic voluntary testing of worker		Songea Municipal Council	1,000,000	431.00
	16	Loss of properties and life due to fire break out	M16.1	Portable fire extinguishers shall be put in place in all strategic areas.	No fire accidents	Songea Municipal Council	Covered imM.10.2	Covered imM.10.2
			M16.2	Fire fighting system incorporated with water hydrants shall be installed in the building including fire detection alarm system to avoid the risk of fire break out.		Songea Municipal Council	Covered imM.10.2	Covered imM.10.2
			M16.3	Fire assembly area shall be designated in the project area		Songea Municipal Council	500,000	215.51
			M16.4	Smoke detectors shall be installed in all buildings and making sure works properly		Songea Municipal Council	1,000,000	431.00
			M16.5	Fire escape routes shall be designed		Songea Municipal Council	500,000	215.51
			M16.6	Induction training shall be provided on how to respond in case of fire emergency		Songea Municipal Council	2,000,000	862.00

Phase	S/No	Impact	Mitigation Ref #	Proposed Mitigation Measure	Target level/ Standard	Responsibility	Cost/Year TShs	Cost in USD
	17	Contamination of general environment due to effluent mismanagement	M17.1	Ensuring proper design of septic tank and soak away system maintenance for domestic wastewater and sedimentation linked with aerated lagoon for production wastewater management	As per limit set by TZS: 344:1989	Songea Municipal Council	1,500,000	646.55
			M17.2	Ensuring routine check-up and maintenance of storm water drainage system		Songea Municipal Council	1,500,000	646.55
			M17.3	Ensure septic tank is frequently emptied by registered contractor's to reduce overflow of liquid waste. Record's on emptying shall be taken in terms of number/routes		Songea Municipal Council	500,000	215.51
	18	Inadequacies in management and operation systems	M18.1	Provide regular training on maintenance to technical personnel,	No damage	Songea Municipal Council	1,000,000	431.00
			M18.2	Institute proper supervision protocol,		Songea Municipal Council	500,000	215.51
			M18.3	Ensure that adequate resources are available particularly money for the running costs, maintenance, security and utilities,		Songea Municipal Council	5,000,000	2,155.12
	19	Interruption of traffic flow resulting to traffic congestion	M19.1	Improve arrangement of parking area within project site whereby more cars will be parked at once	No traffic congestion	Songea Municipal Council	Zero cost	Zero cost
			M19.2	Induction training should be insisted to all drivers to reduce poor parking tendency		Songea Municipal Council	Zero cost	Zero cost
	20	Bad smell/ nuisance	M20.1	To seal by-products in covered, leak-proof containers;	No bad smell	Songea Municipal Council	1,000,000	431.00
			M20.2	Making sure the sanitary facilities are kept clean during the whole operational phase of the proposed project		Songea Municipal Council	2,000,000	862.00
			M20.3	To keep both working areas and storage areas clean and remove waste products immediately from the area;		Songea Municipal Council	1,000,000	431.00
			M20.4	To cover all transfer systems, wastewater canals, and to reduce the escape of foul odors		Songea Municipal Council	1,000,000	431.00
	21	Bad housekeeping/storage area	M21.1	The traders shall make sure proper arrangement of all goods are kept aesthetically	To avoid an aesthetic view of the proposed	Songea Municipal Council	500,000	215.51

Phase	S/No	Impact	Mitigation Ref #	Proposed Mitigation Measure	Target level/ Standard	Responsibility	Cost/Year TShs	Cost in USD
			M21.2	Vegetation covers and planting of trees shall be considered during the operational of the project so as to have good aesthetic view	project	Contractor/ Songea Municipal Council	1,000,000	431.00
	22	COVID-19 outbreak	M22.1	Provision of safe water with soap for washing hands regularly shall be kept on place (at the gates) for easy hand washing to the traders and customers	As per WHO	Songea Municipal Council	1,000,000	431.00
			M222	The use of masks/nose covering instruments shall be used as a method of precautions		Songea Municipal Council	500,000	215.51
			M22.3	Education shall be given to the proposed project users on measures to take against COVID-19		Songea Municipal Council	1,000,000	431.00
DECOMMISSIONING	23	Injuries from Occupational health and safety hazards	M23.1	Each staff shall use Personal Protective equipment as per assigned job	Zero accidents	Songea Municipal Council	1,000,000	431.00
			M23.2	Use of water spraying on unpaved surfaces to suppress dust		Songea Municipal Council	1,000,000	431.00
			M23.2	The site should be fenced to prohibit illegal crossing way		Songea Municipal Council	1,000,000	431.00
	24	Contamination and impaired Environment from dust	M24.1	Suppress dust by spraying of water on dust emitting surfaces	As per limit set by TZS 845:2005	Songea Municipal Council	2,000,000	862.00
	25	Loss of employment	M25.1	Prepare the workers for forced retirement by providing skills on self-employment, and wise investment of the retirement benefits.	The retrenchment to go as smoothly as possible	Songea Municipal Council	2,500,000	1,077.59
			M25.2	Ensure that all employees are members of the Social Security schemes.		Songea Municipal Council	15,000,000	6,465.52
			M25.3	Consider redeploying employees in another proponent project's		Songea Municipal Council	2,500,000	1,077.59

7.7 Grievance Redress Mechanism (GRM)

GRMs are defined as organizational systems and resources established by national government agencies (or, as appropriate, by regional or municipal agencies) to receive and address concerns about the impact of their policies, programs and operations on external stakeholders. The stakeholder input handled through these systems and procedures may be called "grievances," "complaints," "feedback," or another functionally equivalent term.

GRMs are intended to be accessible, collaborative, expeditious, and effective in resolving concerns through dialogue, joint fact-finding, negotiation, and problem solving. They are generally designed to be the "first line" of response to stakeholder concerns that have not been prevented by proactive stakeholder engagement.

GRMs are intended to complement, not replace, formal legal channels for managing grievances (e.g., the court system, organizational audit mechanisms, etc.). Stakeholders always have the option to use other, more formal alternatives, including legal remedies. It is important to emphasize that national GRMs are not intended to replace the judiciary or other forms of legal recourse. The existence of a GRM should not prevent citizens or communities from pursuing their rights and interests in any other national or local forum, and citizens should not be required to use GRMs before seeking redress through the courts, administrative law procedures, or other formal dispute resolution mechanisms

7.8 Site Rehabilitation Plan

A detailed Site Decommissioning and Rehabilitation Plan should be prepared and implemented as part of the construction ESMP. The plan should detail all site-specific measures the subproject Contractor will implement at the end of the construction period to rehabilitate all temporary areas disturbed by the works.

Site rehabilitation should be considered as an integral part of the road project by incorporation throughout the planning, design, construction and maintenance phases. It is equally important that the rehabilitation process be budgeted for in each of these phases.

Issues that need to be addressed during the restoration phase should include:

- Identification of safety issues – this involves the application of road requirements and standards to landscape plans to ensure that proposed treatments will not impede safety.
- Selection of appropriate species - species mixes need to be formulated with regard to the aim of the restoration program and the intrinsic environmental values of adjacent areas.
- Development of an appropriate establishment technique – this could include seeding, seedling planting etc.

7.9 Community Safety Plan

The project contractor should prepare and implement Community Safety Plan, which includes regular community meetings on safety & construction hazards, announcement in advance of heavy construction activities, restriction of access to working sites, awareness campaigns on traffic related risks, including school children.

7.10 Recruitment and Local Labour Management Plan

A detailed Recruitment and Labour Management Plan should be prepared and implemented as part of the construction ESMP and TACTIC's Labour Management Procedures. The plan will detail the manpower needs for the entire construction period, the local recruitment process and the approach planned to maximize local employment and local content opportunities.

7.11 Environmental Permitting

The project Contractor should conduct the environmental and social investigations required to obtain the environmental permit and any other authorizations as required by the authorities for the Project components that might not be covered by the ESIA or the construction permit.

7.12 Emergency Preparedness Plan

A detailed Emergency Preparedness Plan will be prepared and implemented as part of the construction ESMP. The EPP for Common Hazards and Emergency Situations during construction should be structured as such but not limited to:

- Identification of potential emergencies based on hazard assessment
- Procedures to respond to the identified emergency situations;
- Procedures to shut down equipment;
- Procedures to contain and limit pollution;
- Procedures for decontamination;
- Procedures for rescue and evacuation, including a designated meeting place outside the construction camps;
- Location of alarms and schedule of maintenance;
- List and location of equipment and facilities for employees responsible for responding to the emergency (fire-fighting equipment, spill response equipment, personal protection equipment for the emergency response teams, first aid kits and stations);
- Protocols for the use of the emergency equipment and facilities;
- Schedule for periodic inspection, testing and maintenance of emergency equipment;
- Clear identification of evacuation routes and meeting points;
- Schedule of trainings (drills), including with local emergency response services (e.g., fire fighters);
- Procedures for emergency drills;
- Emergency contacts and communication protocols, including with affected communities when necessary, and procedures for interaction with the government authorities;
- Procedures for periodic review and update of emergency response plans.

7.13 Communication Strategy

The plan shall provide a communication direction for the project team and the contractor to ensure a steady flow of accurate and timely information, engagement of stakeholders and to reduce incorrect information from other sources. The aim will be to minimise negative issues and enhance communities' support for the project.

The plan should be prepared to at least contain but not limited to the; list of stakeholders, communication methods and responsibilities of each stakeholder

7.14 Health and Safety Management Plan (HSMP)

The plan should detail the measures taken by the project Contractor to manage the hygiene conditions and medical care in each of the workers camps. It should also address occupational health & safety in alignment with Labour law of Tanzania, ILO recommendations, Good Industry Practices. This plan should include (but not limited to) the following topics: (i) Health and safety policy and commitment from management, (ii) Description of organization; human resources, definition of roles and responsibilities, (iii) workers accommodation, hygiene facilities and food supply, (iv) Description of material resources including Personal Protective Equipment (PPE) to be used by workers, (v) Health and safety procedures, (vi) Risk assessment , (vii) Pollution prevention and protection, (viii) Health and safety training, (ix) Monitoring of health and safety performance, and (x) Medical checks.

7.15 Gender Based Violence (GBV) Action Plan

Gender-based violence (GBV) undermines the health, dignity, security and autonomy of its victims, yet it remains shrouded in a culture of silence. Victims of violence can suffer sexual and reproductive health consequences, including forced and unwanted pregnancies, unsafe abortions, traumatic fistula, sexually transmitted infections and HIV, and even death. (https://tanzania.unfpa.org/en/topics/gender-based-violence-10)

The Gender Based Violence Action Plan should form part of the ESMP for the project objectively to provide guidance to mitigate, prevent and respond to gender based violence during project construction and post construction phases. The action plan should include but not limited to: communities' participation in ending GBV, healthcare for GBV survivors, mental health & psychosocial support to GBV survivors, safety and security of GBV survivors, justice and legal aid, social economic empowerment and referral systems.

7.16 Air Quality Management Plan

A detailed Air Emissions and Dust Control Management Plan should be prepared and implemented as part of the construction ESMP. The plan should detail all site-specific measures the project Contractor will implement during the construction period to identify and manage and reduce all nuisances caused by air emissions and dust production resulting from the construction activities. The plan should also include specific measures for the reduction of the greenhouse gas emissions in compliance with the national standards and proportionate to the potential impacts referring to greenhouse gas emissions.

7.17 Noise & Vibration Management Plan

A detailed Noise & Vibration Control Plan should be prepared and implemented as part of the construction ESMP. The plan should describe how the project Contractor will minimise and manage noise and vibration impacts during construction.

7.18 Effluent Management Plan

Effluents consist of liquid discharges from Worksite, transporting a pollutant (dissolved, colloidal or particles). A detailed Effluent Management Plan should be prepared and implemented as part of the construction ESMP. The plan should detail all site-specific measures the project Contractor will implement during the construction period to identify, drain and treat all effluents generated on site from the construction activities.

7.18.1 Waste Management Plan

A detailed Waste Management Plan should be prepared and implemented as part of the construction ESMP. The plan should detail all site-specific measures the project Contractor will implement during the construction phase to identify, collect, transport and treat all waste produced on the Worksites by its personnel. The plan should reflect consultations and agreements achieved with the local authorities.

7.18.2 Hazardous Materials Management Plan

A detailed Hazardous Materials Handling and Storage Management Plan should be prepared and implemented as part of the construction ESMP. The plan should detail all site-specific measures the Contractor will implement during the construction phase to identify and manage hazardous materials planned for use on the Worksite and their disposal.

8. ENVIRONMENTAL MONITORING PLAN

8.1 Overview

The purpose of this chapter is to outline the key monitoring requirements identified through the ESIA process to monitor the environmental and social performance of the proposed subproject.

8.1.1 Objectives of Environmental Monitoring

The overall objectives of the monitoring activities are to:

- Ensure regulatory requirements are met;
- Check that impacts do not exceed national environmental standards
- Verify predictions made in the ESIA by obtaining real time measurements;
- Verify that mitigation measures are effective and implemented in the manner described in Chapter 7;
- Provide early warning of potential environmental impacts; and
- Inform future operations and contribute to continuous improvement in the management of environmental and social issues related to the project.

Monitoring will be carried out by the project contractor pursuant to her contractual obligations to undertake inspections, monitoring and reporting

8.2 Internal & External Monitoring and Auditing Programmes

Ongoing monitoring should be a continuous control, monitoring both process and method to detecting compliance risk issues associated with project's operations. Ongoing monitoring programs are shall be the contractor's responsibility. Program responsibilities include keeping current with changes in rules, regulations, and applicable laws; developing internal controls, policies, and procedures to comply with them; training staff on these rules; and taking steps in monitoring or verifying compliance with new guidelines.

Monitoring programs should be designed to test for inconsistencies, duplication, errors, policy violations, missing approvals, incomplete data, or other possible breakdowns in internal controls. Monitoring techniques may include sampling protocols that permit program managers to identify and review variations from an established baseline.

Auditing entails reviewing the ongoing monitoring process and verifying it is effective in achieving the desired outcome. When it comes to high-risk compliance areas within an operation, audit objectives are to: (1) verify that contractor is meeting her obligations for ongoing monitoring; and (2) validate that the process is achieving desired outcomes. This includes confirming that controls are in place and functioning as intended or identifying weaknesses in the program that need to be addressed.

An audit must be an independent and objective review, which means it should be done by people external to the project area to be audited. External reviewers can be used, such as consultant experts or project auditors. In any case, the project developer should ensure that both the monitoring and auditing is taking place and doing what it should be doing.

8.2.1 Subproject's Inspections and Monitoring

The following four types of inspections and monitoring must be employed.

- Inspections planned and conducted on a regular basis to ensure that mitigation measures and commitments are properly maintained and implemented, and that specific management procedures are followed.
- Receptor monitoring undertaken to verify predictions made in the ESIA and to confirm that the activities at the site are not resulting in an unacceptable deterioration i.e., Monitoring disturbance to affected residents through a grievance mechanism).
- Compliance monitoring involving periodic sampling or continuous recording of specific environmental quality indicators or discharge levels to ensure compliance of discharges and emissions with project standards.

- Auditing (internal and external) to assess compliance of the site activities with both regulatory and site management system requirements.
- Monitoring results will be presented in regular reports and reviewed at monthly and quarterly site meetings. The results of the inspection and monitoring activities will be reported to municipal council.

8.3 Reporting Procedure

The Contractor forsubproject will be required to report any environmental or social incidents to the (municipal safeguard focal officer) through the subproject Engineer. The subproject Manager through the environmental officer will advise the contractor about appropriate mitigation measures and will direct the contractor to undertake these mitigation measures. If there are complaints from the public during the construction phase, the Subproject Manager is to be notified immediately. The Subproject Engineer/Consultant should record the following information.

- Time, date and nature of the incident / report;
- Type of communication (e.g., telephone, personal meeting);
- Contact details with telephone number of people making the complaint. If this person wishes to remain anonymous then “not identified” is to be recorded;
- Details of response and investigation undertaken as a result of the incident / complaint;
- Name of person undertaking investigation of the incident / complaint;
- Corrective action taken because of the incident / complaint

The Project Engineer/Consultant will prepare and submit weekly, monthly and quarterly monitoring reports to the Project Manager.

Table 8-1Environmental and Social Monitoring Plan for Agro-processing Grain Market

S/No	Impact	Parameter	Monitoring Frequency	Monitoring Location	Measurement Unit	Method	Target Level/Standard	Responsible Institution	Annual Cost Estimates (TShs/Yr)
1	**Air Pollution**	Dust	Continually	Project area	µg/m^3	Micro Dust Pro	<0.01 TZS 845:2005 Air Quality ± Specification	Contractor/Env.Supervisor	8,000,000
2	**Noise Pollution &Vibration**	Noise level	Continually	Project area	Dba	Noise Level Meter	<110	Contractor/Env.Supervisor	6,000,000
3	**Soil Pollution**	pH	Week	Project area	Ppm	colorimetric test kit.	5.5-7	Contractor/Env.Supervisor/Districts Councils	8,000,000
4	**Surface Water Pollution**	Turbidity,pH, Oil, Grease, COD, BOD, DO	Monthly	300m Upstream & Downstream where stream/river crosses	mg/L	APHA 2009	TZS 789:2003-Drinking (potable) water - Specification	Contractor/Env.Supervisor	8,000,000
5	**Impact on Groundwater**	Turbidity,pH, Oil, Grease, COD, BOD, DO	Quarterly	300m Upstream & Downstream where stream/river crosses	mg/L	APHA 2009	TZS 789:2003-Drinking (potable) water - Specification	Contractor/Env.Supervisor	8,000,000
6	**Impact on vegetation Coverage**	Area	Quarterly	Construction Corridor	M2	Linear Transect	N/A	Contractor/Env.Supervisor/Districts Councils	6,000,000
7	**Impact on Employment**	Percentage of local construction labourers	Monthly	Project site	Number of local people employed by the project	Records/Inguiries/Grievances		Municipal & District Council/Contractor/Ministry of Labour	-
8	**Traffic & Road Impacts**	Road Accidents & Road signs	Quarterly	Project Site	Number of Accidents & Road Signs	Records/Inquiries	Zero Road accidents/Suffient Road Signs	Traffic Police/Municipal & Councils	8,000,000
9	**Occupational Health & Safety Impacts**	PPEs/sanitation & accommodation facilities	Continually	Project site	Quality of PPEs/Accommodation facilities and Safety Measures Provided	Injuries & Illness Records	N/A	Contractor/Municipal & OSHA	
10	**Migrant Population**	Employment	Monthly	Project Mtaa/Street	Number	Counting	N/A	Municipal & District Council/Contractor/Mi	-

S/No	Impact	Parameter	Monitoring Frequency	Monitoring Location	Measurement Unit	Method	Target Level/Standard	Responsible Institution	Annual Cost Estimates (TShs/Yr)
								nistry of Labor	
11	**Spread of HIV/AIDS**	Cases (records from the health clinics)	Monthly	Project Mtaa/Street	Number of Cases	Records/Inquiries	N/A	Districts Councils	10,000,000
12	**Waste Generation**	Volume	Weekly	Project Site	Volume	Records/Inquiries	N/A	Districts Councils	4,000,000
13	**GBV**	GBV cases	Weekly	Project Site and campsites	GBV reported cases	Records/Inquiries/ Registration of cases	Zero case	Contractor/Safeguard Supervisor	8,000,000
14	**Sexual Exploitation**	SEAH cases	Weekly	Project Site and campsites	SEAH reported cases	Records/Inquiries/ Registration of cases	Zero case	Contractor/Safeguard Supervisor	6,000,000
15	**Child labour & Child Abuse**	Children Employment	Weekly	Camp sites and Working gangs	Number of children employed	Records review and random sampling at site	Zero case	Songea OSH and S Supervisor	8,000,000

9. COST-BENEFIT ANALYSIS

9.1 Overview

The objective of a benefit-cost analysis is to translate the effects of an investment into monetary terms and to account for the fact that benefits generally accrue over a long period of time while capital costs are incurred primarily in the initial years. The primary market-related elements that can be monetized are running costs, machine operating costs, safety costs, ongoing maintenance costs, and remaining capital value (a combination of capital expenditure and salvage value).

9.2 Project Benefits

Benefits of a market and Agro-Processing Industrial and Grain Market operations are direct, positive effects of that project; e.g., the adding value to agro products, providing reliable market, and employment opportunities. In this projects' benefit cost analysis, the usual procedure is that benefits are first estimated in physical terms and then valued in economic terms. The benefits of the project have been estimated by comparing the value of un processed agro products; vehicle kilometer traveled the farms to look for goods.

9.2.1 Estimation of Benefits in Physical Terms

Estimate the number of goods lacking market

- Travel time to the farms
- Value of goods added

9.3 Project Cost

In economic terms, the cost of Agro-Processing Industry and Grain Market investment is the value of the resources that must be consumed to bring the project about. The total value of design review, environmental study, tendering, construction, environmental & social impact mitigation, environmental & social monitoring and any additional maintenance costs must be estimated.

- Engineering Design Cost: Makes up the cost for market infrastructure design
- Environmental & Social Study Cost: Makes up the cost for conducting ESIA study and certification of the project by NEMC
- Environmental & Social Impacts Mitigation and Monitoring Cost: Makes up the cost for industrial project's environmental and social impacts management and monitoring
- Capital Cost: Makes up the total investment required to prepare a highway improvement for service, from engineering through landscaping. These include: engineering, right of way, major structures, grading and drainage, sub-base and base, surfacing, and miscellaneous items.
- Major Rehabilitation Costs: May be needed to maintain the serviceability of a major market facilities. The cost of overlays or other major preservation activities should be included in the analysis and allocated to the year when they are anticipated to occur.
- Routine Annual Maintenance Costs: It is important to account for the future operating and maintenance costs of the facility. Warehouses and market facilities require preventive maintenance, and market roadway lanes have to be plowed and patched each year.
- Remaining Capital Value (RCV): The remaining capital value is calculated by determining the percentage of useful life remaining beyond the analysis period, and multiplying that percentage by the construction cost for that component. The estimate of the remaining capital value at the end of the analysis period is then converted to a present value and subtracted from the initial capital cost.

