GOVERNMENT OF NAMIBIA

AFRICAN DEVELOPMENT BANK

Design, Construction and Operation of a Seed Processing Plant at Omahenene, Omusati Region

DRAFT Environmental and Social Management Plan

March 2024

Prepared for the:

Namibia Agricultural Mechanisation and Seed Improvement Project
Ministry of Agriculture, Water and Land Reform
Private Bag 13184
Windhoek
Namibia

PROJECT INFORMATION

Project Title	Consultancy Services for the Design and Construction Supervision for the Seed Processing Plants	
Specific Activity	Development of an Environmental and Social Management Plans for the Design, Refurbishment and Operation of a Seed Processing Plant at Omahenene, Omusati Region	
Review versions	Version	Date
	0	01 March 2024
Author	Mr Siyamana Mulele Lead Environmental Assessment Practitioner Namib Consulting Services CC P. O. Box 96093' Windhoek Namibia	
Contributions	Ms. Tendaiishe Rashai-Ngomberume Junior Environmental Assessment Practitioner	
Reviewer 1	……	
Reviewers 2	……	

ZAMBEZI CONSULTING ENGINEERS CONSORTIUM

Executive Summary

Table of Contents

List of Figures

List of Tables

Abbreviations

NAMSIP	-	Namibia Agricultural Mechanisation and Seed Improvement Project
MAWLR	-	Ministry of Agriculture, Water and Land Reform
SSDS	-	Seed Systems Development Scheme
ESIA	-	Environmental and social impact assessment.
CSSI	-	Certified Seed Systems Improvement
ESMP	-	Environmental and social Management Plan
SPPs	-	Seed Processing Plants
AfDB	-	African Development Bank
ZCEC	-	Zambezi Consulting Engineers Consortium

1. Project Description

1.1 Introduction

The Ministry of Agriculture, Water and Land Reform (MAWLR) is implementing the Namibia Agricultural Mechanisation and Seed Improvement Project (NAMSIP). The project is implemented over a period of 5 years, with co-financing by the African Development Bank (AfDB). The project aims to contribute to improved household food security, poverty reduction and economic growth. The project is geared towards enhancing agricultural productivity in order to achieve mainly three national objectives; (i) reduce annual importation of staple cereal crops/grains, (ii) facilitate job creation, and (iii) enhance household incomes and improve the lives of rural people.

The project has 2 main components; Component 1 - value chain improvement, and Component 2 institutional support. Each of the components has two subcomponents as follows;

- Component 1 focusing on value chain improvement, comprises; (i) agricultural mechanisation, and (ii) certified seed systems improvement.
- Component 2 focusing on institutional support, comprises; (i) capacity building, and (ii) project management, monitoring and evaluation.

The Certified Seed Systems Improvement (CSSI) subcomponent has a focus on Seed Systems Development Scheme (SSDS) that is implemented in the Kavango East, Kavango West, Ohangwena, Oshana, Omusati, Oshikoto, Omaheke, Otjozondjupa, Kunene (Northern part) and Zambezi Regions. Under its planned activities is the construction of seed processing plants (SPPs) to serve the cluster regions.

NAMSIP overall is an agricultural activity that is listed under Regulation (7) of the Environmental Impact Assessment Regulations (GN. No. 29 of 2012) of the Environmental Management Act (No. 7 of 2007), and thus requires an environmental and social impact assessment (ESIA). Subsequently, an overarching ESIA was undertaken leading to the development of an environmental and social Management Plan (ESMP). However, specific activities under each component and subcomponent within the project elicits necessity to address associated specific impacts and risks from their implementation. Subsequently, the SSDS under the CSSI subcomponent, that has focus on construction of seed processing plants (SPPs), elicits Regulation (5) of the EIA Regulations on land use and development activities. It is therefore, that this specific activity requires a distinct developed ESMP.