9.4 Discounting

In construction projects, costs are incurred in the initial years, while the benefits from the project/investment accrue over years into the future. When assessing the costs and benefits it is necessary to take into account the time value of money by converting the costs and benefits that take place in different years into a common year.

The present value (PV) of a future cost or benefit has been determined using the formula:

PV=AByi/(1+r) (yi-yo)

Where:

PV =Present Value

AB (or AC) = Annual Benefit (or Annual Cost)

r = Discount Rate

yi = the year in which the benefit or cost occurs

yo = the year of analysis (i.e., the year to which the future dollars are discounted)

In an economic analysis all costs and benefits are given in constant dollars (no inflation) and are discounted to the year of analysis. The year of analysis is usually the current year.

9.5 Cost-Benefit Analysis Planning

9.5.1 Analysis Time Frame & Pertinent Years

Benefit-Cost Analysis includes time-dependent elements that must be defined and held consistent throughout the analysis. These elements are:

- Analysis time frame
- Years of construction
- First year of benefits
- Final year of analysis/year of remaining capital value (RCV)
- Number of days in a year

9.5.2 Timeframe

Is the period of time for which project benefits and related costs are compared and evaluated. An analysis period of 30 years is typical for market improvement projects, because the use and demographic information is generally available for this timeframe

9.5.3 Years of Construction

Construction cost has been assigned to the year or years in which they are anticipated to occur. The cost of construction has been divided evenly between the year 2022 and 2023. Construction cost has also discounted to the year of analysis.

9.5.4 First Year of Benefits

The first year of benefits is the first full year after construction of the Alternative is complete. Therefore, for this project is 2023

9.5.5 Final Year of Analysis/Year of Remaining Capital Value (RCV)

The final year of analysis and year of remaining capital value are the same. For 30-years benefit-cost analysis (2019 to 2052), the final year of analysis and year of remaining capital value is 2052.

9.5.6 Number of Days in a Year

The number of days in a year over which benefits accrue depends on the market characteristics and the proposed improvements. Since the market shall have high-level investor's engagements, 365 days have been used in the analysis.

9.6 Environmental Cost Benefit Analysis

Environmental cost benefit analysis is assessed in terms of the negative versus positive analysis. Furthermore, the analysis is considering whether the impacts can be ameliorated and the costs of mitigating the impacts are reasonable. As it has been demonstrated in the previous

chapter, the benefits of the project, in terms of financial and social benefit are substantial, the environmental impacts can be mitigated and the financial resources needed to mitigate the impacts are relatively reasonable compared to the actual capital investment. The EIA study revealed that there is potential for pollution of the environment due to from construction, operation and maintenances activities. However, proper implementation of the ESMP provided in this report shall help in the mitigation of the negative impacts on the environment.

9.7 Social Economic Cost Benefit Analysis

In general, the project implementation will contribute towards the improvement of market value to the agro-products within the region to stimulate trade and commerce, development of agricultural sector, creation of employment opportunities to the people and hence contributing towards poverty eradication activities. As it can be seen in the impact analysis, there are no serious negative social economic impacts apart from spreading of HIV and Sexually Transmitted Infections due to influx of people in the area. It can therefore be concluded that the social benefits outweigh the social costs that are anticipated

10. DECOMMISSIONING PLAN

10.1 Overview

As decommissioning is not anticipated to take place in the near future, the specific conditions for mitigation are generally inherently uncertain. In view of this, specific mitigation measures pertaining to environmental impacts of decommissioning works cannot be proposed now with a reasonable degree of certainty.

A detailed decommissioning plan that takes environmental issues into consideration shall be prepared by the developer prior to the decommissioning works. Should it be done, decommissioning may entail change of use (functional changes) or demolition triggered by change of land use. Therefore, what is presented here is just a Preliminary Decommissioning Plan which give light to what shall be done if the need for decommissioning arises.

This Plan will be used as a reference document that provides the framework to ensure that demolition activities on the site do not adversely affect the health, safety, traffic or the environment of the public and neighboring properties.

The Contractor for decommissioning phase will be required to prepare a detailed Demolition Plan and Construction Management Plan to the satisfaction of the Proponent and relevant Authorities prior to the commencement of works on site.

10.2 Demolition Methods

Demolition methods shall include but not limited to the following:

- The strip out and removal of all facilities will be undertaken utilizing manual Labor and small plant including – excavators, tipper trucks, metal cutters e.tc.
- The materials will be removed from site using small to medium sized trucks.
- The structures will be demolished using larger plant and equipment including hydraulic excavators equipped with rock breakers,
- During the demolition process erosion control measures will be established. These will include treatment of dust and potential discharges into water sources at bridges sections.

10.3 Demolition Activities

The following are the typical of activities for Agro Processing Grain Industrial and Market decommissioning;

- Demolish of buildings and associated facilities
- All remaining materials and hazardous waste will be removed
- Scarify the compacted area. In some cases, structural elements are added to the excavated stream bottom (rocks, woody debris, etc.) to improve stability and add diversity to the channel.
- The entire surface is then scarified or de-compacted (using an excavator) to encourage water infiltration and re-establish vegetation on the land surface.
- All waste will be disposed of in an appropriate manner; and reusable materials will be resold or recycled
- Vegetation the ground surface and disturbed areas. The surface is then vegetated with local native grasses, tree seedlings are planted
- Install and implement a market closure both physical and legal

10.4 Impacts Associated with Decommissioning Activities

Below are the impacts that are anticipated during decommissioning phase

- Potential impacts on site geology and soils may occur from the excavation, storage, reuse and disposal of soils
- There is the potential for personal injury and significant damage to machinery and equipment if inappropriate levels of consideration are given to health and safety issues,
- The noise impacts of the decommissioning activities

- Impact on air quality due to dust during cutting and filling and removal building structure and paved or tarmac access road and walkways within the facility
- Waste materials on site during decommissioning with potential to be classified as hazardous i.e., oils and lubricants. That are disposed in appropriately, have the potential to represent a significant risk to health and contamination of the local environment

10.5 Mitigation Measures for Anticipated Impacts

- All disturbed areas shall be rehabilitated and re-vegetated;
- Native flora shall be used to re-vegetate the rehabilitated sites;
- The soils and materials excavated during the decommissioning phases of the proposed development will be stored in accordance with Good Practice Guidelines
- Wastes arising will be used wherever possible in the reinstatement of the site such as concrete, gravel and sand. Any excess stored material will be disposed on off-site in full accordance with Environment Agency guidance to minimize the risk of pollution and degradation of habitats
- All health and safety regulations and best practice guidelines will be followed during the decommissioning of the proposed development to ensure that risks to personal safety and equipment on site are minimized.
- Any substances classified by regulation as hazardous which are used or removed during decommission phase will be used and disposed of responsibly off site in accordance with manufacture's guidance and regulations governing use of the material. Materials with potential to be classified as hazardous are most likely to be tarmac, oils, fuels.
- Obtaining all necessary permits and/or authorizations to gain access to sites and to conduct work
- Consultation with representatives and communities to inform and get opinions to ensure safety measures.
- Trained personnel from facility operations will be used where possible; and additional rehabilitation crews shall be hired.

10.6 Decommissioning Cost

Table 10-1: Decommissioning Plan and Budget

S/N	Activity	Responsible	Budget (Tshs)
1	Provide information about the decommissioning to residents, market beneficiaries, employees and local government leaders	Developer	5,000,000/=
2	Seeking decommissioning permits from NEMC	Developer	Pay requisite fees as prescribed
3	Prepare workers psychologically about the fears of losing livelihoods, jobs and business	Developer	20,000,000/=
4	Informing neighbors of anticipated decommissioning	Developer,	15,000,000/=
5	Demolition of the existing structures and return site to original situation	Developer	60,000,000/=

11. SUMMARY AND CONCLUSION

PO-RALG and the World Bank initiated discussions to consider the construction of an Agro-processing Industry and Grain Market at Lilambo Industrial Area in Songea Municipality. This subproject aims at providing reliable processing facility and grain market to the local farmers and adding value to the agricultural products produced in Ruvuma region.

The proposed project has undergone ESIA study as legal requirement under the National Environmental Management Act, 2004 as well as World Bank's requirement as stipulated in Environmental and Social Framework, 2018.

Environmental and Social Impact Assessment study was conducted from December 2021 to January 2022 which involved collection of baseline information including secondary data engagement of communities related the proposed subproject in Lilambo area, impacts identification, impacts evaluation and preparation of Environmental and Social Management Plan. Impacts identified include various categories; physical, biological, social, economic and climate change risks. Evaluation of impacts indicates low magnitude on physical and biological negative impacts. Positive economic impacts are anticipated to be of medium magnitude. Most of Social negative impacts scored low magnitude except those related to Market Users Safety.

As described in chapter 4 of baseline information, trends of climate change variables in the project area are varying from year to year, rain/precipitation, temperature and ultraviolet index are expected to increase in future, and functionality of the proposed market and its associated facilities might be under threat of climate change.

Among the proposed measures includes provision of appropriate waste management system for both solid and liquid waste, appropriate fire-fighting system as most of market area in Tanzania are affected by fire eruption where most of people losses their properties, safety markings and signs in the design as well as proper facilities to withstand climate change scenarios, provision of water drainage structures with capacities to allow free flow of runoff from both sides of the project area and safety and health trainings to the workers

It is, therefore, concluded that, implementation of the proposed subproject will not cause significant impacts provided that the corresponding mitigation measures are adequately and timely addressed in place. The identified adverse impacts shall be managed and positive impact highly enhanced through the proposed mitigation measures and monitoring schedules outlined in chapter seven (7) of this report of the establishment of agro-processing grain market at Lilambo Industrial Area in Songea Municipality-Ruvuma Region.

REFERENCES AND BIBLIOGRAPHY

1. Population and housing census, 2012
2. Municipal Social economic profile
3. Environmental Impact Assessment Regulations URT (2005)

List of Appendices

Appendices 1 Approval ToR Letter

THEUNITED REPUBLIC OF TANZANI '

VICE PRESIDENT'S OFFICE
UNION AND ENVIRONMENT

NATIONAL ENVIRONMENT MANAGEMENT COUNCIL
(NEMC)

In reply please quote:
Ref: EC/EIA/2022/4598 **Date: 08/06/2022**

Songea Municipal Council,
P.O. Box 14,
SONGEA.

RE: SCOPING REPORT AND TERMS OF REFERENCE FOR THE PROPOSED ENVIRONMENTAL IMPACT ASSESSMENT OF AGRO PROCESSING INDUSTRY AND MODERN MARKET LOCATED AT LILAMBO "B" MTAA, LILAMBO WARD IN SONGEA MUNICIPALITY, RUVUMA REGION

Refer to the above heading.

2. The National Environment Management Council (NEMC) receved of your application attached with Scoping Report submitted with draft Terms of Reference (ToR) for undertaking Environmental Impact Assessment (EIA) study of the aforementioned project.

3. The Terms of Reference have been reviewed and found to be satisfactory to guide the EIA study. However, you will be required to ensure that;-

i. Land ownership document bearing the name of the proponent and compatibility of the project activities with the land use of the area must be attached in the EIA report;

ii. The EIS should clearly describe the management of all waste water and solid waste to be generated from the modern market and grains factory for each project phase;

iii. Description of all project components in terms of size, capacity, design and technology to be used is provided in the report; with this respect, site layout plan for the grains factory and modern market should be attached as well;

iv. Baseline information for the project site with an inclusion of baseline data of air quality, noise and vibration level is provided in the EIA report;

v. All key stakeholders are consulted and their views and concerns addressed. Records of meetings, communication and comments should be provided. Consultation forms should bear date and each consulted stakeholder should sign against his/her name as the law requires. Submission of documents which do not observe this requirement will be sent back to the developer for corrections;

4. Furthermore, there are some issues that needs amendment during submission of the EIS as follow;

i. Name of the Proponent that will be responsible to implement the EMP of this project has to appear on the cover page i.e. Songea Municipal Coucil;

ii. Accoring to Section 34 (i) of EMA (Registration and Practice Of Environmental Experts) Regulations, 2021, the foreign firm of environmental experts wishing to practice as a firm of environmental experts in Tanzania shall apply for practicing permit. Contrary to the above, TYPSA and Urban Solution Limited are not allowed to appear in this document;

iii. Provide the specific title for this particular project on the cover page and to all the coming correspondences with the Council;

5. Upon Submission of the EIS, the Council will arrange for a technical review of the document by Technical Advisory Committee (TAC). Prior to this review, representatives of the Council will visit the project site to verify the adequacy of the report with respect to the proposed project site and surrounding environment. Upon submission of the EIS you will be required to as well pay to the Council a review cost though control number to be generated by the system.

6. Thank you for your good cooperation.

A. N. Sembeka
For: Director General.

Cc: NORPLAN Tanzania Limited,
P.O. Box 2820,
DAR ES SALAAM.

Appendices 2 Draft of ToR

DRAFT TERMS OF REFERENCE FOR ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT FOR THE PROPOSED ESTABLISHMENT OF AGRO-PROCESSING INDUSTRY AND GRAIN MARKET AT LILAMBO INDUSTRIAL AREA IN SONGEA MUNICIPALITY - RUVUMA REGION

(TACTIC ZONE 3)

1.0 BACKGROUND

The Government of the United Republic of Tanzania through The President's Office - Regional Administration and Local Development (PO-RALG) has received a credit from the Word Bank towards in implementing projects-financed Tanzania Cities Transforming Infrastructure and Competitiveness Project (TACTIC), which will be, implemented through the President's Office Regional Administration and Local Development (PO-RALG).

NORPLAN Tanzania Ltd was awarded the contract by PO-RALG to conduct; Feasibility Study, Urban Design, Detailed Engineering Design, Environmental and Social Due Diligence, Preparation of Cost Estimates and Bidding Documents for Urban Infrastructure Investments for Songea Municipal Council. This report presents Environmental and Social Impact Assessment for the proposed establishment of Agro-Processing Industry and Grain Market in Songea Municipality-Ruvuma region.

In Tanzania, agriculture markets are characterized by inadequate adherence to product quality standards, grades and post-harvest management, which can limit product access to regional and international markets (GoT, 2011). Private and public food safety standards have been implemented in Tanzania. In urban areas, supermarkets play a large role in the development of private food safety standards particularly as relates to quality attributes of agricultural commodities. Rural and poor households are excluded from the benefits of higher food standards since they tend to shop in traditional open markets where higher hygienic standards are not always applied.

Significant quantities of grains are exported regionally from Tanzania to neighbouring countries in East Africa (Kenya, Rwanda, Burundi, Uganda and the DRC), with occasional flows to Malawi and Zambia. A significant amount of informal grains trade occurs through bush "panya" routes from surplus producing areas to neighbouring importing countries where good quality grains from Tanzanian are generally preferred over other imports.

The most significant domestic principal foods marketing corridor originates from the surplus producing regions of Rukwa, Mbeya, Njombe and Ruvuma with Dar es Salaam as the key destination market. High transportation and market information costs are key factors limiting the efficient flow of principal foods from surplus producing areas to deficit areas within Tanzania.

Like in all other regions in Tanzania, Ruvuma is adversely affected by weak agro industries, poor linkages within the marketing, processing and production chains, poor market orientation and inadequate processing facilities leading to high levels of produce wastage. Given the high potentials in the region, investment in agro processing such as milling and packing of grains' products could boost the sector in the region.

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2.0 SCOPE OF CONSULTANCY SERVICES

The Consultant shall carry out the environmental and social impact assessment for the proposed Agro-Processing Industry and Grain Market. The Consultant shall review all available and relevant documents, maps, previous studies if any, and conduct the environmental and social impact assessment study, field investigations and other related works herein described to attain the stated objectives.

The consultancy services will be carried out in accordance with these Terms of References which are in accordance with the requirements of the applicable National Legislations. The Environmental and Social Impact Assessment will be conducted and ESMP and RAP will be developed. In this regard, the Environmental and Social Impact Assessment (ESIA) and development of ESMP and RAP will be in line with the requirements of:

(i) The Environmental Management Act Cap 191 of 2004;
(ii) Environmental Impact Assessment and Audit regulations, 2005;
(iii) The Land Act Cap 113 of 1999; and
(iv) Village Land Act Cap 114 of 1999 (R.E 2019)

The Consultant shall perform all impact analyses related to services as described therein with due care and diligence to attain the objective of the assessment, among others, the Consultant will perform the following tasks:

Task 1: ESIA Scoping and Registration

The Consultant shall carry out scoping exercise and prepare Scoping Report for screening and approval by the National Environment Management Council together with dully filled forms no:1 & 4. The Scoping Report should include the following:

- Background of the project and objective of the assignment;
- Project description;
- An outline of how the scoping exercise was undertaken;
- Identification of issues and problems;
- Synthesis of results of Scoping exercise (potential positive and negative impacts);
- Project boundaries in terms of spatial, temporal and institutional aspects;
- Stakeholder's consultation. This will cover all levels of stakeholders' identification, record their concerns and indicate how they were involved. This list of stakeholders consulted should be appended in the Scoping Report;
- Project alternatives;
- Cost of the implementation of the project.

In the undertaking of scoping exercise, the Consultant has to refine the Terms of Reference (TOR) in consultation with various stakeholders to cover environmental issues which may emerge from the consultation during the scoping exercise. The TOR should be appended to the Scoping Report. The Scoping Report shall be submitted for review and submission to the NEMC for further review/screening and approval.

Task 2: Environmental and Social Impact Assessment

Sub-Task (i): Description of Project Background

The Consultant shall provide a brief description or profile of the Developer, background to the project proposal and its justification, need and purpose of undertaking the study, ESIA and RAP study methodologies and approaches applied and structure of the report.

Sub-Task (ii): Description of the Proposed Project

The Consultant shall describe project components and activities to be implemented in each phases of project life i.e. pre-construction or mobilization, construction, operation and post-construction (demobilization). This part is meant to give a general idea of what the project will entail. To avoid unnecessary details, focus on the project activities based on project phases i.e.

mobilization or pre-construction phase, construction phase, operation phase and demobilization phase. The description shall include the following information:

- ***Background information***

Background information shall include: Title of the proposed project and developer; Project justification and objectives; Funds and source of funding or financier(s); Project location including maps of appropriate scale; Project design, size, and capacity; Area of influence of the project works; Project life span and Project components; Land size required;

a) Project Activities

Description of project activities shall be based on phases of project life cycle i.e. mobilization or pre-construction, construction, operation and maintenance, demobilization and decommissioning phases:

- ***Mobilization or Pre-construction activities*;**

  Describe activities pertaining to demolition of the existing infrastructures, earthworks (demolition and removal of demolition materials and top soil), building of temporary security fence around the sites, office and storage facilities, material transportation and storage, abstraction and transportation of water to the construction site and collection, storage, transportation, treatment and disposal of wastes generated

- ***Construction Activities;***

  Describe all associated activities during construction work such as extraction of construction materials and water indicating its types and sources; blasting; cut and fill; land clearance; soil and gravel compaction and leveling, demolition of structures along the project reserve; types, sources and amount of liquid and solid waste generation and including their disposal; dust etc.

  Describe all associated activities during construction work such as actual construction works, paving of surfaces with paving blocks, roadways within the project site, landscaping and environmental restoration, implementation of the ESMP, excavation of foundations, building columns & Beams, roof Trusses & sheeting , road ways and approach ladders & outside platforms

- ***Operation and maintenance activities;***

  Identify and describe all the associated activities to be conducted during project operation and maintenance such as project health and safety measures, operation and management of project facilities along the project such as public toilets, etc.

- ***Demobilization Activities;***

  Identify and elaborate on the activities to be conducted during demobilization or decommissioning of the project including movement and demolition of construction facilities, restoration of borrow pits, termination of the temporary workers' employment, waste management, etc.

b) Project Requirements

Identify all types, sources and quantities of construction materials, equipment and chemicals required by the project. Source and quantities of water, energy, manpower (Staffing and support) and other facilities and services required in each phase of project life etc.

Sub-Task (iii): Provide Baseline Condition or Description of the Physical, Biological, and Socio-Economic and Cultural Environment

In order to forecast the impacts, it will be necessary to determine the initial reference or baseline state. It is therefore, required to describe the existing environment that would be directly and/or indirectly affected by the construction of the proposed project. The 'environment' to be affected must be based on the project definition of the term that would include physical, biological socio-

economic, cultural and historical factors. Only those environmental factors that are necessary to understand the impacts of the planned development should be considered. Assemble, evaluate, and present baseline data on the relevant environmental characteristics of the study area. Include information on any changes anticipated before the project commences.

(a) **Physical environment:** This shall cover geology; topography; soils; climatic conditions and meteorology; ambient air quality; surface and groundwater hydrology; existing sources of air emissions; existing water pollution discharges; receiving water quality; traffic data etc;

(b) **Biological environment**: flora, fauna, rare, threatened or endangered species, ecologically important or sensitive habitats, including available forest reserves, significant natural sites; species of commercial importance; and species with potential to become nuisances, vectors, or dangerous (of project site and potential area of influence of the project); and

(c) **Socio-economic and socio-cultural environment**: population; land use; planned development activities; community structure; employment; livelihood means, distribution of income, goods and services; recreation; public health; Gender issues and HIV/AIDS, cultural/historic properties; tribal peoples; and customs, aspirations, and attitudes to the project.

The Consultant shall indicate sources of data and methodologies used to acquire data. The relevant international and national standards of noise levels, water and air quality etc. must be applied when comparing between the existing and anticipated impact of project.

Sub-Task (iv): Describe the Policy, Legal and Institutional Framework

Describe the policy, legal, institutional framework as well as regulations, strategies, standards, international conventions and treaties that are of relevance to the environmental management and the proposed undertaking in particular. They should be those, which relate to but not limited to environmental quality, health and safety, protection of sensitive areas and protection of endangered species, land and land use. A description of the World Bank environmental and social safeguard policies to be triggered by the project should be provided. The objective of this section is to show compliance of the developer with the existing policies, laws administrative/institutional conditions both at national and international levels.

The following, but not limited to, are the relevant policies and legislation to be cited in relation to the proposed project undertakings.

Relevant policies and legislation to the proposed projects	
Policies, Regulations and Guidelines	**Legislation**
• National Environmental Policy (1997); • National Water Policy (2002); • The Wildlife Policy of Tanzania (2007); • National Gender Policy (2000) • National Transport Policy (2011) • National Land Policy (1995) • National Mineral Policy (2009) • National Energy Policy (2015) • National Human Settlement Development Policy (2002) • National Policy on HIV/AIDS (2001) • Construction Industry Policy (2003) • National Agricultural Policy (2013) • National Employment Policy (2008) **Regulations, Strategies and Guidelines:**	• Road Act (2007); • Environmental Management Act (2004); • Energy and Water Utilities Authority (EWURA) Act (2001) • Water Resources Management Act No 11 of (2009), • Mining Act 2010; • Occupational Health and Safety Act (2003) • HIV and AIDS (prevention and Control) Act No. 28/08 (2008) • Local Government Laws (Miscellaneous Amendments), No. 13 (2006); • Village and Urban Land Acts (1999); • Land Act No. 2/04 (2004), amendment of the Land Act (1999);

• Environmental Impact Assessment and Audit Regulations (2005); • Mining (Environmental management and Protection) Regulation (1999) • Land Regulation (2001); and • National Strategy for Growth and Reduction of Poverty (NSGRP - MKUKUTA -2010) • Environmental Code of Practice for Road Works (2009); • Tanzania Development Vision 2025 (2000) • Road Sector Compensation and Resettlement Guidelines (2009) • Environmental Management (Air quality standards) Regulations, 2007 • National Environment (Noise standards and Control) Regulations 2015 • Environmental Management (Water quality standards) Regulations, 2007 • Environmental Management (Hazardous waste Control) Regulations, 2021 •	• Antiquities Act (1964), Rules 1999 • The Standards Act No. 2 of 2009 • Land Acquisition Act 1967, Revised in 2012 • Contractors Registration Act (1997) • Engineers Registration Act 1997 (Amendments 2007) • The Industrial and Consumer Chemical (management and Control) Act, 2003 • Employment and Labour Relations Act (2004) • The petroleum Act of 2015 • Urban Planning Act (2007) • Land Use Planning Act (2007) • Worker's Compensation Act (2008)

International Obligations/Treaties:

(v) The International Conventions/Treaties to be reviewed include:International Convention on Trade of Endangered Species (CITES);

(vi) Convention on Biological Diversity (1996); and

(vii) United Nations Convention to Combat Desertification (1997);

(viii) Basel Convention on Control on the Trans-Boundary Movement of Hazardous Waste and Disposal.

Furthermore, the Consultant shall clearly describe the linkage between the functions of the relevant institutional or administrative frameworks in Tanzania and the proposed project undertakings. The Consultant shall assess the capacity of the project implementing entities on the management of environmental and social issues under the project. On the social side, the Consultant shall assess the institutional arrangements for the implementation of the RAP, including the processes involve with identification and valuation of the affected assets, the different stakeholders involved and their roles and responsibilities.

Sub-Task (v): Stakeholder Consultations and Public Involvement.

The Consultant shall identify and consult all the relevant stakeholders at national, regional and local levels. These include the Government Agencies, local NGOs, affected groups and other interested parties in order to obtain their views regarding the proposed project implementation arrangement. Indicate who they are, where they are, why they are important in this project, which issues are critical to them and how they will be involved in the ESIA study. Particular attention shall be paid to the disadvantaged groups (e.g. children, people with disabilities, the elderly and women) that may be affected by the proposed project.

The Consultant shall describe methodology applied during stakeholder consultations and public participation such as consultative meetings, household, focus groups interviews and other most appropriate methods to establish public views on the proposed project. Meetings with local authorities and the public shall be held to obtain their views on the project and its implication to the environment and social aspects.

Consultant shall propose public consultation Programme during the ESIA and development of RAP and the most appropriate methods to establish public views should be used. The consultation process should be open and transparent to ensure that the views of interested and

affected parties are incorporated in the project design. A summary of issues and response in table form indicating sections which address them should be prepared.

There should be evidence in the Environmental Impact Statement (EIS) to the effect that there were stakeholders' consultations at all levels. Photographs, minutes of the meetings, names and signatures of consulted people could be necessary in this regard.

Among others, the consultations should ensure the involvement of the following:

- Regional Secretariat,
- Councillors /Mayors,
- Ward Executive Officers,
- TANESCO,
- SOUWASA,
- TTCL,
- Fire and rescue force,
- TARURA,
- Market Vendors,
- Aged people,
- women,
- Influential Elders,
- Communities,
- People with disabilities (SHIVYIWATA),
- Municipal and Wards' CDOs and

Transporters (drivers).**Sub-Task (vi): Analysis of Alternatives to the Proposed Project**

The Consultant shall describe different project alternatives that were examined in the course of designing the proposed project and identify other alternatives, which would achieve the same objectives. Including the 'No action' alternative to demonstrate environmental and social conditions without the project, consideration of alternatives should extend to sitting, design, technology, construction techniques, phasing and schedule, and operating and maintenance procedures alternatives.

Compare alternatives in terms of potential environmental and social impacts; capital and operating costs; suitability under local conditions; and institutional, training, and monitoring requirements. When describing the impacts, indicate which are irreversible or unavoidable and which can be mitigated. To the extent possible, quantify the costs and benefits of each alternative, incorporating the estimated costs of any associated mitigating measures. Various environmental and social criteria should be developed to select the best project alternatives.

Sub-Task (vii): Impact Identification and Assessment

The Consultant shall identify, analyze and assess environmental and social impacts (positive and negative) of the proposed project works on natural resources, human beings and the ecosystems based on the phases of project life cycle i.e., mobilization or pre-construction phase, construction phase, operation phase and decommissioning and demobilization phase. Aspect of climate change should be considered in impact identification throughout the project cycle. Methods applied in impact identification and the criteria used in evaluating the levels of impacts significance of the proposed project works must be specified.

The impacts analysis should focus on both positive and negative impacts and be able to state whether the impacts are positive or negative; direct or indirect; short term or long term; reversible or irreversible. The Assessment should focus on the potential for negative environmental and social impacts of the proposed project on the access to business, community/common facilities, human settlements; potential impacts caused by planned and unplanned (spontaneous) in-migration of people; clearing of forest lands for agriculture;

increased pressure on fuel wood, fodder and water resources; social disruptions and conflicts; and threats to woodlands and wildlife species composition and habitats.

The assessment should also examine the potential for linear resettlement that usually involves projects producing linear patterns of land acquisition. An overview shall be provided of different groups of people and their cultural, ethnic, and socio-economic characteristics, and how they are likely to benefit and/or be negatively affected by the project. Negative impacts may include but not be limited to physical relocation, loss of land or other physical assets, or loss of access to livelihood.

Sub-Task (viii): Valuation of Properties to be Affected

The Consultant should identify the properties along the proposed project which will be affected by the implementation of the project. The valuation of properties to be affected should be in line with requirements of Road Management Regulations of 2009. The types and numbers of the properties to be affected should be indicated. Furthermore, the names and address of the properties' owners should be indicated. The Consultant shall utilize the information from the Valuer to address resettlement issues and develop Resettlement Action Plan. The Resettlement Action Plan shall be developed as per attached guidelines.

The ESIA study should clearly identify and analyze cumulative, residue and trans-boundary impacts. Wherever possible, describe impacts quantitatively, in terms of environmental components affected (area, number), environmental and social costs and benefits. Assign economic values when feasible. Characterize the extent and quality of available data, explaining significant information deficiencies and any uncertainties associated with the predicted impacts.

The Consultant should take into consideration existing by-laws, national and international environmental standards, legislation, treaties, and conventions that may affect the significance of identified impacts. The Consultant shall use the most up to date data and methods of analyzing and assessing environmental and social impacts. Uncertainties concerning any impact shall be indicated.

Sub-Task (ix): Propose Impact Mitigation Measures

The Consultant shall suggest cost-effective measures for minimizing or eliminating adverse impacts of the proposed project works. Measures for enhancing positive or beneficial impacts should also be recommended. The costs of implementing these measures shall wherever possible be estimated and presented.

One of the mitigation measures for the resettlement impact is compensation. The Consultant is therefore required to conduct property valuation for those properties to be affected by the project implementation to effect compensation and development of Resettlement Action Plan.

The Consultant shall review the ongoing measures on HIV/AIDS awareness creation within the project area and propose for the mitigation measures. The proposal shall include a plan of action which will identify responsible key implementers, time frame and expected output.

The proposed mitigation measures shall be properly designed and specified with clear Pay Items in the Bidding Documents. The cost estimate shall be included in the Tender Documents for the project and should also include cost of supervision for the implementation of mitigation measures. Also measures to address emergencies should be covered.

Sub-Task (x): Resource Evaluation or Cost Benefit Analysis.

The Consultant shall review the economic study undertaken during the Preliminary Engineering Design to ascertain the economic viability taking into account the environmental and social issues. The Economic Internal Rate of Return (IRR) and Net Present Value (NPV) of the project at recommended discount rate of 12% should be calculated and interpretation of the results be provided.

Sub-Task (xi): Development of the Environmental and Social Management Plan (ESMP)

The Environmental and Social Management Plan focuses on three generic areas: implementation of mitigation measures, institutional strengthening and training, and monitoring. The Consultant shall prepare Environmental and Social Management Plan which will include proposed work Programme, budget estimates, schedules, staffing and training requirements and other necessary support services to implement the mitigation measures. Institutional arrangements required for implementing this management plan shall be indicated. The cost of implementing the monitoring and evaluation including staffing, training and institutional arrangements must be specified. Where monitoring and evaluation will require inter-agency and inter-Governments collaboration, this should be indicated.

Identify institutional needs to implement environmental assessment recommendations. Review the authority and capability of institutions at local, regional, and national levels and recommend how to strengthen the capacity to implement the environmental and social management and monitoring plans. The recommendations may cover such diverse topics as new laws and regulations, new agencies or agency functions, inter-sectoral arrangements, management procedures and training, staffing, operation and maintenance training, budgeting, and financial support.

ESMP shall specify impact mitigation plan and environmental monitoring plan requirement. The costs, responsibility and timeframe for mitigating each impact and monitoring of each environmental parameter should be provided. Impact Mitigation plan and monitoring plan should be based on the project phases i.e. mobilization or Pre-construction, Construction, Operation, Demobilization and Decommissioning phase.

Sub-Task (xii): Reporting

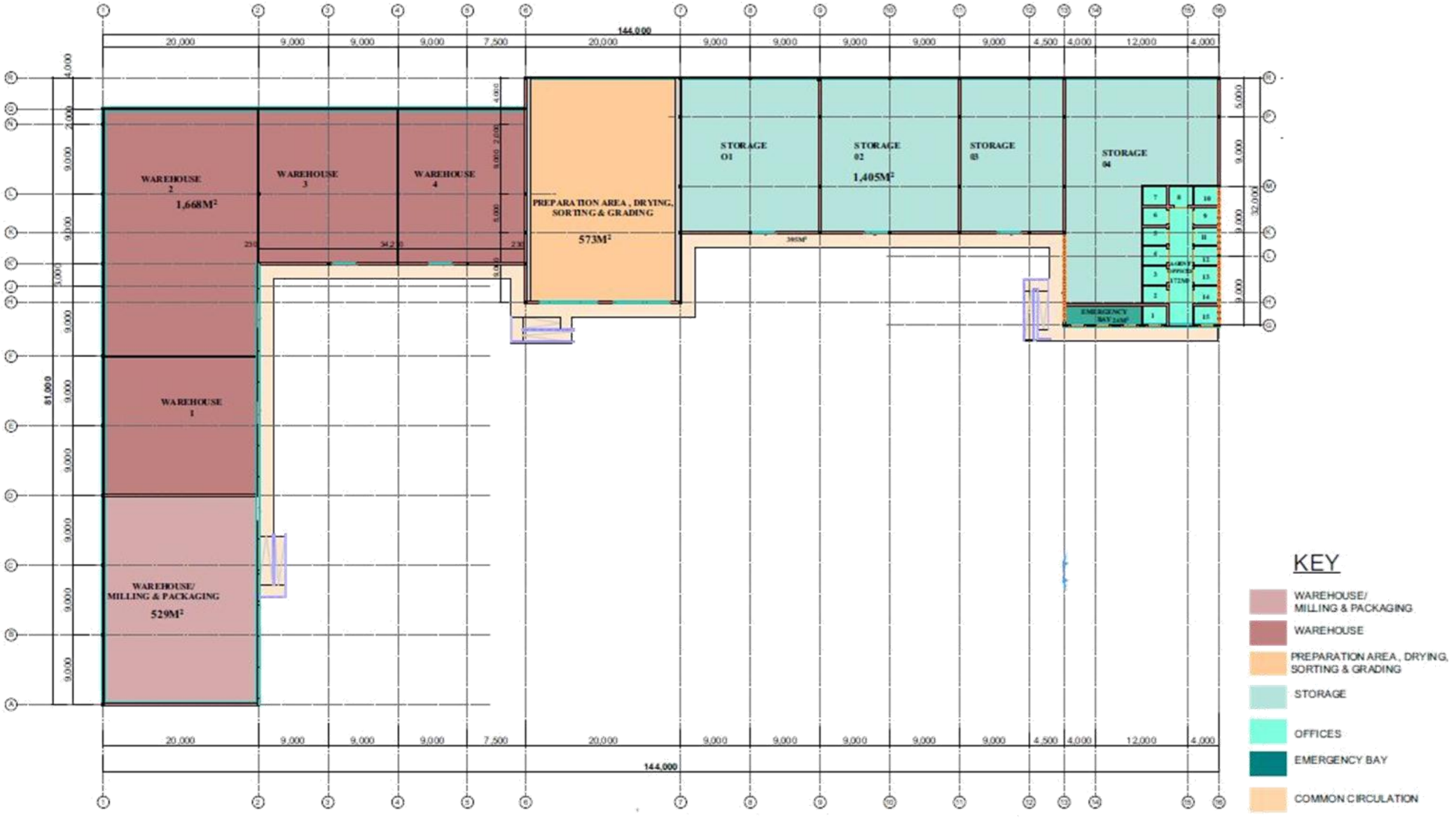
Notwithstanding the above requirements, the contents and the structure of the Environmental and Social Impact Assessment Report should be in accordance with the Environmental and Impact Assessment and Audit Regulations, 2005.

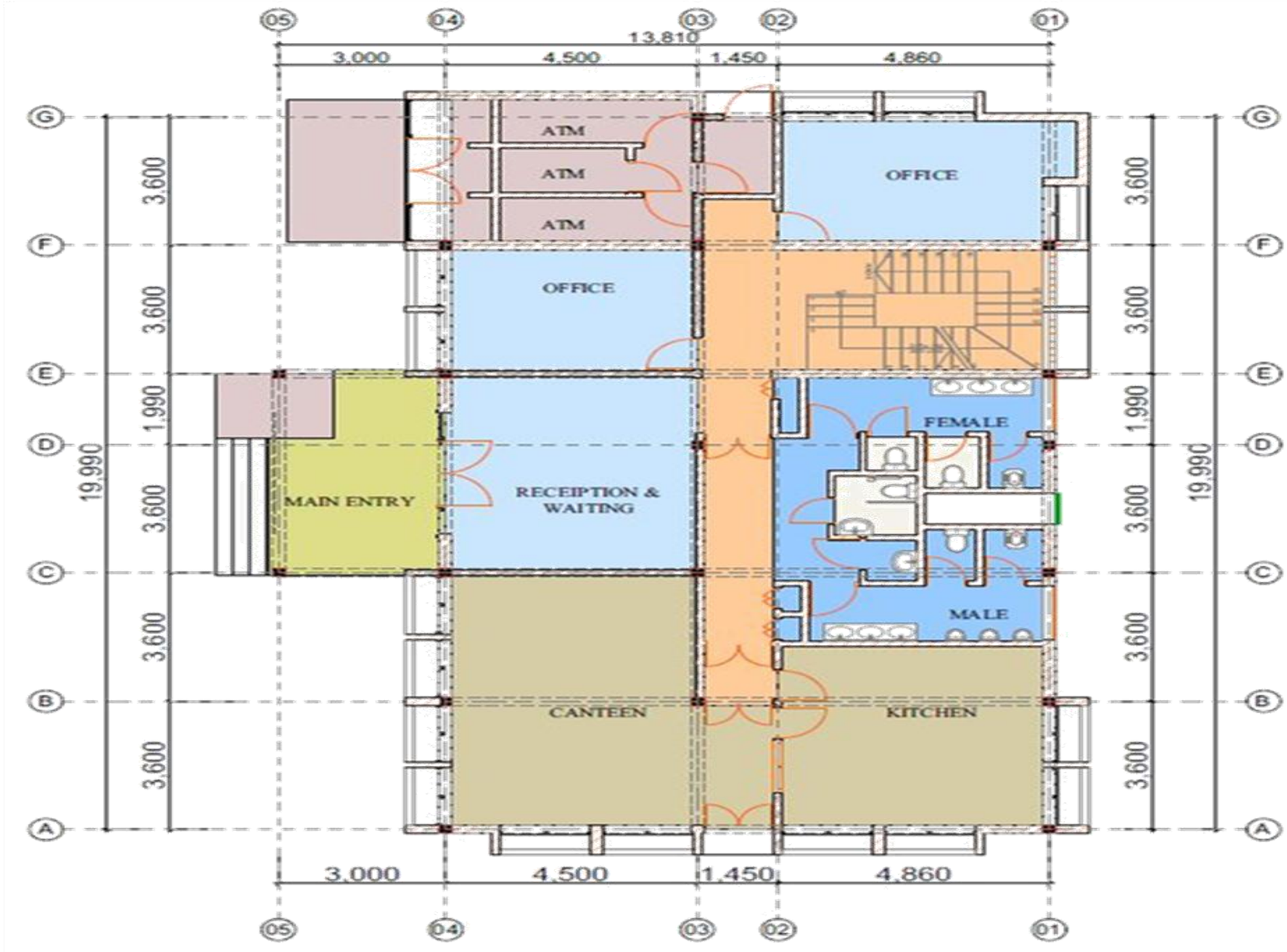
The ESIA should be concise and limited to significant environmental and social Issues. The main text should focus on actions supported by summaries of the data collected and citations for any references used in interpreting data. Detailed or un-interpreted data are not appropriate in the main text and should be presented in appendices or a separate volume. Unpublished documents used in the ESIA may not be readily available and should also be assembled in appendices.

3.0 STAFFING

The consultancy services will be carried out by four key staff. These include ESIA Team Leader/Environmental Expert, Sociologist, Valuer, The team shall also comprise of Support Staff on all key specialities for the study.