Further to above national obligations, all activities under the NAMSIP require to align with the AfDBs environmental and social policy framework articulated through the integrated safeguard system (ISS). Under this framework, the risk assessment of the components and subcomponents of the NAMPSIP were determined at category II risk level. Resultantly, the various activities of the NAMSIP are likely to have detrimental site-specific environmental and/or social impacts, however at a lesser severity scale. Subsequently, it is required that such projects develop a minimum of an ESMP prior their implementation.

Successive to the given background, Zambezi Consulting Engineers Consortium (ZCEC) were appointed by the MAWLR to carry out consulting services for the design and supervision of construction of the SPPs under the CSSI subcomponent of the NAMSIP. The consulting services requires complementary carrying out the development of the ESMP for the various sites. Namib Consulting Services CC under ZCEC was designated to fulfil these obligations.

This report takes to scope the potential impacts and risks for the design, construction and operation of the SPP towards development of an ESMP.

1.2 Project Development Phases

The envisaged development of the SPP follows the conventional project phases of pre-construction, construction, operation and potential decommission in future. In each of the stated phases, various activities are envisaged. A

description of all these activities is important as foundation to identification and evaluation of potential risks and impacts in the various phases.

Pre-Construction Phase

The following activities are envisaged under the pre-construction or design phase;

i. Site reconnaissance visit.
ii. Review existing project documents.
iii. Review availability and capacity of supply for basic services for the SPP.
iv. Pre-site evaluation assessments.
v. Designs and review of plans for structures and associated accessories.
vi. Development of works procurement documents.

Construction Phase

The following activities are envisaged under the construction phase;

i. Mobilization and Site setup
ii. Site Preparation
iii. Transportation of goods and materials to site
iv. Offloading and storage of goods and materials
v. Consumption of resources (energy, water, chemicals, and materials)
vi. Carry out civil, mechanical, electrical and accessory works
vii. Maintenance of equipment and machinery.
viii. Demobilisation of all construction equipment's and machinery
ix. Testing of all systems, and site preparation for plant commissioning

Operation Phase

The following activities are envisaged under the pre-construction or design phase of the SSDS;

i. Transportation of raw materials and finished products to and from site
ii. Raw material acquisition and use
iii. Raw and final products handling and storage
iv. Consumption of resources (energy, water, chemicals, and materials)
v. Operation of machinery and equipment
vi. Maintenance of machinery and equipment
vii. Human resource mobilisation and operations processes

Decommissioning phase

The following activities are envisaged;

i. De-installation and removal of equipment and machinery, including disconnecting of all reticulating lines
ii. Breakdown of structures and hard surfaces
iii. Site clean-up
iv. Site handover or alternative uses.

1.3 Description of Project Activities

The specific envisaged activities under each of the development phases of the project are as follows;

1.3.1 Pre-Construction

(a) Site reconnaissance visit

This activity was aimed at familiarising the consulting team with the selected site for the development of SPP and thus provide a first-hand opportunity to contextualise the site outlook towards meeting planning and design specifications.

(b) Review existing project documents

Project documents provide specific information on planning and design requirements and specifications for various expertise of the consulting team. These were provided by the Proponent.

(c) Review availability of basic services

Infrastructural development such as a SPP requires basic services beside availability of land. Services such as potable water, power supply and waste management are necessary for the envisaged development. Located outside a locality area, it is necessary that the availability of these services and capacity of these services are established as foundation for the development.

(d) Pre-site evaluation assessments

The site was evaluated for suitability to withstand the envisaged infrastructural development but also towards meeting the project's objectives of proximity to the seed farmers. A topographic survey and geotechnical assessment of the site were carried out towards informing design specifications.

(e) Planning and designing a new SPP facility

The development of the SPP at Omahenene is premised on the following requirements set out in the project documents and further refined in consultation with the client:

i. a brand new small sized building with the following retrofitted infrastructure
   - Normal storage
   - Cold storage
   - Processing plant area,
   - Laboratory room.
ii. Plant processing machinery of capacity of 1 ton per hour to handle production of pearl millet, maize, sorghum, and cow peas.
iii. Further provision for amenities such as administration offices, sanitary rooms for both genders, staff change rooms, a shop, and kitchen rooms.