Appendices 3 Drawing


WAREHOUSE 2
1,668M²
WAREHOUSE 3
WAREHOUSE 4
WAREHOUSE 1
WAREHOUSE/ MILLING & PACKAGING
529M²
PREPARATION AREA , DRYING, SORTING & GRADING
573M²
STORAGE 01
STORAGE 02
1,405M²
STORAGE 03
STORAGE 04
EMERGENCY BAY
144.000
81.000
KEY
WAREHOUSE/ MILLING & PACKAGING
WAREHOUSE
PREPARATION AREA , DRYING, SORTING & GRADING
STORAGE
OFFICES
EMERGENCY BAY
COMMON CIRCULATION


05
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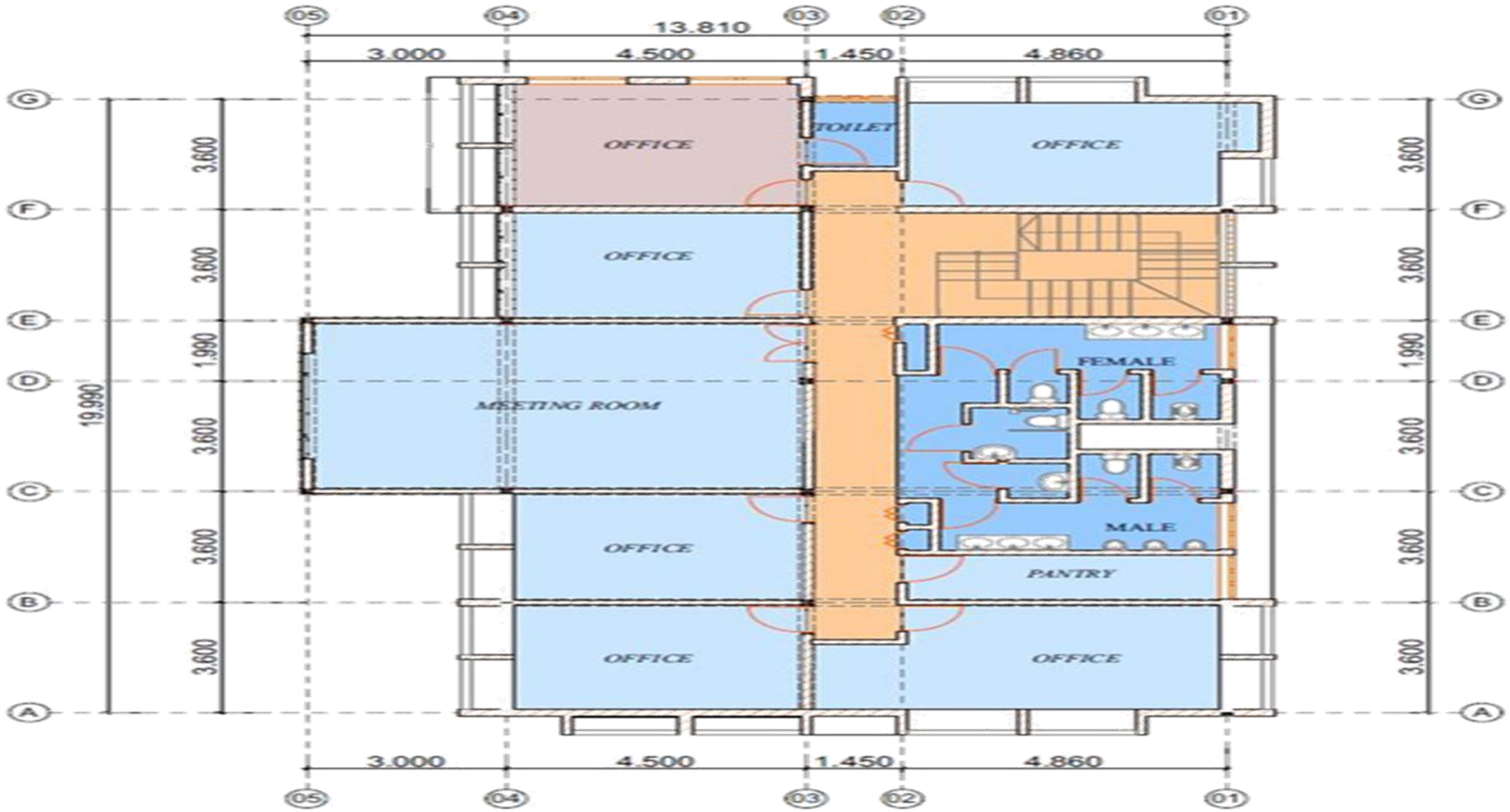
ATM
OFFICE
OFFICE
FEMALE
MALE
MAIN ENTRY
RECEIPTION &
WAITING
CANTEEN
KITCHEN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MEETING ROOM
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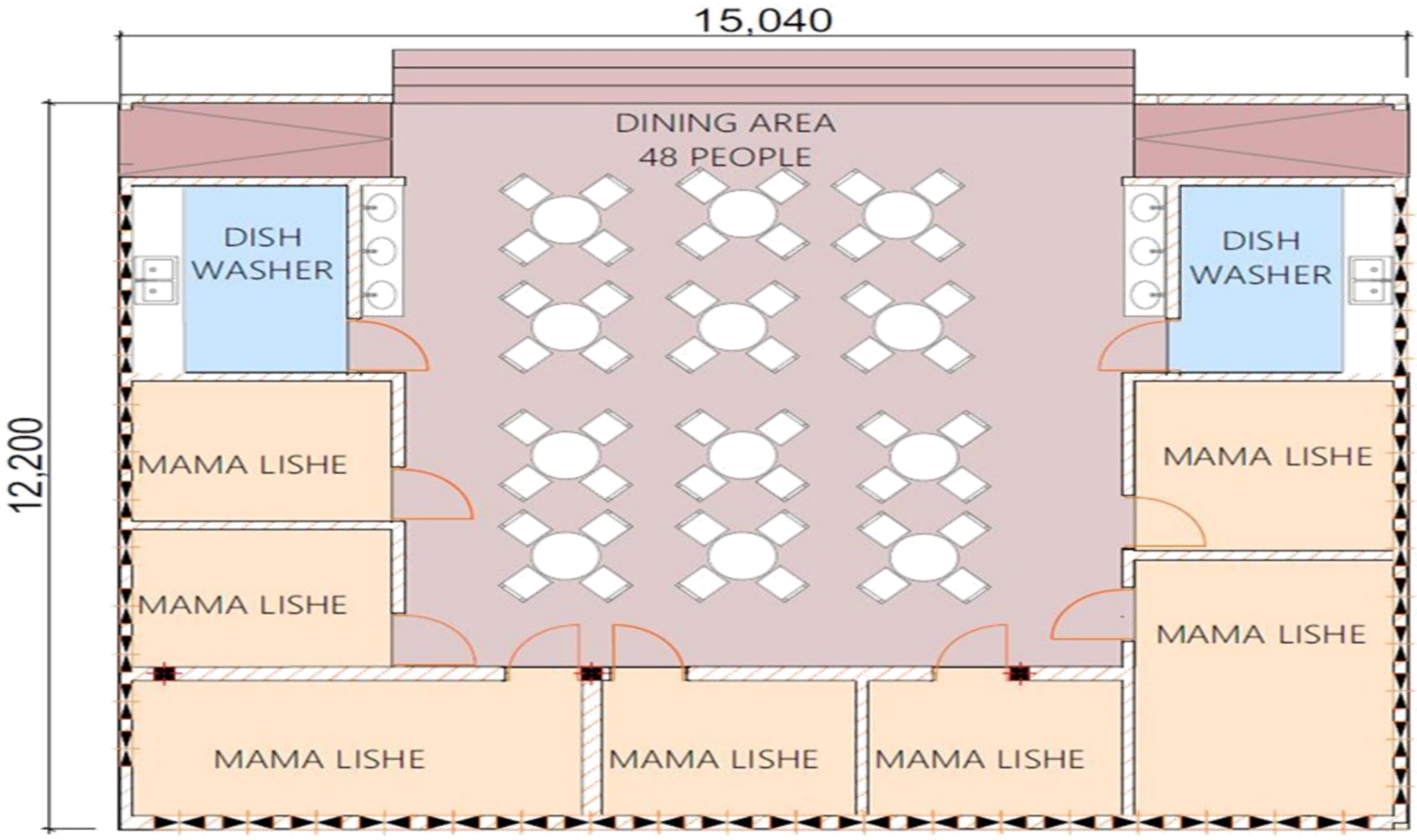
15,040
12,200
DINING AREA
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WASHER
DISH
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MAMA LISHE
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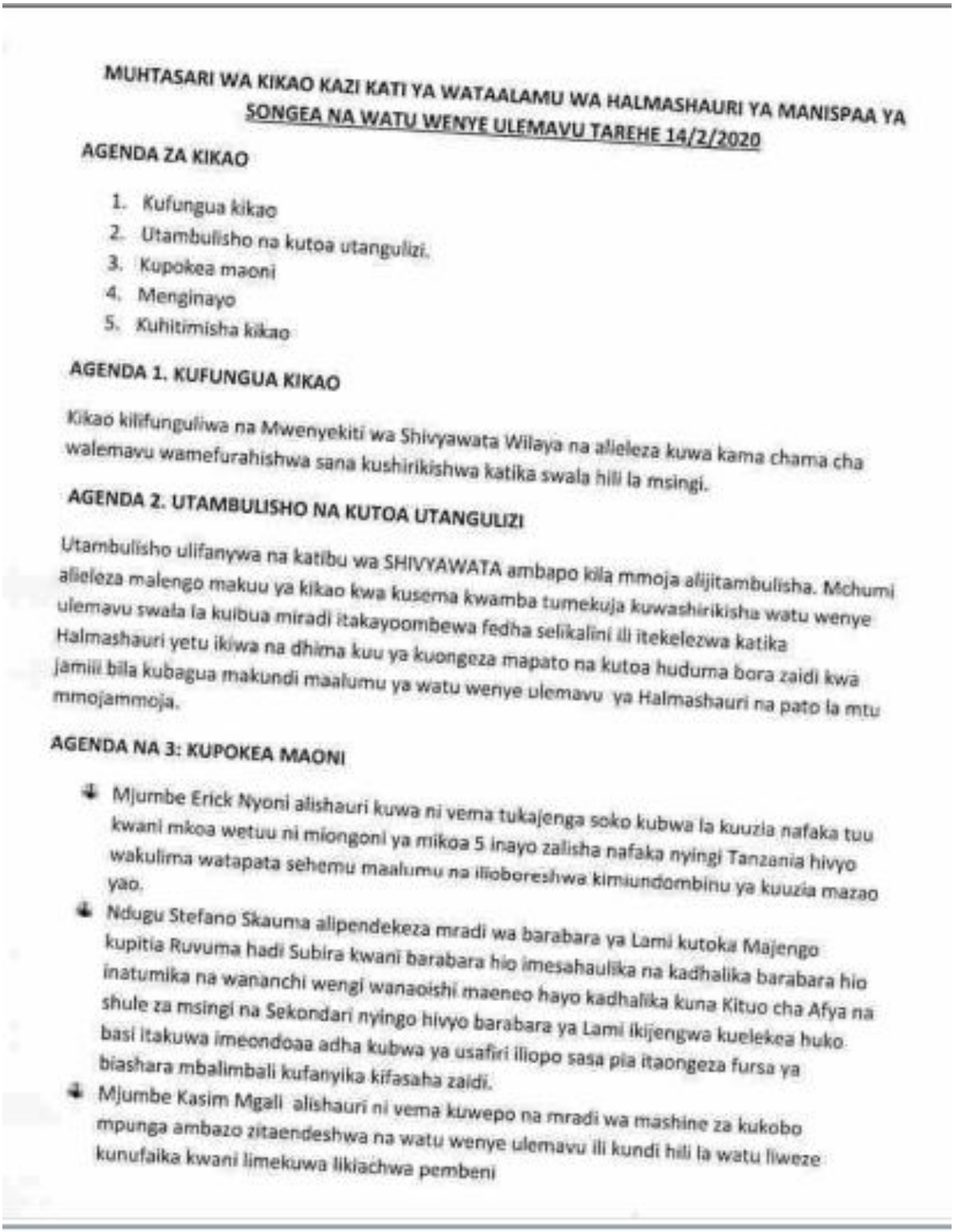
MAMA LISHE

Appendices 4 Minutes



MUHTASARI WA KIKAO KAZI KATI YA WATAALAMU WA HALMASHAURI YA MANISPAA YA SONGEA NA WATU WENYE ULEMAVU TAREHE 14/2/2020

AGENDA ZA KIKAO

1. Kufungua kikao
2. Utambulisho na kutoa utangulizi.
3. Kupokea maoni
4. Menginayo
5. Kuhitimisha kikao

AGENDA 1. KUFUNGUA KIKAO

Kikao kilifunguliwa na Mwenyekiti wa Shivyawata Wilaya na alieleza kuwa kama chama cha walemavu wamefurahishwa sana kushirikishwa katika swala hili la msingi.

AGENDA 2. UTAMBULISHO NA KUTOA UTANGULIZI

Utambulisho ulifanywa na katibu wa SHIVYAWATA ambapo kila mmoja alijitambulisha. Mchumi alieleza malengo makuu ya kikao kwa kusema kwamba tumekuja kuwashirikisha watu wenye ulemavu swala la kuibua miradi itakayoombewa fedha selikalini ili itekelezwa katika Halmashauri yetu ikiwa na dhima kuu ya kuongeza mapato na kutoa huduma bora zaidi kwa jamii bila kubagua makundi maalumu ya watu wenye ulemavu ya Halmashauri na pato la mtu mmojammoja.

AGENDA NA 3: KUPOKEA MAONI

- Mjumbe Erick Nyoni alishauri kuwa ni vema tukajenga soko kubwa la kuuzia nafaka tuu kwani mkoa wetuu ni miongoni ya mikoa 5 inayo zalisha nafaka nyingi Tanzania hivyo wakulima watapata sehemu maalumu na ilioboreshwa kimiundombinu ya kuuzia mazao yao.
- Ndugu Stefano Skauma alipendekeza mradi wa barabara ya Lami kutoka Majengo kupitia Ruvuma hadi Subira kwani barabara hio imesahaulika na kadhalika barabara hio inatumika na wananchi wengi wanaoishi maeneo hayo kadhalika kuna Kituo cha Afya na shule za msingi na Sekondari nyingo hivyo barabara ya Lami ikijengwa kuelekea huko basi itakuwa imeondoaa adha kubwa ya usafiri iliopo sasa pia itaongeza fursa ya biashara mbalimbali kufanyika kifasaha zaidi.
- Mjumbe Kasim Mgali alishauri ni vema kuwepo na mradi wa mashine za kukobo mpunga ambazo zitaendeshwa na watu wenye ulemavu ili kundi hili la watu liweze kunufaika kwani limekuwa likiachwa pembeni

- Mjumbe ndugu Maimbo Kaponda alishauri kuwa pawepo na mradi wa kusomesha walemavu hasa wasio ona katika chuo cha veta Songea kwani kwa sasa watu wasiona wanaachwa tuu na kuwa ombaomba, pia akaongeza kuwa yeye binasi haoni ila ni fundi selemala mzuri tuu. Na baada ya kuwaelimisha watuu hawa basi wanaweza kujiajiri na kufungua kiwanda kidogo pale SIDO na watazalisha bidhaa mbalimbali.

Pia alieleza kuwa miradi hiii ikitekelezwa vema basi itabadilisha hali ya Halmashauri yetu nzima kifedha na kimuonekano pia ajira zitazalishwa nyingi hivyo kuleta manufaa kwa wananchi kwa ujumla.

Aidha ikumbukwe kuwa maeneo ya kujenga vitu vyote hivyo yapo na yanamilikiwa na Halmashauri kwa kiwango kikubwa hivyo utekelezaji wa miradi hii kama mtaridhia wajumba itakuwa na tija kubwa na lengo letu la Manispaa yetu kuwa Jiji mwaka 2025 litatimia.

AGENDA 4: MENGINEYO

Mjube Ally Kiponda alishauri kuwa miradi pendekezwa ni mizuri ila katika uchoraji wa ramani za miradi hio tafadhali miundo mbinu hio izingatie hasa uwepo wa watu wenye ulemavu ambao nao ni sehemu ya jamii itakayo kuwa inatumia miundo mbinu hiooo, hivyo tunaomba miundombinu hio iwe Rafiki kwa watu wenye Ulemavu ili na sisi tufaidike nayo kwa kiwango cha juu.

Mjumbe Maimbo kaponda alisema ili maegesho ya Malori yatumike kiufasaha ni vema tukawa na barabara mzunguko itakayo pitisha malori hayo njee ya mji ili kupungiuza foleni na uharibifu wa barabara za mjini hapa.kadhalika eneo la kuegesha malori basi yajenge katika barabara zote tatu za kuingioa na kutoka katika mji wetu wa Songea.

AGENDA 5. KUHITIMISHA KIKAO

Katika kikao hiki miradi ifuatayo iliibuliwa;

- Ujenzi wa soko kubwa la nafaka.
- Ujenzi wa barabara ya lami kutoka Majengo Ruvuma hadi Subira.
- Kiwanda cha kukoboa mpunga

Mwenyekiti wa walemavu wilaya alihitimisha kikao mnamo saa 7:04 mchana kwa kuwashukuru washiriki kwa kuja kushiriki vema kikao kadhalika alipendezwa na ujio wa wataalamu wa Manispaa kuwashirikisha watuu wenye ulemavu katika shughuli za kimaendeleo za Halmashauri yao na kuomba tuwe tunafanya hivyo mara kwa mara.

	JINA	CHEO	SAHIHI
1	ERICK H. NYONI		
2	ALLY Y. KIPONDA	M/KITI SHINA	[illegible]
3	CHRISTINA MWINUKA	KATIBU	[illegible]
4	KASIM H. MGWALY	MJUMBE	Mwinuka
5	SITEFANO SHAUMA	MW/KITI CHAMA	[illegible]
6	MAMBO KAPONDA	MWEKIT:	shauma
7	FADHIL ISMAIL		[illegible]
8	CHRISTINA WILSON MWAMPOTE	CDO - SONGEA MC FIELD	[illegible]
9	BENHERI CHAMICHA		[illegible]
10	YUSUPH LIHYAMA	[illegible]	

MINUTES OF MEETNG BETWEEN SONGEA MUNICIPAL STAFFS AND DISABLED PEOPLE CONCERNING PROJECT INITIATION HELD ON 14/02/2020 AT SHIVYAWATA OFFICE:

MEETING SUMMARY

AGENDA OF THE MEETING

1. Opening the Meeting
2. Introduction
3. Receiving opinions from members
4. Closing the meeting

Agenda N0.1 Opening the meeting

The meeting was opened by the Chairman of Shivyawata Group (Disabled group) by welcoming all members of the meeting and He said that, they are very happy to be involved in this key issue as disabled group.

Agenda N0.2 Introduction

Introduction was done by Secretary of Shivyawata group where by every member of the meeting introduced him/her self. Facilitator (Economist) from Songea Municipal Council he was welcomed by the chair of the meeting. Then acting Municipal Economist was state to members aim of involving disabled people during the processes of project initiation, in order to get there comments before the design and the establishment of any project. Then after through that project will be helpful in poverty reduction for poor people as well as to provide social service delivery to all Songea community members without any kind of discrimination.

Agenda N0.3 Receiving opinions from Members (Disabled people)

MR.ERICK NYONI advice by saying that, it is much better to construct a large cereal grain Market simply because Ruvuma Region is among of the five big Regions in our country which are producing high amount of cereal crops especially maize.

MR. STEFANO SKAUMU advised that, the government should also construct the road from Majengo to Ruvuma ward, because nowadays there is health centre (Ruvuma Health Centre) at Ruvuma ward been constructed and they expect that majority number of patient from different areas will delivery at that health centre. Not only that but also there are high number of people are living at that area.

MR.KASIMU NGALI advised that,it is much better to have rice processing industry project which will be running by disabled people themselves so as to make them well organized and cooperative towards rising their income.

MR.MAIMBO KAONDE advised that VETA SONGEA should establish disabled program UNIT particularly for blind people, also he added by saying that implementation of all those projects will be helpful to buitness of the Songea Municipal council.

In this Meeting the following projects were initiated after discussion with stakeholders;

- Construction of large cereal grain Market.
- Construction of tarmac road from Majengo ward to Ruvuma ward
- Construction of rice processing Industry

Agenda N0.4 Other Business

Mr. ALLY KIPONDA advice that all mentioned projects are good, but he insisted by saying that should put much consideration in drawings of these projects so as to be friendly to all groups especially disabled people.

Mr. MAIMBO KAPONDA said that, the Government should construct truck road outside of the town so as to reduce truck conjunction at the town centre and to have three road ways which are coming in and out within town centre.

Agenda N0.5 Closing the Meeting

The meeting was closed at 13:04 pm by chairman of disabled people he said that, thanks very much to all members for coming and participating fully in this meeting also he added thankfully for coming staffs from Songea Municipal council for involving disabled people in development activities should be done usually.

.....

Chairperson

.....

Secretary

4-02-2020

Date

Appendices 5 Attendance

MRADI WA USHINDANI KATIKA UBORESHAJI WA MIUNDOMBINU KWENYE MIJI YA TANZANIA
(TACTIC)

UPEMBUZI YAKINIFU, USANIFU, TATHMINI ZA ATHARI KWA MAINGIRA NA JAMII, UANDAAJI WA GHARAMA ZA MRADI NA UANDAAJI WA ZABUNI KWA AJILI YA UBORESHAJI WA MIUNDOMBINU KATIKA HALMASHAURI ZA MANISPAA ZA MOROGORO, SONGEA, SUMBAWANGA NA MBEYA (TACTIC KANDA Na: 3)

MAHUDHURIO KWA AJILI YA: MIKUTANO, USHAURI NA MAHOJIANO

MSHAURI:............NORPLAN

HALMASHAURI YA MANISPAA/JIJI: SONGEA

MTAA/KATA: LILAMBO

Na	JINA	TAASISI	WADHIFA	SIMU Na:	SAHIHI	TAREHE
1	MONIKA L. NYANGU		KATIBU TAWI	0756712013	M. Nyangu	30-12-2021
2	ARON A. GOLYAMA		MKITI TAWI	0768808682	[illegible]	30/12/2021
3	ABUNUASI M. PILIKANA		M.E.O-LILAMBO	0769-333136	[illegible]	30/12/2021
4	MARY A. SAGIMBA		MEO-LILAMBO	0786-337771	[illegible]	30/12/2021
5	ANSILA G. KANDUTA		MKITI CCM TAWI LA	0763432642	A. Kanduta	30/12/2021
6	ANNA R. MBUNDA		UCCM KATA	0757946885	[illegible]	30/12/2020
7	EDESIUS D. KOMBA		MSTAAFU	0673037870	[illegible]	30/12/2021
8	JAMES KAVISHE		MEO-SINAI	0763332274	[illegible]	30/12/2021
9	ROMANUS P. LUAMANO		K/UVCCM KATA	0622962308	[illegible]	30/12/2021
10						

AFISA MTENDAJI KATA YA LILAMBO

MRADI WA USHINDANI KATIKA UBORESHAJI WA MIUNDOMBINU KWENYE MIJI YA TANZANIA
(TACTIC)

UPEMBUZI YAKINIFU, USANIFU, TATHMINI ZA ATHARI KWA MAINGIRA NA JAMII, UANDAAJI WA GHARAMA ZA MRADI NA UANDAAJI WA ZABUNI KWA AJILI YA UBORESHAJI WA MIUNDOMBINU
KATIKA HALMASHAURI ZA MANISPAA ZA
MOROGORO, SONGEA, SUMBAWANGA NA MBEYA (TACTIC KANDA Na: 3)

MAHUDHURIO KWA AJILI YA: MIKUTANO, USHAURI NA MAHOJIANO

MSHAURI:............ NORPLAN

HALMASHAURI YA MANISPAA/JIJI: SONGEA

MTAA/KATA: LILAMBO

Na	JINA	TAASISI	WADHIFA	SIMU Na:	SAHIHI	TAREHE
1	FRENK D. MATENGA	LILAMBO B	KTAWI LILAMBO 'B'	0766695983	[signature]	30/12/2021
2	ABRAHAM LUOGA	〃	M/KITI MTAA	0693032560	A.Luoga	30/12/2021
3	SELEMANI HALILE	MANGUA	M/KITI S/MTAA	0627304309	[signature]	30/12/2021
4	MARY SILENGE	LUWAWASI	M/KITI - MTAA	0756499298	M.Silenge	30/12/2021
5	AMINA L MKURUCHI	LIKUYU FUSI	M/KITI / MTAA	0742676826	A.Mkuruchi	30/12/2021
6	MSANGI SHABANI	LILAMBO "A"	M/KITI WA ULEZI	0755217452	[signature]	30/12/21
7	KALISTUS MPANGALA	LILAMBO 'A'	MJUMBE	0747103750	Mpangala	30/12/2021
8	ROMWARDY E. KOMBA	LIKUYU FUSI	M/KITI CCM TAWI	0753692759	R. Komba	30/12/2021
9	KAWAIDA Nyoni	Lila B	M/KITI MAZAZI	0672627790	K.Nyoni	〃 〃 〃
10	AGUSTA R. MAPUNDA	LILAMBO	KATIBU UWT KATA	0755756195	A.Mapunda	30/12/2021

AFISA MTENDAJI KATA YA LILAMBO

MRADI WA USHINDANI KATIKA UBORESHAJI WA MIUNDOMBINU KWENYE MIJI YA TANZANIA
(TACTIC)

UPEMBUZI YAKINIFU, USANIFU, TATHMINI ZA ATHARI KWA MAINGIRA NA JAMII, UANDAAJI WA GHARAMA ZA MRADI NA UANDAAJI WA ZABUNI KWA AJILI YA UBORESHAJI WA MIUNDOMBINU KATIKA HALMASHAURI ZA MANISPAA ZA MOROGORO, SONGEA, SUMBAWANGA NA MBEYA (TACTIC KANDA Na: 3)

MAHUDHURIO KWA AJILI YA: MIKUTANO, USHAURI NA MAHOJIANO

HALMASHAURI YA MANISPAA/JIJI: SONGEA

MSHAURI:............ NORPLAN

MTAA/KATA..........LILAMBO

Na	JINA	TAASISI	WADHIFA	SIMU Na:	SAHIHI	TAREHE
1	ANTONIA LUGOME		MJUMBE	0757668700	A.LUGOME	30-12-2021
2	CLARA CHAWE		MJUMBE	0713548604	C.Chawe	30-12-2021
3	JOYCE E. SANGANA		K/MWENEZI.L.B	0692744116	[signature]	30-12-2021
4	DANIEL SAMSON		MTUNZA VIFAA MRADI	0620364209	[signature]	30.12.2021
5	STELA.H. LUOGA		K/TAWI C.C.M.	0693376443	S.LUOGA	30.12.2021
6	ISMAIL.I.SELEMANI		AFISA KILIMO	0786894127	[signature]	30/12/2021
7	IBRAHIM.E. NJELEKELA		MEO-MANGUA	0629537298	[signature]	30/12/2021
8	SAIDI .S. MAPILO		MEO-Likuyufusi	0763-802322	[signature]	30/12/2021
9	FRANCIS MBELE		MJUMBE	0768358034	[signature]	30/12/21
10	EDGAR NDUNGURU		MEO-LILAMBO	0714382867	[signature]	30/12/2021

AFISA MTENDAJI
KATA YA LILAMBO

MRADI WA USHINDANI KATIKA UBORESHAJI WA MIUNDOMBINU KWENYE MIJI YA TANZANIA
(TACTIC)

UPEMBUZI YAKINIFU, USANIFU, TATHMINI ZA ATHARI KWA MAINGIRA NA JAMII, UANDAAJI WA GHARAMA ZA MRADI NA UANDAAJI WA ZABUNI KWA AJILI YA UBORESHAJI WA MIUNDOMBINU KATIKA HALMASHAURI ZA MANISPAA ZA
MOROGORO, SONGEA, SUMBAWANGA NA MBEYA (TACTIC KANDA Na: 3)

MAHUDHURIO KWA AJILI YA: MIKUTANO, USHAURI NA MAHOJIANO

HALMASHAURI YA MANISPAA/JIJI: SONGEA ..... MSHAURI:..... NORPLAN

MTAA/KATA..... LILAMBO .....

Na	JINA	TAASISI	WADHIFA	SIMU Na:	SAHIHI	TAREHE
1	JOHN K. LUOGA		M/KITI LILAMBO 'A'	0788661155		30/12/2021
2	LUCIUS N. MITI		M/KITI TAWI LILAMBO	0768934794		30/12/2021
3	HALIMA YAZIDU		MEO-MYAGEYA	0690594835		30/12/2021
4	EDITHA BALTHAZARY	ADM	MEO-MWANAMKUU	0755040591		30/12/2021
5	JOHN R. LUAMBANO		MJUMBE	0718748136		30/12/2021
6	HAMISI S. SIAMBALY		MJUMBE	0746202510		30/12/2021
7	HERBERT M. MAPUNDA	LILAMBO "A"	MZEE MSTAAFU	0754179640		30/12/2021
8	ALEXANDER MBUNDA	LILAMBO 'A'	MJUMBE	0657008054		30/12/2021
9	CHRISTOFA ZAKAYO	LILAMBO B.	MJUMBE	0715750149		30/12/2021
10	MBWANA ALLY MUTO	LILAMBO		0767 4508		30/12/2021

OFISA MTENDAJI
KATA YA LILAMBO

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MRADI WA USHINDANI KATIKA UBORESHAJI WA MIUNDOMBINU KWENYE MIJI YA TANZANIA
(TACTIC)

UPEMBUZI YAKINIFU, USANIFU, TATHMINI ZA ATHARI KWA MAINGIRA NA JAMII, UANDAAJI WA GHARAMA ZA MRADI NA UANDAAJI WA ZABUNI KWA AJILI YA UBORESHAJI WA MIUNDOMBINU KATIKA HALMASHAURI ZA MANISPAA ZA MOROGORO, SONGEA, SUMBAWANGA NA MBEYA (TACTIC KANDA Na: 3)

MAUDHURIO YA KIKAO   KATA YA LILAMBO

MAHUDHURIO KWA AJILI YA: MIKUTANO, USHAURI NA MAHOJIANO

HALMASHAURI YA MANISPAA/JIJI: LILAMBO SONGEA.

MSHAURI:............ NORPLAN

MTAA/KATA........LILAMBO..................

Na	JINA	TAASISI	WADHIFA	SIMU Na:	SAHIHI	TAREHE
1	TUMWEBAZE THOMAS	NOR-PLAN	SOCIAL EXPERT	0754434828		30th/12/2021
2	RAMADHAN KADONDORO	NOR PLAN	ENVIRONMENTAL EXPERT	0746165078		30.12.2021
3	JOYCE YESSE	NORPLAN	ENVIRONMENTAL EXPERT	0742768976		30.12.2021
4	BERTRAM NJELEKELA	SONGEA MC	MEMO	0762831604		30/12/2021
5	MENSA A. NGELANGELA	SONGEA MC	SCDO	0625-344502		30/12/2021
6	BENHERY CHAMCHA	SONGEA MC	MCHUMI	0769162008		30/12/2021
7						
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AFISA MTENDAJI
KATA YA LILAMBO

Appendices 6 Certificate of Occupancy

THE UNITED REPUBLIC OF TANZANIA
MINISTRY OF LANDS, HOUSING AND HUMAN SETTLEMENTS DEVELOPMENT

Telegrams: LANDS
Telephone: 2121241/9
In reply please quote:
Ref. No. LR/T 1605

LAND REGISTRY,
P.O Box 1391,
Dar es salaam.
Date: 22 Feb, 2022

SONGEA MUNICIPAL COUNCIL
P.O Box P.O BOX 14
SONGEA

Sir/Madam,

RE: TITLE NO. 1605 LAND OFFICE NO. 938844
PLOT NO. 174 - 181 BLOCK A AT LILAMBO

I have the honour to enclose herewith duplicate of the Certificate of Title Numbered as above please.

ASST. REGISTRAR OF TITLES

Copy to: Commissioner for Lands
Your LD File No: STC/39848 refers

CERTIFICATE OF OCCUPANCY

(Under Section 29)

Date of Issue:
Title Number: 1605 L.R.
Land Office Number: 938844
Land: PLOT NO. 174 - 181 BLOCK 'A' LILAMBO IN SONGEA MUNICIPALITY.

Term: NINETY NINE YEARS.

TLH No: 1605 RLW
REGISTERED ON 22.02.2022
EPT. DEA M
Senior Asst. Registrar of Titles

Land Form No. 22
TANGANYIKA STAMP DUTY ACT
Stamp Duty Shs: 100/= Paid
On Original Receipt Shs: 92204607468
18.02.2022
Stamp Duty Officer

TANGANYIKA STAMP DUTY ACT
Stamp Duty Shs: 9900/= Paid
Receipt No: 92204607458 4684
of 18.02.2022
Stamp Duty Officer

THE UNITED REPUBLIC OF TANZANIA

THE LAND ACT, 1999
(NO. 4 OF 1999)

CERTIFICATE OF OCCUPANCY

(Under Section 29)

Title No. 1605 RLW
L.O. No.958844
STC No.39848.

The 22nd day of February Two thousand and Twenty Two.

THIS IS TO CERTIFY that **SONGEA MUNICIPAL COUNCIL** of P.O. Box, 14, **SONGEA Established under the LOCAL GOVERNMENT (URBAN AUTHORITIES) ACT (Cap. 288 R.E 2002)** (hereinafter called "the Occupiers") **is** entitled to the Right of Occupancy (hereinafter called "the Right") in and over the land described in the Schedule hereto (hereinafter called "the Land") for a term of **Ninety nine** years from the first day of **January, Two thousand and twenty Two** according to the true intent and meaning of the Land Act and subject to the provisions thereof and to any regulations made thereunder and to any enactment in substitution there for or amendment thereof and to the following special conditions:-

1. The Occupier having paid rent up to the thirteenth day of **June, 2022**, shall hereafter pay rent of shillings **Nine hundred twenty six thousand seven hundred ninety six (Tshs.926,796,/=) only** a year in advance on the first day of July in every year of the term without deduction PROVIDED that the rent may be revised by the Commissioner for Lands.

2. The Occupier shall:-

   (i) **Be responsible** for the protection of all **beacons** on the land throughout the term of the Right. **Missing beacons** will have to be re-established at any **time at the Occupier's expenses as assessed** by the Director **responsible for Surveys and Mapping.**

(ii) Do everything necessary to preserve the environment and protect the soil and prevent soil erosion on the land and do all things which may be required by the authorities responsible for environment and to achieve such objective.

(iii) Building to be in permanent materials.

(iv) Building plan to be submitted to the **Songea Municipal Council** within six months from the date of the commencement of the Right.

(v) Building construction to begin within six months after approval of building plans.

(vi) Building to be completed within Thirty six (36) months from the date of the commencement of the Right.

3 The Occupiers shall further:-

i) Make and maintain on the land throughout the term adequate arrangements for water supply, drainage and disposal of trade refuse and effluent to the satisfaction of the Authority;

ii) Make and keep all the buildings on the land rat-proof and carry out such measures as the Medical Officer of Health for the Authority may require for this purpose;

iii) Provide and maintain on the land such ablution facilities and take and maintain such hygienic measures as may be required by the said medical Officer of Health.

iv) Fence the land with a good quality fencing, car parking spaces shall be provided as required by the Authority;

v) Loading and unloading facilities shall be provided within the boundaries of the land.

4. **USER**: The Land and building to be elected thereon shall be used for **Special Economic development Area purposes only,** Use Group **'W' Use class (a)** as defined in the Urban Planning (Use Groups and Uses Classes) Regulations, 2018.

5. The Occupier shall not assign the Right within three years of the date hereof without the prior approval of the Commissioner.

6. The Occupier shall deliver to the Commissioner notification of disposition in prescribed form before of at the time the disposition is carried out together with all premia, taxes and dues prescribed in connection with the disposition.

7. The President may revoke the right for good cause and in public interest.

SONGEA MUNICIPALITY

INSERT SHOWING DETAILS OF PLOT

N

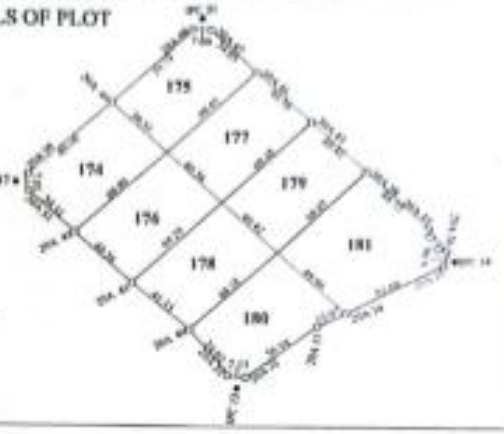
LOCATION LILAMBO

BLOCK " A "

PLOT 174 — 181

L .O. No 958844

AREA 23764 Sq.m.



This plan is prepared in accordance with Registered plan No 120735 is approved for the purpose of L[illegible] ordinance

For Director of Surveys and Mapping

Date 15/2/2022

Ministry of Lands,Housing and Human Settlement Development DODOMA

The Issue of this plan Implies no guarantee or admission of title of Government.

SCHEDULE

ALL that land known as **Plot No 174-181 Block 'A'** situated at **LILAMBO** in **Songea Municipality** containing **Twenty three thousand seven hundred sixty four (23,764) square meters** as shown for identification only edged **red** on the plan attached to this Certificate and defined on the registered Survey Plan Numbered **120735** deposited at the Office of the Director for Surveys and Mapping at Dodoma

Given under my hand and my official seal the day and year first above written

ASSISTANT COMMISSIONER FOR LANDS

The within named **SONGEA MUNICIPAL COUNCIL** hereby accept the terms and conditions contained in the foregoing Certificate of Occupancy.

SEALED with the COMMON SEAL of the said

THE SONGEA MUNICIPAL COUNCIL who is

and DELIVERED by presence of Us.

This 16 day of February 2022

Witness's:
Name: MICHAEL LEODGAR MBANO
Signature:
Postal Address: 14 SONGEA.

Qualification: MAYOR

Name: Hr Frederick J. Sagamiko
Signature:
Postal Address: 14, Songea

Qualification: Municipal Director

Appendices 7 Emergency Response Plan

2.4 Service design.

2.4.1 Electrical System Design.

The electrical design is based on the relevant architectural drawings, the schematic utilities plan, all other drawings to be provided by equipment supplier, and the Design Specification Files.

Specifications for all the works have been prepared including calculations for power cable, main panel and subpanel selections. The design of electrical services design considerations is compatible with the technical specifications of the utility services of the district, as well as with the building codes in force in Tanzania

2.4.1.1 Electrical Design.

Design standards and codes of practice to which have been used includes the following.

- 16th Edition of IEE wiring Regulations in Building – BS7671:2008;
- IEC Standards;
- British Standards and Code of Practice;

During design, selection of the equipment and all components was done in a way that they are suitable for operation in ambient conditions of 5 Deg to 40 Deg and up to 98% relative humidity either in an unheated ventilated building or in open air.

The power supply is designed to 400 Volts, 50 Hz, three phase, 4 wire system 230 Volts, 50Hz. Single phase. The switchgear is designed in a way that they are capable of withstanding the system fault level at the place of installation. This is designed throughout to secure safety during operation, inspection, cleaning and maintenance and is arranged in such a way that it minimize the risk of fire arising and spreading.

All PVC conduits including their connecting accessories for carrying the cables proposed in the design must be of fire retardant. All armored cables considered in this design is of thermosetting type.

To consider green environment design, LED lights have been considered inside the building while solar powered lights is considered for the site areas.

The illumination level for the different areas has been designed by considering lighting of different wall surfaces, natural light available particularly at corridor intersections. Also, the use of natural light reduces costs by balancing brightness patterns. The emergence lights and emergency exit sign lights were used in corridors and exit paths as they required.

The Relux Pro software was used to modal all the required lux level in all rooms as well as in the site.

2.4.1.2 Fire Detection.

The fire detection and alarm system comprise of ionized smoke and heat sensors, integral sounder units, manual call points and interface units.

The fire detection and alarm system in the Administration building is centralized system and designed to facilitate accurate identification of the source of heat / smoke / fire in their early stages to minimize occurrences of false alarms due to faulty equipment, electrical transients, system faults etc. Administration Building is designed with analogue addressable system.

For the facility buildings fire detection is design as well. The conventional system is used for the facility buildings with most of the closure building being share the common conventional fire detection panel. However, all facility building will be linked to the main Administration Fire detection system.

The minimum sound level of a sounder device is considered to be not more than 65dB (A) above a background noise (if lasting more than 30 seconds) and at a frequency between 500Hz and 1000Hz. The design also consider that a person should will not travel more than 45m along an escape route to reach a manual call point.

In this design coverage dimensions used for heat and smoke detectors is taken as follows:

i. Smoke: 5m to wall / 10m between detectors
overage 100m2.

ii. Heat: 3.5m to wall / 7m between detectors

Coverage 50m2

According to the current version of the BS 5839 Part 1, fire resistant cables are considered for all critical circuits, this includes detection, sounders and mains supply.

Appendices 8 Geotechnical Study Summary Report

5. Geotechnical Investigation

5.1 Introduction

Geotechnical Investigation for Lilambo industrial park and upgrading of Manzese A & B markets was a component of the project for Feasibility Study, Urban Design, Detailed Engineering Design, Environmental and Social Due Diligence, Preparation of Cost Estimates and Bidding Documents for Urban Infrastructure Investments for Morogoro, Songea, Sumbawanga and Mbeya Councils (TACTIC ZONE 3) in Songea. The scope of the assignment also involved the architectural and structural design of the two mentioned markets as well as proposed construction of Lilambo industrial park in Songea municipality.

This report summarizes the findings and observations obtained from the field and laboratory testing. The site work also involved Excavation of Trial Pits to 2m to 3m depth from the ground surface or refusal, profiling and sampling and performing Dynamic Probing Super Heavy (DPSH) Test. The field investigations were carried out in June to July 2022 in accordance with the British Standard Specifications (BS 5930:1999+A2:2010: Code of Practice for Site Investigation) and ISO 22476-2:2005 Field testing — Part 2: Dynamic probing.

The collected soil samples from trial pits were sent to Norplan Soil Mechanics Laboratory for testing. The tests included Classification tests (particle size distribution analysis, atterberg limits, linear shrinkage), shear strength tests and chemical tests for soil samples. The laboratory testing was carried out in accordance to BS 1377:1990.

The report also provides details of the tests carried out, their analysis and foundation recommendations.

5.2 Objectives

The main objectives of the ground investigation were to determine the probable sub surface conditions such as stratification, denseness or hardness of the strata and position of groundwater.

5.3 The Site Geology

5.3.1 Site location

The sites were located in Songea Municipal. Location of Trial Pits and DPSH Points is given in the form of coordinates in Table 5-1.

5.3.2 Geological Outline

Regionally Songea is within the Usagaran (Mozambique belt) Proterozoic system which principally comprises high grade (amphibolite grade) metamorphic rocks of both sedimentary and igneous origin ranging from schists to gneisses, including marbles, amphibolite, graphitic schist, mica and kyanite schist, acid gneisses, hornblende, biotite and garnet gneisses, quartzite and granulites which are overlain by Cretaceous sediments in the east and Karoo in south west. Structural trends of the Usagaran are mainly north-south.

Rocks in Usagaran system are well known for hosting Gold, Nickel, Copper, different gemstones such Tourmaline, Red garnet, Tanzanite, and high-grade coarse graphite flakes in the country. Several other graphite-bearing gneisses are reported within or near the Nachingwea granulite terrain.

5.4 Applicable standards

The followings standards are applied:

- BS 5930:1999 + A 2: 2010: Code of practice for site investigations
- ISO 22476-2:2005: Field testing — Part 2: Dynamic probing.
- BS 1377:1990; Method of test for soils civil engineering Purposes

5.5 Field Investigation

The scope of work included test pit excavations to depths of 3.0m below the ground level or refusal and performing Dynamic Probing Super Heavy (DPSH) Tests.

The actual locations of investigation points were done using handheld GPS and the coordinates indicated in the layouts in Appendix 1. The coordinates for DPSH and test pit locations are presented in

Table **5-1** below.

Table 5-1, Investigation Points Coordinates

Point ID	Depth below GL (m)	Coordinates (m) in WGS 84		Remarks
		Eastings	Northings	
TP 1	2	775013.0	8819488.0	Lilambo Industrial Park
TP 2	2.1	775024.0	8819508.0	
TP 3	2.2	775046.0	8819614.0	
DPSH 1	11.8	774973.8	8819556.5	
DPSH 2	9.6	775062.8	8819571.0	
DPSH 3	11.8	775127.5	8819603.9	
TP 1	2.5	789330.4	8818920.3	Manzese A Market
TP 2	2.4	789347.1	8818868.2	
TP 3	2.6	789399.2	8818805.6	
DPSH 1	11.8	789278.6	8818862.5	
DPSH 2	11.8	789415.4	8818857.2	
TP 1	2.3	789352.2	8818763.4	Manzese B Market
TP 2	2.1	789383.9	8818754.5	
TP 3	2.4	789353.6	8818727.0	
DPSH 1	11.8	789362.4	8818742.1	

5.5.1 Test Pits

Three (3) Trial pits were done at each site making a total number of nine (9) Trial pits in Songea Municipality. Each Trial pit was dug to 3.0m depth below the existing ground level or refusal by manual labours.

Generally, for each test pit the following was carried out;

- Profile description of subsoil layers,
- Taking a coloured picture of the profile
- Taking a representative sample of the existing subgrade layer for subsequent laboratory testing,

- Recording level of ground water table in case encountered.

Selected trial pits photos for Songea Municipal Council sites are presented below;

Figure 5-1(a) –Selected trial Pit (TP01 & TP02) photos at Manzese A Market

Figure 5-1(b)–Selected trial Pit (TP01 & TP02) photos at Manzese B market.

Figure 5-1(c)–Selected trial Pit (TP02 & TP03) photos at the proposed Lilambo industrial Area.

5.5.2 Dynamic Probing Super Heavy (DPSH) Test

DPSH test is useful for continuous assessment of subsurface strata throughout the depth of investigation. The test involved driving a disposable cone into the ground using a 63.5kg hammer falling through 76cm height. The blow counts were recorded for each 20cm advance into the ground according to ISO 22476-2:2005 Field testing — Part 2: Dynamic probing. X Selected DPSH site photos for Songea Municipal Council sites are presented in figure 5.2 below, the Depth Vs Blow counts plots for each DPSH Test are presented in section 5.6.2 below.

Figure 5-2 –Selected DPSH photo at Lilambo Industrial Area and Manzese A market

5.6 Investigation Results

5.6.1 Subsurface Conditions

This section briefly describes the subsoil strata encountered at site. The detailed soil conditions are described in logs presented in Appendix G. Test pits encountered the following general succession of strata presented below.

5.6.1.1 Borehole Profiles

a) **Songea Industrial Park - Pit 1**

0.00 – 2.00m	Dry, reddish brown, sandy CLAY of intermediate plasticity

b) **Songea Industrial Park - Pit 2**

0.00 – 2.10m	Dry, reddish brown, sandy CLAY of intermediate plasticity

c) **Songea Industrial Park - Pit 3**

0.00 – 2.20m	Dry, reddish brown, sandy CLAY of intermediate plasticity

d) **Manzese A Market - Pit 1**

0.00 – 0.35m	Soil Garbage
0.35 – 2.50m	Dry, light red, sandy SILT of intermediate plasticity

e) **Manzese A Market - Pit 2**

0.00 – 0.20m	Soil Garbage
0.20 – 1.80m	Moist, Light red, Sandy SILT of intermediate Plasticity
1.80 – 2.40m	Moist, light red, Clayey Sandy GRAVEL of intermediate Plasticity

f) **Manzese A Market - Pit 3**

0.00 – 0.20m	Soil Garbage
0.20 – 2.60m	Moist, greyish red, Sandy SILT of intermediate Plasticity

g) **Manzese B Market - Pit 1**

0.00 – 0.30m	Dry, broken blocks plus garbage
0.30 – 2.30m	Moist, darkish red, Sandy CLAY of intermediate Plasticity

h) **Manzese B Market - Pit 2**

0.00 – 0.25m	Soil garbage
0.25 – 2.10m	Moist, dark red, Sandy CLAY of high Plasticity

i) **Manzese B Market - Pit 3**

0.00 – 0.70m	Soil Garbage
0.70 – 1.70m	Moist, dark red, Gravelly Sandy CLAY of high Plasticity

1.70 – 2.40m Moist, dark red, Clayey Sandy GRAVEL of high plasticity

5.6.2 Dynamic Probing Super Heavy (DPSH) Test

The Charts of Depth Vs Blow counts for each Dynamic Probing Super Heavy (DPSH) for all sites in Songea municipality are presented below.

i. Lilambo Industrial Park Site

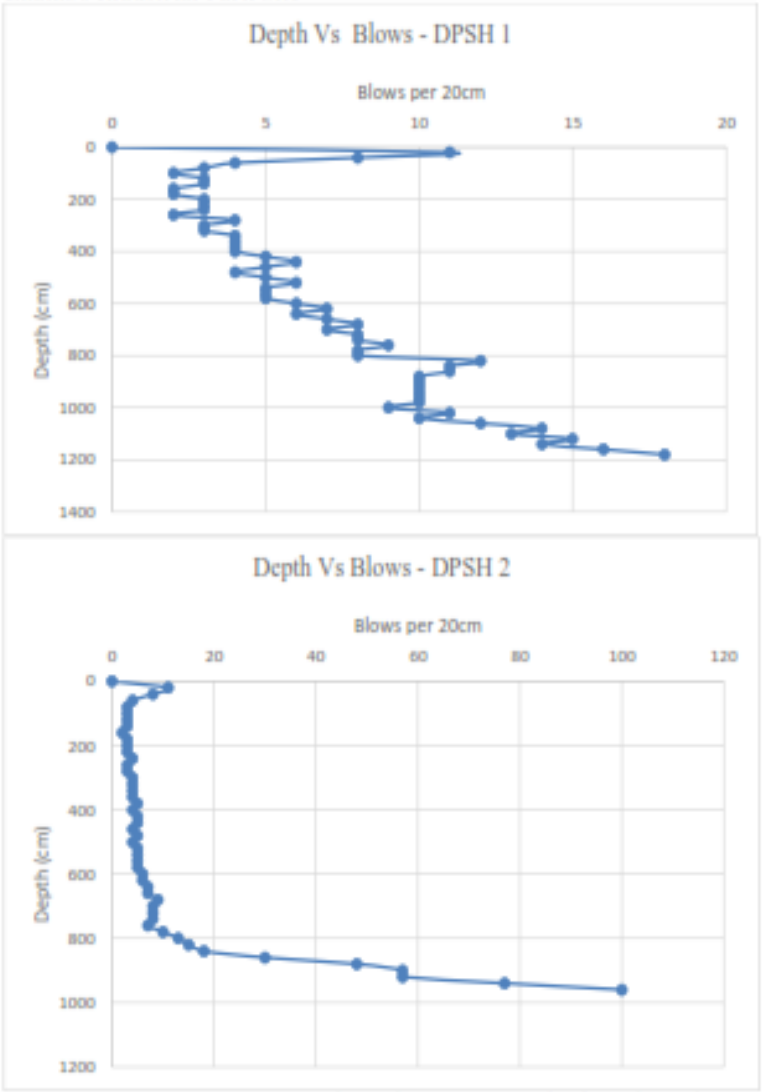


*Figure **5-3 (a)** DPSH 01&02 - Depth Vs Blow Count for Lilambo Industrial Area*

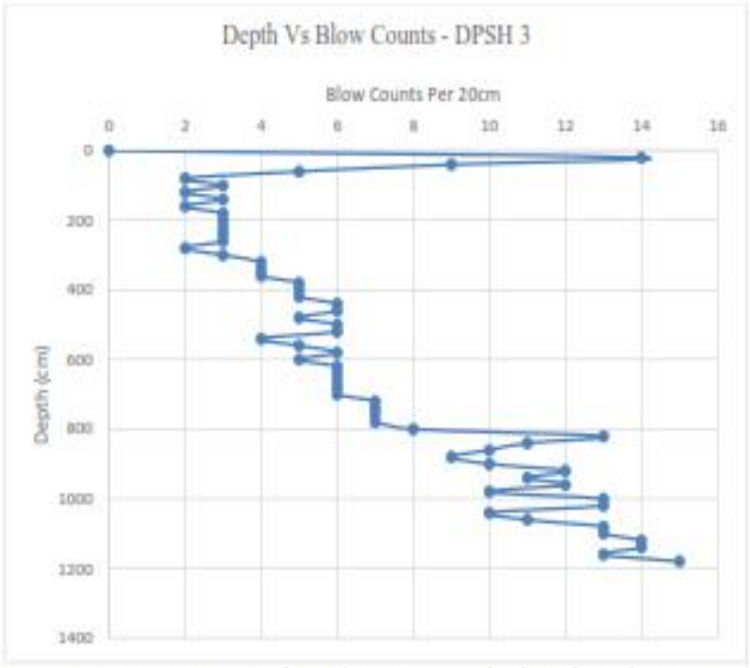


Figure 5-3 (b) DPSH 03 - Depth Vs Blow Count for Lilambo Industrial Area

ii. Manzese A Market Site

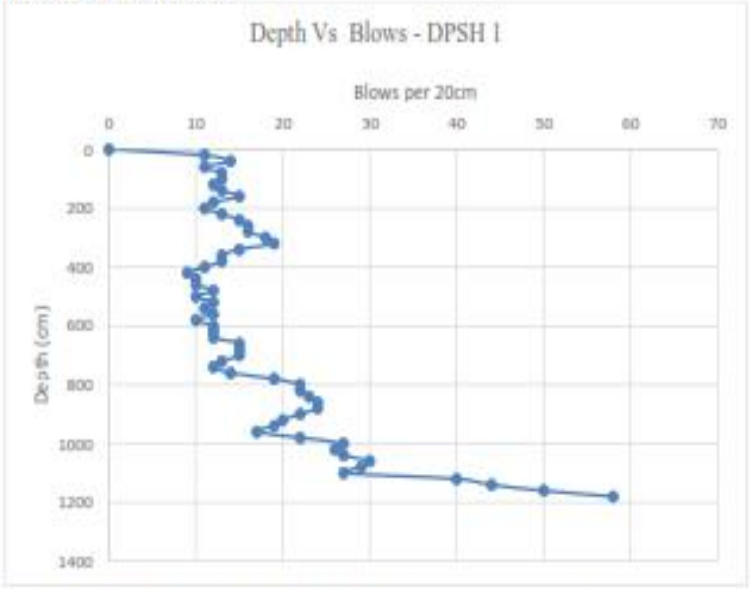


Figure 5-3 (c) DPSH 01 - Depth Vs Blow Count for Manzese A market

5.6.3 Groundwater Observation

During the subsurface investigation, ground water table was not encountered across all locations.

5.7 Laboratory Test results

Laboratory tests were carried out in accordance with the British Standard Specifications (BS1377:1990). The tests carried out include: -

- Particle size distribution analysis
- Shear strength tests
- Chemical Tests on water samples

The discussion on the Laboratory test results is referring to the results presented in Appendix I of this report.

a) Sieve analysis

The particle size distribution indicates that the site soils are distributed across the sites as following;

Lilambo Industrial Park Site – The result indicate the soil is uniformly distributed and is Sandy Clay

Manzese A Market Site - The soils from this site indicated to be Sandy Silt mainly. Clayey Sandy Gravel was also encountered.

Manzese B Market Site – The results indicate the soils are mainly Sandy Clay. Clayey Sandy Gravel also exist at this location.

b) Atterberg limits

Lilambo industrial Park site indicated a plasticity index (PI) of 18.6 – 20.8% (Intermediate plasticity), Manzese A Market indicated 19 – 21% (Intermediate plasticity) and Manzese B market site indicated a PI of 20.6 – 22.5%(Intermediate to high plasticity). Therefore, the soils from these sites possess some significant

water retention properties hence poor drainage is anticipated in these sites.

c) Shear Strength test

Direct shear test results for each site are summarized in the table 5-2.

Table 5-2, Summary of Direct Shear Test Results

Soil Type	Cohesion (kN/m²)	Angle of Friction (Deg)
Lilambo industrial Park		
Sandy Clay	22 - 28	29 - 32
Manzese A market		
Sandy Silt	29 - 38	25 - 27
Clayey Sandy Gravel	29	34
Manzese B Market		
Sandy Clay	34 - 38	25 - 26
Sandy Clay	26	33
Clayey Sandy Gravel	13	38

d) Chemical Test

The chemical Tests for Soil samples from Soko Matola, Grain & fruit market, Soweto Market and Central and Mini Bus Stand are as summarized in table 5-3 below.

Table 5-3, Summary of chemical tests on soil samples

Trial Pit ID	Sample Depth (m)	Chloride Content (mg/kg)	Sulphate Content (mg/kg)	pH
Lilambo Industrial Park				
TP 1	0.20 – 2.00	2	1.7	6.19
TP 3	0.20 – 2.20	2	1.5	6.97
Manzese A Market				
TP 1	0.35 – 2.50	33.8	28.0	6.77
TP 2	1.80 – 2.40	12.0	8.94	6.35
Manzese B Market				
TP 1	0.30 – 2.30	47	39	6.78
TP 3	1.70 – 2.40	27.2	22.4	7.21

According to BS 8500-1:2015+A2:2019 and DIN 4030, these values are non-aggressive. Therefore, no further recommendations are necessary for concrete cover to the reinforcement and ordinary Portland cement can be used in the construction under the site conditions.

5.8 Soil Parameters

The soil parameters have been assigned based on description of the strength in soil profile, index property test results, empirical relationships with DPSH test results, and on laboratory test results.

Based on the field and laboratory testing carried out during the investigations, the following design parameters are assigned to different strata as summarized in the following table:

Table 5-2, Soil Parameters

Soil Type	Unit Weight (KN/m^3)	Cohesion (KN/m^2)	Angle of friction (deg)
Lilambo Industrial Park			
Sandy Clay	18	22	29
Manzese A Market			
Sandy Silt	17	29	25
Sandy Gravel	19	29	34
Manzese B Market			
Sandy Clay	18	26	25
Sandy Gravel	19	13	38

5.9 Allowable Soil Pressure

The allowable bearing pressure is a function of both soil properties, type and depth of particular foundation. Bearing Capacity Has been checked using both DPSH Blow counts and Laboratory test results. In both Cases Meyerhof Equations were used to determine bearing capacity.

Meyerhof (1951, 1963) proposed a bearing-capacity equation similar to that of Terzaghi but included a shape factor s_q with the depth term N_q. He also included depth factors d_i,- and inclination factors i_i,- for cases where the footing load is inclined from the vertical.

Meyerhof Equation for ultimate bearing capacity (vertical foundation loads) is given below: -

$q_{ult} = cN_c s_c d_c + \overline{q} N q S q d q + 0.5\gamma B' N_\gamma s_\gamma d_\gamma$ ..... (Using Laboratory soil test results)

Where,

q_{ult} = Ultimate bearing capacity (kPa)

C = Cohesion (kPa)

B' = Foundation width (m)

$\bar{q}$ = Effective Overburden pressure at the foundation depth (kPa)

γ = Unit weight of soil (kN/m^3)

N_c, N_q, N_γ = Foundation factors

s_c, s_q, s_γ = shape factors

d_c, d_q, d_γ = Depth factors

The factor of safety of 3 to 5 is usually applied to the obtained ultimate bearing capacity to obtain allowable bearing Capacity.

Meyerhof Equation for the SPT Test allows the allowable bearing capacity of soil to be estimated using Dynamic Probing Super Heavy (DPSH) Test. Meyerhof's Equation for the bearing capacity using SPT Test is indicated below.

$$q_{all} = \left[\frac{N}{0.08}\right] * \left[\frac{(B+0.3)}{B}\right]^2 * K_d \qquad \text{for: } 0 \le D \le B \text{ and } B > 1.2\text{m}$$

Where: - q_{all} = *Allowable bearing pressure for 25mm settlement, kN/m²*

$K_d = 1 + 0.33(D/B) \le 1.33$ *[as suggested by Meyerhof (1965)]*

N = *Design N Value*

B = *Foundation width, m*

D = *Foundation depth, m*

In this case, DPSH Blow counts have been used as an estimate of allowable bearing capacity. For the case of the water table being within the influence zone of the foundation, a correction should be made by groundwater correction factor C_w.

For computation of allowable bearing capacity; consideration has been made for shallow pad foundations and the results are indicated in the table below. The values in bracket represent bearing capacity from DPSH Blow counts.

Table 5-3, Computed Bearing Capacities (kN/m²) for pad foundation

Foundation Depth (m)	Pad Size (m)	Bearing Capacity (kN/m²)
Lilambo Industrial Park		
1.5	2x2	340 (44)
Soweto Market Site		
2	2x2	240(132)
Manzese A Market		
1.5	2x2	275(100)
Manzese B Market		
1.5	2x2	155(175)

5.10 Conclusion and Recommendations

6.10.1 Conclusions

As a result of field activities carried out, the analysis of in-situ test results and laboratory soil test results, the following engineering conclusions and recommendations have been made:

a) The geotechnical investigation has revealed that the site soils vary from 3 sites. The reader is advised to refer to chapter 5.7 of this report.

b) The bearing capacities for the proposed locations are indicated in table 5-5. The bearing capacities from DPSH Test (which represent in situ soil conditions) seem to be significantly low for the Lilambo Industrial Park, Manzese A & B Markets in Songea municipality.

c) It has been observed that Manzese A & B sites in Songea contain Garbage (See Logs in the Appendix). Attention must be provided to the soils of this nature.

d) Water Table was not encountered across the sites.

e) Dewatering is not anticipated since Ground Water Table was not encountered.

f) The excavated materials of non-plastic nature from the sites may be used as a backfill material.

6.10.2 Recommendations

Based on the conclusions made above the following recommendations are proposed during the implementation of the project:

a) It is recommended that the weak soils be replaced with good gravel materials to an engineered fill of not less than 50cm, well compacted and placed in layers. This improved layer shall lie below the foundation base.

b) The Garbage soils must be entirely removed and replaced with competent fill material, and well compacted in layers to achieve good densification.

c) Drainage vents in the foundations will be required especially where the Clay soils persist.

Appendices 9 Construction Materials Investigation Summary Report

4. Materials Investigations

4.1 Introduction

Natural gravels for selected layers and fill, and densely graded crushed stone base material will be required for the new pavement. The granular materials for pavement layers; both subbase and base course layers has to satisfy strength, durability, grading and atterberg limits requirements. For this project, the C1 subbase layer will require gravels of at least G20 quality material (with modified requirements).

Materials investigations have been carried out along the project road within economic haulage distance. The investigations include sources of natural granular material (borrow pits), sources of hard rock to be used for base material, surface treatment and concrete works (quarries). Also, sources of sand for concrete works and water for construction were also investigated.

4.2 Fill Materials

It is recommended that the materials to be used for fill (of G3 class) or better for layers more than 300mm below the formation level, the fill material should be compacted to 90% BS-Heavy.

4.3 Gravel Sources

4.3.1 General Summary and Utilization

Two (2) gravel material sources in Songea Municipality which are within economic haulage distances were visited, and all gravel sources were investigated during preliminary investigation phase for their suitability and estimation of available quantities. Trial pits were excavated at each borrow pit to a depth of approximately 2.0m or to a hard stratum within the 2.0m depth. Visual assessment of the materials encountered was made and representative samples were taken for laboratory testing. The thickness of overburden and gravel seam was measured.

The following laboratory tests were performed on representative samples taken:

- Sieve Analysis
- Liquid limit LL
- Plastic limit PL

- Moisture Density Relationship
- 3 - Point CBR Test

A summary of laboratory test results on representative samples is presented in table 4-1 below.

Table 4-1, Laboratory Test Results on Representative Samples

BP No.	B/Pit Name	LOCATION	LL	LS	PI	PL	AASHTO class	GM	SWELL	CBR (95%)
1	Subira	Subira	39.30	8.40	15.50	23.80	A-2-6	1.99	0.00	31.37
2	Namanditi	Namanditi	34.70	6.70	13.00	21.70	A-2-6	2.37	0.00	26.57

From the test results of the representative samples taken for laboratory testing, the quality of materials can be summarized as follows:

- All two (2) borrow pits have gravel with CBR greater than 25.0%.

Regarding the test results above, all two potential sources for granular materials have been recommended for the construction of the fill and pavement layers. A summary of laboratory test results for gravel sources is shown in Appendix B.

Appraisal of the natural gravel borrow pits investigated is outlined below.

01. Subira borrow pit

This is an existing borrow pit located in Sinai village, 8.0km from Songea Municipality. Overburden materials are silty soils. The borrow pit is accessible and currently used to maintain the existing project roads as well as for construction of ongoing road projects and for other different fill purposes in Songea Municipality.

Suitable gravel materials are found from a depth of 0.2/0.5m to over 4m seen on hill cut face with an approximate quantity of over 300,000m^3.

The source has the following properties; liquid limit of 39.30%, linear shrinkage of 8.4%, plasticity index of 15.50%, grading modulus of 1.99, CBR% swell of 0.00, material's 4-days soaked CBR was 31.37% at 95% MDD.

The material can be classified as G25 quality material. The material from this borrow pit can be used for construction of fill, improved subgrade and pavement layers.

02. Namanditi borrow pit

This is an existing borrow pit located in Namanditi village, 6.0km from Songea Municipality. Overburden materials are silty soils. The borrow pit is accessible and currently used to maintain the existing project roads as well as for construction of ongoing road projects and for other different fill purposes in Songea Municipality.

Suitable gravel materials are found from a depth of 0.2/0.4 m to over 3.5m seen on hill cut face with an approximate quantity of over 300,000m^3.

The source has the following properties; liquid limit of 34.70%, linear shrinkage of 6.70%, plasticity index of 13.00%, grading modulus of 2.37, CBR% swell of 0.00, material's 4-days soaked CBR was 26.57% at 95% MDD.

The material can be classified as G25 quality material. The material from this borrow pit can be used for construction of fill, improved subgrade and pavement layers.

4.4 Borrow Pit Quantities and Utilization

The following paragraphs contain information of the natural gravel sources that may be available for the project. Although probable, the information provided have to be regarded as a summary of assumptions and verification testing will be necessary at the time of construction.

During construction, the following will be required:

- Confirm by means of onsite testing compliance of the in-situ materials in-between the indicated (tested) test pit positions.
- Identification and distinguishing within the borrow pit area between specific sourcing areas (of different quality).
- Borrowing and stockpiling operations have to be performed diligently. Unsuitable (overburden) material has to be avoided and only gravel that has been tested and that complies with requirements may be used.

4.5 Excavated Materials from Cut Sections

The excavated materials on the cut sections can be used for various constructions works. According to alignment laboratory test results, there are suitable subgrade materials which can be used for fill layers.

The materials have various properties; however, at this stage, the materials have been assessed for common fill that shows CBR % swell of < 2 and materials 4-days soaked CBR of more than 3% at 90% MDD. Tentatively, the material can be classified as G3 quality material, which can be used for construction of fill. During construction, the excavated materials should be stockpiled, retested and classified properly.

4.6 Hardstone Sources

4.6.1 General

Hard stone material will be required for production of aggregate for concrete works, production of base course pavement layer, and production of bituminous surfacing pavement layer. Hard stone samples from the proposed quarry sites were taken for laboratory testing. The following test have been carried out at NORPLAN (T) LTD material testing laboratory in Dar es Salaam.

- Loss Angeles Abrasion
- Aggregate strength – 10% fines value (TFV), dry
- Aggregate strength – 10% fines value (TFV), wet
- Aggregate Crushing Value (ACV)
- Sodium Sulphate Soundness
- Bitumen Affinity
- Aggregates Impact Value
- Soluble salts Contents
- Water absorption

Laboratory test results for rock source are summarized in Appendix C.

01. Mpitimbi Quarry

This is an existing hard stone source/quarry located in Mpitimbi village 20km from Songea Municipality. Currently the quarry is fully operational and used for different constructional purposes within Songea Municipal Council.

It is estimated that the source can yield more than 450,000m³ of crushed aggregates. Samples taken from this source were tested for suitability in bituminous surfacing and concrete works that shows the following results.

- TFV (Dry) 213.2 kN

- TFV (Wet) 185.6 kN
- ACV 18.75%
- Aggregate Impact Value 17.7%
- Apparent specific gravity 2.683%
- Water absorption 0.476%
- Saturated surface dry specific gravity 2.661%

TFV is 213.2KN > 110KN, the ratio of TFV (wet) to TFV (dry) is 87.1% > 75%, water absorption is 0.476% < 2.0%. According to PMDM and Standard Specification for Road Works (SSRW-2000), the aggregates from this source meet the required properties for base course pavement layer, asphalt works and concrete works.

02. Sinai Quarry

This is a new proposed hard stone source/quarry located in Sinai village, about 25km from Songea Town. Currently the quarry site has not started operating, upon operational it is estimated that the source can yield more than 800,000m³ of crushed aggregates.

Samples taken from this source were tested for suitability in bituminous surfacing and concrete works that gave the following results.

- TFV (Dry) 254.4 kN
- TFV (Wet) 214.1 kN
- ACV 16.99%
- Aggregate Impact Value 16.4%
- Apparent specific gravity 2.777%
- Water absorption 0.235%
- Saturated surface dry specific gravity 2.766%
- Bulk specific gravity 2.759%

TFV is 254.4KN > 110KN, the ratio of TFV (wet) to TFV (dry) is 84.1% > 75%, water absorption is 0.235% < 2.0%. According to PMDM and Standard Specification for Road Works (SSRW-2000), the aggregates from this source meet the required properties for base course pavement layer, asphalt works and concrete works.

5.7 Sand Sources

5.7.1 General

Sources of sand were investigated by sampling and performing sieve analysis to ascertain their suitability. The grading of these sources, in comparison with grading envelope specified in BS 822 (1983) shall form the basis for recommending the use of these sources for concrete works. Summary of laboratory tests results for sand sources is shown in Appendix D. During site investigations, only one reliable source was identified and representative sample was taken for laboratory testing.

01. Mwenge Mshindo River sand

This is an existing and the only reliable sand pit source located at Mwenge Mshindo river around 12km from Songea town. The source is easily accessed and is currently utilized in different ongoing projects within Songea Municipality. The material is light brown which is medium to coarse SAND.

A representative sample taken from this source was tested for particle size distribution to ascertain its suitability for usage in concrete works. The grading of this source falls within the grading template specified in BS 822 (1983) and therefore recommended for use for concrete works. A summary of other laboratory test results is as follows;

- Bulk specific gravity……..…..….2.469%
- Saturated surface dry specific gravity…….2.523%
- Apparent specific gravity…….. 2.610%
- Water absorption…..……. 2.182%
- Sand equivalent ……...91.0%
- Organic content……10.24%

5.8 Water Sources

5.8.1 General

There are various permanent and seasonal rivers including water ponds that provide reliable sources of water for construction works especially during rain seasons. During site investigations, two reliable permanent water sources were identified. Representative samples were taken for laboratory testing. The laboratory water test was done in accordance to standard methods for the examination of water samples ASTMC 1602 and APHA et al., 1992.

The following tests have been carried out at University of Dar es Salaam water testing laboratory in Dar es Salaam.

- PH
- Total Alkalinity (mg/l as $CaCO_3$)
- Chlorides (mg/l)
- Electrical conductivity (µS/Cm)
- Total Dissolved Solids (mg/l)
- Total Hardness (mg/l as $CaCO_3$)
- Sulphate (mg/l)
- Magnesium (mg/l)
- Calcium (mg/l)
- Ammonium (mg/l)
- Bicarbonates (mg/l as $CaCO_3$)

Laboratory test results for water sources is shown in Appendix E.

Water Source - 1 (Ruvuma River)

Ruvuma River discharges water throughout the year. Currently, water from this river is used for domestic and construction purposes in Songea town. Ruvuma river can be easily being accessed at many locations within Songea Municipality. Evaluation of water quality from this source was carried out and the results are summarized below.

Table 4-4, Summary of Water Results for Ruvuma River

S/No.	Parameters	Unit	Value	Specification for Concreting: Degree of Aggressiveness			
				DIN 4030			AASHTO
				Slight	Severe	Very Severe	Recommended
1	pH	-	7.42	6.5-5.5	5.5-4.5	<4.5	4.5-8.5
2	Electrical Conductivity	µS/Cm	74.2	N.M	N.M	N.M	N.M
3	Total Dissolved Solids	mg/l	40	N.M	N.M	N.M	N.M
4	Total Hardness	mg/l	17.5	N.M	N.M	N.M	N.M

S/No.	Parameters	Unit	Value	Specification for Concreting: Degree of Aggressiveness			
				DIN 4030			AASHTO
				Slight	Severe	Very Severe	Recommended
5	Total Alkalinity	mg/l	15.0	N.M	N.M	N.M	N.M
6	Sulphates	mg/l	6.0	200-600	600-300	>3000	<1000
7	Chloride	mg/l	9.50	300-600	600-300	>3000	<500
8	Calcium	mg/l	3.28	N.M	N.M	N.M	N.M
9	Magnesium	mg/l	2.76	300-1000	1000-3000	>3000	N.M
10	Ammonium	mg/l	0.38	15-30	30-60	>60	N.M

According to limits set by DIN 4030, AASHTO and Tanzanian standards for various uses, the water source is suitable for drinking and construction works.

Water Source - 2 (Lowisa River)

Lowisa River discharges water throughout the year. Currently, water from this river is used for domestic and construction purposes in Songea town. Lowisa river can be easily being accessed at many locations within Songea town. Evaluation of water quality from this source was carried out and the results are summarized below. Water test results is attached in appendix E.

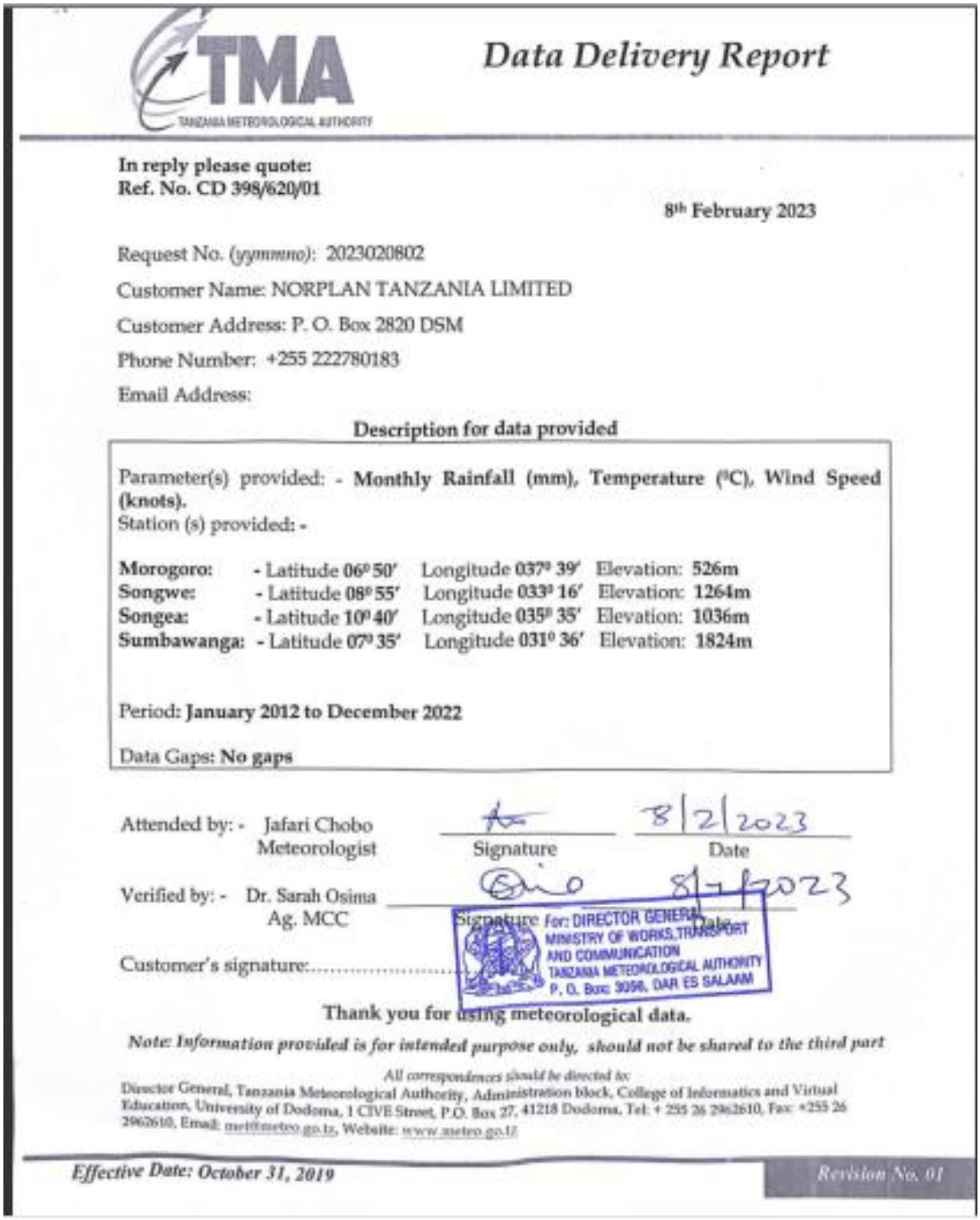
Table 4-5, Summary of Water Results for Lowisa River

S/No.	Parameters	Unit	Value	Specification for Concreting: Degree of Aggressiveness			
				DIN 4030			AASHTO
				Slight	Severe	Very Severe	Recommended
1	pH	-	7.61	6.5-5.5	5.5-4.5	<4.5	4.5-8.5
2	Electrical Conductivity	µS/Cm	102.2	N.M	N.M	N.M	N.M
3	Total Dissolved Solids	mg/l	50	N.M	N.M	N.M	N.M
4	Total Hardness	mg/l	23.0	N.M	N.M	N.M	N.M

S/No.	Parameters	Unit	Value	Specification for Concreting: Degree of Aggressiveness			
				DIN 4030			AASHTO
				Slight	Severe	Very Severe	Recommended
5	Total Alkalinity	mg/l	20.5	N.M	N.M	N.M	N.M
6	Sulphates	mg/l	8.3	200-600	600-300	>3000	<1000
7	Chloride	mg/l	11.5	300-600	600-300	>3000	<500
8	Calcium	mg/l	4.4	N.M	N.M	N.M	N.M
9	Magnesium	mg/l	3.9	300-1000	1000-3000	>3000	N.M
10	Ammonium	mg/l	1.34	15-30	30-60	>60	N.M

According to limits set by DIN 4030, AASHTO and Tanzanian standards for various uses, the water source is suitable for drinking and construction works.

Appendices 10 TMA Climatic Data



TMA
TANZANIA METEOROLOGICAL AUTHORITY

Data Delivery Report

In reply please quote:
Ref. No. CD 398/620/01

8th February 2023

Request No. (*yymmno*): 2023020802

Customer Name: NORPLAN TANZANIA LIMITED

Customer Address: P. O. Box 2820 DSM

Phone Number: +255 222780183

Email Address:

Description for data provided

Parameter(s) provided: - **Monthly Rainfall (mm), Temperature (°C), Wind Speed (knots).**
Station (s) provided: -

Morogoro:	- Latitude **06° 50′**	Longitude **037° 39′**	Elevation: **526m**
Songwe:	- Latitude **08° 55′**	Longitude **033° 16′**	Elevation: **1264m**
Songea:	- Latitude **10° 40′**	Longitude **035° 35′**	Elevation: **1036m**
Sumbawanga:	- Latitude **07° 35′**	Longitude **031° 36′**	Elevation: **1824m**

Period: **January 2012 to December 2022**

Data Gaps: **No gaps**

Attended by: - Jafari Chobo, Meteorologist — Signature — 8/2/2023 Date

Verified by: - Dr. Sarah Osima, Ag. MCC — Signature — 8/2/2023 Date

For: DIRECTOR GENERAL
MINISTRY OF WORKS, TRANSPORT AND COMMUNICATION
TANZANIA METEOROLOGICAL AUTHORITY
P. O. Box 3056, DAR ES SALAAM

Customer's signature:.....

Thank you for using meteorological data.

Note: Information provided is for intended purpose only, should not be shared to the third part

All correspondences should be directed to:
Director General, Tanzania Meteorological Authority, Administration block, College of Informatics and Virtual Education, University of Dodoma, 1 CIVE Street, P.O. Box 27, 41218 Dodoma, Tel: + 255 26 2962610, Fax: +255 26 2962610, Email: metl@meteo.go.tz, Website: www.meteo.go.tz

Effective Date: October 31, 2019 — *Revision No. 01*

SONGEA MONTHLY TOTAL RAINFALL(mm)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2012	286.7	111.4	172.2	58.6	12.3	0.0	0.2	0.0	0.0	0.0	82.7	171.9
2013	281.5	76.3	252.8	114.4	7.1	0.0	0.0	0.0	0.0	18.4	106.6	147.3
2014	384.8	172.7	196.6	141.8	2.8	0.6	0.0	4.0	3.3	24.0	130.2	132.7
2015	306.0	75.2	123.5	86.0	1.3	0.0	0.0	0.0	0.0	3.2	36.5	220.6
2016	295.1	249.9	158.6	151.0	0.0	0.0	0.0	0.0	0.0	0.0	10.2	87.8
2017	196.1	331.8	159.0	204.9	12.8	0.0	0.0	5.3	4.5	0.0	43.4	268.3
2018	322.7	242.8	164.1	138.9	1.7	0.0	0.5	0.0	12.2	0.0	3.5	152.6
2019	298.7	255.6	159.4	70.1	12.6	2.3	0.0	1.0	0.0	11.2	78.1	345.7
2020	358.1	362.5	524.1	98.7	0.0	1.5	0.0	0.0	0.0	25.6	58.6	135.3
2021	357.7	163.4	223.8	75.4	2.7	0.0	1.6	0.0	0.0	0.0	11.5	65.4
2022	340.8	377.5	289.4	290.8	0.0	0.0	0.0	0.0	0.0	0.0	52.1	250.7

SONGEA MONTHLY MEAN MINIMUM TEMPERATURE(°C)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2012	18.4	17.7	17.5	15.4	13.3	11.4	9.7	12.4	14.6	16.3	17.1	17.5
2013	17.6	16.6	16.3	14.5	12.0	9.1	9.0	11.5	13.5	15.8	17.2	17.0
2014	16.6	16.3	15.6	15.2	11.5	9.9	9.3	10.5	11.8	14.2	15.5	15.8
2015	15.3	15.1	14.4	13.2	10.5	7.9	8.7	9.1	11.3	14.2	14.6	14.6
2016	14.5	14.0	16.8	18.6	16.8	11.7	11.5	12.9	14.6	16.2	18.8	18.8
2017	17.8	17.7	17.4	16.6	13.9	11.0	10.0	12.0	13.4	16.8	17.8	17.6
2018	16.9	16.7	16.5	15.0	12.7	10.0	10.5	11.8	13.8	16.7	19.4	19.0
2019	19.0	18.2	18.4	17.6	16.1	11.6	12.2	14.1	16.7	19.1	20.0	19.6
2020	19.8	19.5	19.3	18.1	15.3	13.8	12.8	14.1	15.6	19.0	19.4	19.7
2021	19.2	19.4	18.7	17.9	13.6	13.0	12.5	13.9	16.1	18.1	20.1	20.0
2022	19.3	19.0	18.7	18.2	14.7	12.8	12.3	13.9	15.0	16.7	19.3	19.3

AGMCC
8/2/2023

For: DIRECTOR GENERAL
MINISTRY OF WORKS,TRANSPORT
AND COMMUNICATION
TANZANIA METEOROLOGICAL AUTHORITY
P. O. Box: 3056, DAR ES SALAAM

SONGEA MONTHLY MEAN MAXIMUM TEMPERATURE(°C)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2011	28.4	26.8	27.2	26.7	25.9	25.6	24.3	25.6	27.8	29.8	31.1	29.0
2012	27.9	28.3	27.7	26.4	25.8	25.2	24.6	26.6	28.9	30.4	29.2	28.3
2013	28.3	28.5	27.4	26.7	25.7	24.5	24.1	25.7	28.7	28.9	30.6	28.7
2014	27.8	27.5	27.2	26.0	25.4	24.6	24.4	26.2	27.4	29.4	30.1	30.0
2015	27.8	28.6	27.5	27.1	26.3	25.8	25.5	26.6	28.8	30.7	30.2	29.4
2016	27.6	28.7	29.4	27.1	29.1	24.7	24.3	25.9	27.6	30.3	31.3	29.6
2017	28.2	27.5	27.2	25.8	25.9	25.2	24.6	25.7	28.0	29.9	30.8	29.3
2019	28.3	28.2	27.8	26.7	25.3	24.9	25.0	26.8	28.2	29.7	30.6	27.4
2020	28.4	28.1	27.7	27.3	26.2	25.1	23.9	26.4	27.7	30.7	31.8	30.8
2021	29.5	29.1	28.3	26.2	25.7	24.9	24.9	26.4	28.4	30.3	32.8	32.2
2022	29.3	28.5	28.3	28.0	26.9	24.4	23.6	24.9	26.8	29.3	30.4	27.9

SONGEA MONTHLY MEAN WINDSPEED(knots)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2012	3	4	3	4	3	4	4	5	7	8	7	5
2013	4	3	3	3	3	4	4	6	7	8	8	4
2014	3	3	3	5	3	4	4	4	6	7	7	6
2015	4	2	4	3	3	4	5	6	9	9	8	4
2016	3	3	3	3	4	5	4	6	9	10	10	8
2017	5	3	3	4	4	3	5	6	8	9	8	5
2018	3	4	3	4	4	4	5	6	7	8	8	5
2019	4	4	4	4	5	5	5	6	7	8	8	5
2020	6	5	4	5	5	5	6	6	7	8	8	5
2021	3	4	4	5	5	5	6	5	7	6	7	7
2022	3	3	2	3	3	3	5	5	7	7	7	5

Appendices 11Comments & Comments Addressed Table

THE UNITED REPUBLIC OF TANZANIA

VICE PRESIDENT'S OFFICE

NATIONAL ENVIRONMENT MANAGEMENT COUNCIL (NEMC)

In reply please quote:
Ref: **EC/EIA/2022/4598** Date: **21/12/2022**

Municipal Executive Director,
Songea Municipal Council,
P. O. Box 14,
Ruvuma.

RE: **COMMENTS FROM TECHNICAL ADVISORY COMMITTEE (TAC) REVIEW MEETING FOR THE ENVIRONMENTAL IMPACT STATEMENT FOR THE PROPOSED CONSTRUCTION OF AGRO-PROCESSING INDUSTRY AND GRAIN MARKET ON PLOTS NO. 174-181 BLOCK 'A' LILAMBO INDUSTRIAL AREA, LILAMBO B MTAA, LILAMBO WARD, SONGEA DISTRICT IN RUVUMA REGION**

Kindly refer to the above captioned subject.

2. The Council would like to inform you that a Technical Advisory Committee (TAC) review meeting was convened on 09th December, 2022 and reviewed the Environmental and Social Impact Statement for the above-mentioned project.

3. The TAC made improvements (see the attachment comments) that need to be addressed in the final ESIA report before re-submitting it to NEMC for final scrutiny.

4. Furthermore, you are also required to address all comments as raised by the TAC review team; provide comments-response table indicating comments addressed section and page numbers where the comments have been addressed and where the comments have not been addressed indicate the reasons for not doing so and this should be appended in the final report;

5. We look forward for your continued corporation.

A. N. Sembeka
For: **Director General.**

Cc: NORPLAN Consulting Engineers and Planners,
P.O Box 2820,
Dar es Salaam.

COMMENTS FROM THE TECHNICAL ADVISORY COMMITTEE (TAC) REVIEW MEETING TO IMPROVE THE ENVIRONMENTAL IMPACT STATEMENT REPORT FOR THE PROPOSED CONSTRUCTION OF AGRO-PROCESSING INDUSTRY AND GRAIN MARKET ON PLOTS NO. 174-181 BLOCK 'A' LILAMBO INDUSTRIAL AREA, LILAMBO B MTAA, LILAMBO WARD, SONGEA DISTRICT IN RUVUMA REGION

1.0 PROJECT PARTICULARS

Project title : The proposed establishment of agro-processing industry and grain market

Location : Lilambo B Mtaa, Lilambo Ward, Songea District in Ruvuma Region.

Proponent : Songea Municipal Council

Consultant : NORPLAN Consulting Engineers and Planners

2.0 GENERAL COMMENTS

i. As Regulation 18(2) of the Environmental Impact Assessment and Audit, Regulations of 2005, provide that, the EIS shall closely be styled and contain the executive summary then it follows with acknowledgement, should follow what Regulation stated;

ii. Under Regulation 20(1) of the Environmental Impact Assessment and Audit, Regulations of 2005, an Environmental Impact Assessment shall be signed by each of the individual who participating in making such report, therefore an expert should sign it under roman ix of the proposed projects;

iii. Layout and content on cover page should follow the requirements of Regulations (Project Title, authorizing institution (NEMC), developer and lead consultant (other associates such as TYPSA, Urban Solutions Ltd, can be acknowledged inside the report and no need to include them in footer note);

iv. Under Regulation 20(1) of the **Environmental Impact Assessment and Audit, Regulations of 2005,** an Environmental Impact Assessment shall be signed by each of the individual who participating in making such report, therefore an expert should sign it under roman ix of the proposed project;

v. Delete all irrelevant or unnecessary information throughout the document, e.g. DSM Metropolitan Development Project, feasibility study for..... Morogoro, Mbeya, Sumbawanga..., etc (appear on cover page);

vi. Ensure that the Non-Technical Executive Summary is provided and in both Kiswahili and English;

vii. Append in the EIS report the following permits/certificates:

- Copy of approved Terms of Reference
- Architectural drawings
- Emergence preparedness and response plan
- Water abstraction permit from SO-UWASA
- Permits for sources of quarry, borrow and sand
- Geotechnical study summary report
- Soil study summary report
- Construction materials investigation summary report
- Topographic survey study report

3.0 SPECIFIC COMMENTS

REVIEW AREA 1: (Project Description, Local Environment, Baseline Conditions, Policy and Legal Framework)

1. Page xvi, the heading should be as list of acronyms and abbreviation as provided under Regulation 18(2) (iii) of the Environmental Impact Assessment and Audit, Regulations, 2005 and Regulation 7(a) (i) by inserting immediately after Section (iii) acronyms then it should be followed Section (iv) abbreviations as provided under Environmental Management (Environmental Impact Assessment and Audit) (Amendment) Regulations, 2018;
2. Page 3, Section 1.4 section 14(a) of which law, should indicate which law of that section;
3. Page 3, Section 1.4 on the requirement for an ESIA, that the project falls under the list of the Projects requiring EIA it should be pursuant to the Regulation 5(1) instead of 6(1) of the Environmental Management (Environmental Impact Assessment and Audit) (Amendment) Regulations, 2018;
4. Page 4, Section 1.8 on the methodology should cite the law as the Environmental Impact Assessment and Audit, Regulations G.N. No. 349 of 2005 as amended in 2018;
5. Page 8 section 2.4 (Land ownership).
    a) Correct the statement that '*title deed is on progress*', instead, indicate that the *Title Deed is attached as Appendix 6*. Henceforth, indicate plot number, block number, size of the plot and Title Deed No.
    b) Describe compatibility of the proposed project with land-use of the plots.
    c) Section 2.6; Make clear how many buildings will be constructed? What floor area (sqm) for each building? How many floors for each of the building? Which building will be used for agro-processing industry and which will be for grain market, what is the carrying capacity for each building;
6. Page 13; The grain market will have an average of 650 business spaces (refer page 13), the agro-processing industry will employ 1000 people (refer page 12); but the number of toilets (water Closet) will be 6 for women and 5 for men. The number of

toilets is very small compared to the number of people expected to be there during the operation phase; and having small number of toilets is contrary to section 55(3) of the Occupational Health and Safety Act, 2003 which require one sanitary conveniences for 25 persons for each sex. Review the number of toilets against the number of persons and update accordingly;

7. Page 14; Table 2-2 showing area (sqm) that will be occupied by each component of the building and hence indicate the plot coverage, plot ratio, built up area, etc;
8. In chapter 2, provide the following information:
   a) Status of permits for sources of quarry, borrow and sand pits
   b) water and energy demand especially during operation phase
   c) Storage tanks capacity for water during operation phase
   d) Expected wastes (solid, liquid, hazardous) to be generated during project lifecycle and its managements as per Regulations.

9. Page 15, Chapter 3; Should be headed as **POLICY, ADMINISTRATIVE AND LEGAL FRAMEWORK;**
10. Page 23;
    a) Section 3.3.1 it is The National Environmental Policy, 2021;
    b) 23, section 3.3.2 the citation of the National Agriculture Policy, 2013 it should be as paragraph instead of subsection as it is and Section 3.3.3 it cited as paragraph not section;
11. Page 24, Section 3.3.7; it cited as The National Water Policy, 2002 remove that (URT) we know that it is our law from United Republic of Tanzania there is no need to write it;
12. Page 25, Section 3.3.8; the citation should be as The National Energy Policy, 2015 and Section 3.3.9 the citation is The National Gender Policy, 2000;
13. Page 26, Section 3.3.12; it should be as The National Health Policy, 2017;
14. Page 28;
    a) Section 3.5.1; in EMA of 2004 should be cited section instead of Article 82;
    b) Section 3.5.3 the law should be cited as The Water Supply and Sanitation Act, No. 12 of 2019;
15. Page 29, Section 3.5.4 the citation is The Land Act, No. 4 Cap 113 of 1999 {R.E 2919];
16. Page 30, Section 3.5.9 The Employment and Labor Relations Act, No. 6 Cap 366 of 2019;
17. Page 32;
    a) Section 3.5.19 the law should be cited as The Workers Compensation Act, 2015;
    b) Section 3.5.20 it should be cited as The Environmental (Solid Waste Management) Regulations, 2009 as amended in 2016 and in Regulations should cited as Regulation instead of section;
18. Page 34;

a) Section 3.6.3 Mining Act [CAP.123 of 2019 R.E 2010];
b) Section 3.7.2 the convention should be cited as The Minimum Age Convention, No. 138 of 1973;

19. Page 35, Section 3.7.3 it should be as The Workers Compensation (Accidents) Convention, No. 17 of 1925;
20. Page 36, Section 3.7.4 The Minimum Wage-Fixing Machinery Convention, No. 26 of 1928;
21. Page 38, Section 3.8 on the Administrative Framework, the law should be cited as The Environmental Management Act Cap 191 of 2004 as amended in 2016 and 2021;
22. Page 53, Section 4.3.5 on the Noise and Vibration should provide the day and time of level measurement;
23. Should consult the ministry of Agriculture and neighbor from Mtaa;
24. Attach the Certificate of Occupancy which is certified by registered Advocate;
25. Page 113, Section 2.0 Scope of Consultancy Service the citation of the law it should be as the (i) The Environmental Management Act Cap 191 of 2004 (iii) The Land Act Cap 113 of 1999 (R.E 2019) and Village Land Act Cap 114 of 1999 (R.E 2019);
26. Page 127, on the appendix the minutes of the meeting with Swahili language it should be signed by the chairperson and secretary;
27. The following are the missing Policy, Regulations and Acts:
    a) The Transport Policy, 2003
    b) The National Trade Policy, 2003
    c) The National Economic Empowerment Policy, 2004
    d) The Environmental Management (Registration and Practice of Environmental Experts) Regulations, 2021
    e) The Urban Planning (Use Group and Use Classes) Regulations, 2018
    f) The urban Planning (Planning Space Standards) Regulations, 2018
    g) The Environmental Management (Fees and Charges) Regulations, 2021
    h) The Environmental Management (Standards for the Control of Noise and Vibration) Regulations, 2014
    i) The Industries and Consumer Chemicals (Management and Control) Regulations, 2015
    j) The Fire and Rescue Force (Safety Inspections and Certificate) amendment Regulations, 2012
    k) The Fire and Rescue Force (Fire Precautions in Buildings) Regulations, 2015
    l) The Income Tax Act, 2004 R.E 2019
28. The captions of Figures in Chapter 4 are too wordy. Try to have separate paragraphs for description of the figures, but the caption of each figure should have few words not exceeding a single sentence.
29. Page 41, Chapter 4.0; Baseline Conditions:
    a) For any condition described, should show/indicate on how the project will positively or negatively impact the environment;

b) Ensure that the baseline condition data like climatic data are sourced from the regulatory Authority i.e., Tanzania Meteorological Authority as per TMA Act (2019) section 48;
c) Ensure that the devices used to collect data are registered by the Authority and recognized; and
d) Show relevance of the climatic condition with the project site, explain how these characteristics affects the existing project.

30. Page 51, the report is silent on how the wind speed and direction data were collected.

REVIEW AREA 2: (Impact Identification and Evaluation)

31. In chapter 6, discuss more possible impacts including population influx, gender based violence, loss of scenic quality, increased traffic congestion, disease outbreak, fire risks, etc.,

REVIEW AREA 3: (Project alternatives, Impact mitigation, EMP and Commitment)

32. In chapter 7; all identified impacts in chapter 6 should be appear on Table 7-2 ESMP including the those recommended on comment number 35;

REVIEW AREA 4: (Public participating and presentation of the report)

33. On page 64, provide a row in Table 5.2 which should indicate responses of developer for raised comments.
34. As Regulation 18(2) of the **Environmental Impact Assessment and Audit, Regulations of 2005,** provide for the EIS shall closely be styled and contain the executive summary then it follows with acknowledgement, should follow what Regulation stated;

COMMENTS FROM THE TECHNICAL ADVISORY COMMITTEE (TAC) REVIEW MEETING TO IMPROVE THE ENVIRONMENTAL IMPACT STATEMENT REPORT FOR THE PROPOSED CONSTRUCTION OF AGRO-PROCESSING INDUSTRY AND GRAIN MARKET ON PLOTS NO. 174-181 BLOCK 'A' LILAMBO INDUSTRIAL AREA, LILAMBO B MTAA, LILAMBO WARD, SONGEA DISTRICT IN RUVUMA REGION

S/No	COMMENTS DESCRIPTION	RESPONSE/REMARKS
	GENERAL COMMENTS	
i	As Regulation 18(2) of the Environmental Impact Assessment and Audit, Regulations of 2005, provide that, the EIS shall closely be styled and contain the executive summary then it follows with acknowledgement, should follow what Regulation stated;	See the Final Submitted Reports
ii	Under Regulation 20(1) of the Environmental Impact Assessment and Audit, Regulations of 2005, an Environmental Impact Assessment shall be signed by each of the individual who participating in making such report, therefore an expert should sign it under roman ix of the proposed projects;	See the Final Submitted Reports
iii	Layout and content on cover page should follow the requirements of Regulations (Project Title, authorizing institution (NEMC), developer and lead consultant (other associates such as TYPSA, Urban Solutions Ltd, can be acknowledged inside the report and no need to include them in footer note);	See the Cover Page of the Final Submitted Reports
iv	Under Regulation 20(1) of the Environmental Impact Assessment and Audit, Regulations of 2005, an Environmental Impact Assessment shall be signed by each of the individual who participating in making such report, therefore an expert should sign it under roman ix of the proposed project;	See the Final Submitted Reports
v	Delete all irrelevant or unnecessary information throughout the document, e.g. DSM Metropolitan Development Project, feasibility study for..... Morogoro, Mbeya, Sumbawanga ... , etc (appear on cover page);	See the Cover Page of the Final Submitted Reports
vi	Ensure that the Non-Technical Executive Summary is provided and in both Kiswahili and English;	See the Final Submitted Reports
vii	Append in the EIS report the following permits/certificates:	See appendix 1

S/No	COMMENTS DESCRIPTION	RESPONSE/REMARKS
	• Copy of approved Terms of Reference	
	• Architectural drawings	See appendix 3
	• Emergence preparedness and response plan	See appendix 7
	• Water abstraction permit from SO-UWASA	**See section 2.9.5** *(Water Supply during the Operation Phase)*
	• Permits for sources of quarry, borrow and sand	**See section 2.9.3** (**Sources for Earth Materials)** (*All the permit shall be applied by responsible contractor as the Report states*)
	• Geotechnical study summary report	See appendix 8
	• Soil study summary report	See appendix 9
	• Construction materials investigation summary report	See appendix 9
	• Topographic survey study report	See section 4.3.2
	SPECIFIC COMMENTS	
	REVIEW AREA 1: (Project Description, Local Environment, Baseline Conditions, Policy and Legal Framework)	
1	Page xvi, the heading should be as list of acronyms and abbreviation as provided under Regulation 18(2) (iii) of the Environmental Impact Assessment and Audit, Regulations, 2005 and Regulation 7(a) (i) by inserting immediately after Section (iii) acronyms then it should be followed Section (iv) abbreviations as provided under Environmental Management (Environmental Impact Assessment and Audit) (Amendment) Regulations, 2018;	See Page xvi
2	Page 3, Section 1.4 section 14(a) of which law, should indicate which law of that section;	See section 1.4
3	Page 3, Section 1.4 on the requirement for an ESIA, that the project falls under the list of the Projects requiring EIA it should be pursuant to the Regulation 5(1) instead of 6(1) of	See section 1.4

S/No	COMMENTS DESCRIPTION	RESPONSE/REMARKS
	the Environmental Management (Environmental Impact Assessment and Audit) (Amendment) Regulations, 2018;	
4	Page 4, Section 1.8 on the methodology should cite the law as the Environmental Impact Assessment and Audit, Regulations G.N. No. 349 of 2005 as amended in 2018;	See section 1.8
5	Page 8 section 2.4 (Land ownership). a) Correct the statement that 'title deed is on progress', instead, indicate that the Title Deed is attached as Appendix 6. Henceforth, indicate plot number, block number, size of the plot and Title Deed No.	See section 1.8
	b) Describe compatibility of the proposed project with land-use of the plots.	See appendix 6 & Section 3.5.23
	c) Section 2.6; Make clear how many buildings will be constructed? What floor area (sqm) for each building? How many floors for each of the building? Which building will be used for agro-processing industry and which will be for grain market, what is the carrying capacity for each building;	Section 2.7
6	Page 13; The grain market will have an average of 650 business spaces (refer page13), the agro-processing industry will employ 1000 people (refer page 12); but the number of toilets (water Closet) will be 6 for women and 5 for men. The number of toilets is very small compared toilet number of people expected to be there during the operation phase; and having small number of toilets is contrary to section 55(3) of the Occupational Health and Safety Act, 2003 which require one sanitary convenience for 25 persons for each sex. Review the number of toilets against the number of persons and update accordingly;	The mentioned number of employment is not permanent (approximated); the number of toilets shall be considered in design in terms of space available in relation of cost as well such as construction and maintenance so as to follow section 55(3) of the Occupational Health and Safety Act, 2003
7	Page 14; Table 2-2 showing area (sqm) that will be occupied by each component of the building and hence indicate the plot coverage, plot ratio, built up area, etc	Section 2.7 *(Figure 2-1 & Figure 2-2)*
8	In chapter 2, provide the following information: a) Status of permits for sources of quarry, borrow and sand pits	**See section 2.9.3** (**Sources for Earth Materials)** (*All the permit shall be applied by responsible contractor as the Report states*)

S/No	COMMENTS DESCRIPTION	RESPONSE/REMARKS
	b) water and energy demand especially during operation phase	**See section 2.9.4** *(Water Supply & Energy Supply during the Operation Phase)*
	c) Storage tanks capacity for water during operation phase	**See section 2.9.4** *(Water Supply during the Operation Phase)*
	d) Expected wastes (solid, liquid, hazardous) to be generated during project lifecycle and its managements as per Regulations.	**See section 2.9.4** *(Solid Wastes)* & **Section 6.7.6**
9	Page 15, Chapter 3; Should be headed as **POLICY, ADMINISTATVE AND LEGAL FRAMEWORK;**	See Chapter 3
10	Page 23; a) Section 3.3.1 it is The National Environmental Policy, 2021;	See section 3.3.1
	b) 23, section 3.3.2 the citation of the National Agriculture Policy, 2013 it should be as paragraph instead of subsection as it is and Section 3.3.3 it cited as paragraph not section;	See section 3.3.2 & Section 3.3.3
11	Page 24, Section 3.3.7; it cited as The National Water Policy, 2002 remove that (URT) we know that it is our law from United Republic of Tanzania there is no need to write it;	Section 3.3.7
12	Page 25, Section 3.3.8; the citation should be as The National Energy Policy, 2015 and Section 3.3.9 the citation is The National Gender Policy, 2000;	Section 3.3.8 & Section 3.3.9
13	Page 26, Section 3.3.12; it should be as The National Health Policy, 2017;	Section 3.3.12
14	Page 28; a) Section 3.5.1; in EMA of 2004 should be cited section instead of Article 82;	Section 3.5.1
	b) Section 3.5.3 the law should be cited as The Water Supply and Sanitation Act, No. 12 of 2019;	Section 3.5.3
15	Page 29, Section 3.5.4 the citation is The Land Act, No.4 Cap 113 of 1999 (R.E2919)	Section 3.5.4

S/No	COMMENTS DESCRIPTION	RESPONSE/REMARKS
16	Page 30, Section 3.5.9 The Employment and Labor Relations Act, NO.6 Cap 366 of 2019;	Section 3.5.9
17	Page 32; a) Section 3.5.19 the law should be cited as The Workers Compensation Act, 2015;	Section 3.5.19
	b) Section 3.5.20 it should be cited as The Environmental (Solid Waste Management) Regulations, 2009 as amended in 2016 and in Regulations should cited as Regulation instead of section;	Section 3.5.24
18	Page 34; a) Section 3.6.3 Mining Act (Cap 123 of 2019 :E 2010);	Section 3.6.3
	b) Section 3.7.2 the convention should be cited as The Minimum Age Convention, No. 138 of 1973;	Section 3.7.2
19	Page 35, Section 3.7.3 it should be as The Workers Compensation (Accidents) Convention, No. 17 of 1925;	Section 3.7.3
20	Page 36, Section 3.7.4 The Minimum Wage-Fixing Machinery Convention, No. 26 of 1928;	Section 3.7.4
21	Page 38, Section 3.8 on the Administrative Framework, the law should be cited as The Environmental Management Act Cap 191 of 2004 as amended in 2016 and 2021 ;	Section 3.8
22	Page 53, Section 4.3.5 on the Noise and Vibration should provide the day and time of level measurement;	Section 4.3.5
23	Should consult the ministry of Agriculture and neighbor from Mtaa;	See table 5-1 # 11(Mtaa); the agricultural officer consulted is a representative of Ministry of Agriculture
24	Attach the Certificate of Occupancy which is certified by registered Advocate;	See appendix 6
25	Page 113, Section 2.0 Scope of Consultancy Service the citation of the law it should be as the (i) The Environmental Management Act Cap 191 of 2004 (iii) The Land Act Cap 113 of 1999 (R.E 2019) and Village Land Act Cap 114 of 1999 (R.E 2019);	See section 2.0 of the submitted ToR

S/No	COMMENTS DESCRIPTION	RESPONSE/REMARKS
26	Page 127, on the appendix the minutes of the meeting with Swahili language it should be signed by the chairperson and secretary;	See appendix 4
27	The following are the missing Policy, Regulations and Acts:	
	a) The Transport Policy, 2003	Section 3.3.15
	b) The National Trade Policy, 2003	Section 3.3.16
	c) The National Economic Empowerment Policy, 2004	Section 3.3.17
	d) The Environmental Management (Registration and Practice of Environmental Experts) Regulations, 2021	Section 3.5.26
	e) The Urban Planning (Use Group and Use Classes) Regulations, 2018	Section 3.5.27
	f) The urban Planning (Planning Space Standards) Regulations, 2018	Section 3.5.28
	g) The Environmental Management (Fees and Charges) Regulations, 2021	Section 3.5.29
	h) The Environmental Management (Standards for the Control of Noise and Vibration) Regulations, 2014	Section 3.5.30
	i) The Industries and Consumer Chemicals (Management and Control) Regulations, 2015	Section 3.5.231
	j) The Fire and Rescue Force (Safety Inspections and Certificate) amendment Regulations, 2012	Section 3.5.32
	k) The Fire and Rescue Force (Fire Precautions in Buildings) Regulations, 2015	Section 3.5.33
	l) The Income Tax Act, 2004 R.E 2019	Section 3.5.20
28	The captions of Figures in Chapter 4 are too wordy. Try to have separate paragraphs for description of the figures, but the caption of each figure should have few words not exceeding a single sentence.	See Chapter 4
29	Page 41, Chapter 4.0; Baseline Conditions: a) For any condition described, should show/indicate on how the project will positively or negatively impact the environment;	

S/No	COMMENTS DESCRIPTION	RESPONSE/REMARKS
	b) Ensure that the baseline condition data like climatic data are sourced from the regulatory Authority as per TMA Act 2019 section 48 Ensure that the devices used to collect data are registered by the Authority and recognized; and d) Show relevance of the climatic condition with the project site; explain how these characteristics affect the existing project.	See Chapter 4
30	Page 51, the report is silent on how the wind speed and direction data were collected.	See Chapter 4
	REVIEW AREA 2: (Impact Identification and Evaluation)	
31	In chapter 6, discuss more possible impacts including population influx, gender based violence, loss of scenic quality, increased traffic congestion, disease outbreak, fire risks, etc.,	See chapter 6 & table 7-2
	REVIEW AREA 3: (Project alternatives, Impact mitigation, EMP and Commitment)	
32	In chapter 7; all identified impacts in chapter 6 should be appear on Table 7-2 ESMP including the those recommended on comment number 35;	See table 7-2; no comment # 35
	REVIEW AREA 4: (Public participating and presentation of the report)	
33	On page 64, provide a row in Table 5.2 which should indicate responses of developer for raised comments.	All concerns raised by stakeholders are their commitment since Songea Municipal Council is a developer on establishment of the project
34	As Regulation 18(2) of the Environmental Impact Assessment and Audit, Regulations of 2005, provide for the EIS shall closely be styled and contain the executive summary then it follows with acknowledgement, should follow what Regulation stated;	See the Final Submitted Reports

RESUBMITTED COMMENTS ON ENVIRONMENTAL IMPACT STATEMENT FOR THE FOR THE PROPOSED CONSTRUCTION OF AGRO-PROCESSING INDUSTRY AND GRAIN MARKET ON PLOTS NO. 174-181 BLOCK 'A' LlLAMBO INDUSTRIAL AREA, LlLAMBO B MTAA, LlLAMBO WARD, SONGEA DISTRICT IN RUVUMA REGION

S/No	COMMENTS DESCRIPTION	RESPONSE/REMARKS
	GENERAL COMMENTS	
1	The report control form is for the own office use	See the submitted final report
2	Delete the footer	See the submitted final report
3	Check the ESMP; the responsibility to implement ESMP lies on the side of the developer (Songea Municipal Council)	See table 7-2