The design of a new small sized SPP thus required architectural, civil/structural, mechanical and electrical and material quantification expertise. Refer to Annexure 2 (A) and 2(B) for the site layout and design plan of the SPP for Omahanene

(f) Development of tender/procurement documents

Subsequent to completion and approval of the detailed plans, design and quantities of the envisaged SPP, these were incorporated into consolidated procurement documentations for the construction works for the SPP.

1.3.2 Construction Phase

(a) Mobilization and site setup

An appointed contractor for the construction of the SPP are expected to mobilise from base to site and setup necessary facilities for the construction works. Site setup envisages to include a site office, a storage facility for goods and materials. Furthermore, it is deemed necessary that provision of accommodation is made for the construction workers due to location of the site.

(b) Site preparation

Initial preparatory site works envisages to involve clearing the site of minimal vegetation and trees, demarcation and markings of layouts, excavation, trenching and digging. Setting up of a batching plant or establish area for the concrete works.

(c) Transportation and delivery of goods and materials to site

Goods and materials procured for the construction works is to be transported from suppliers and delivered to the construction site. These goods and materials will include cement, stones, steel, wood, roofing, bricks and glass materials including other accessories.

(d) Civil, mechanical, electrical and accessory works

The expected civil works comprise concrete foundations, masonry, steel and roof works. These will involve concrete batching, erecting steel beams, formwork with wood, bricklaying and roof installation. Complementary to civil structural works will be mechanical and electrical installations. Such will involve erecting and setting up route lines for electrical supply, erecting and setting up seed processing machinery and associated equipment. Further accessory works include connecting to basic services for potable water and sewer.

(e) Operation and maintenance of equipment and machinery

The construction works involves operation of machinery and equipment. These further require maintenance over the construction duration. Onsite machinery and equipment onsite will require some maintenance to maintaining operability. The use of lubricants, oils and other servicing substances is eventual.

(f) Demobilisation of all construction equipment and machinery

Upon completion of construction works it is expected that machinery, equipment and remnant goods and materials brought to site will be demobilized and removed from the site.

(g) Testing of systems and site preparation for commissioning

Installed systems including mechanical and electrical systems will be tested for operability as per required specifications. These form preparatory works for the commissioning of the plan, including site clean-up of remnant construction redundant materials and waste residuals.

1.3.3 Operation Phase

The operation phase of the processing plant will involve a flow process provided in Annexure 1 to this report and described below. The steps involve as follows;

i. Delivery and receiving raw material (i.e. raw seeds) to the SPP from seed farmers.
ii. Inspection of the seed will follow and thus result in some raw seeds that are completely dry undergoing pre-cleaning and disinfecting step where deemed necessary. The pre-cleaning step aims to remove impurities within received raw seeds but also provide for removal of potential disease carrying impurities. In a parallel step, seeds with retained moisture are allowed to dry. Such drying is achieved through various methods that may include open air drying on screens or where available through heating machines.
iii. Pre-cleaned and dried seeds are all together sent to storage, awaiting further proceeding processing steps.

Further seed processing steps are attained as follows;

iv. Storage retrieved raw seeds undergo fine cleaning. This aims at removing fine inert material that may still be contained in raw seeds from storage. This step further allows for removal of unviable seeds. Subsequently, this step may extend in a parallel step of grading by size where deemed necessary for specific seeds. This step is manageable through use of machinery and equipment that may involve air blast and vibrating screens. The cleaner cum grader machine is widely acknowledged in this process. Size grading using physical properties may involve properties such as size, colour, weight, texture or electrical conductivity. Various machinery may be applied for sorting or grading into the described properties.
v. Sorted grades of seeds are treated with fungicide and or pesticide to prevent infections.
vi. Treated seeds of various grades are packaged involving placing in bags, numbering of each lot and labelling. Furthermore, in a parallel step, the seeds are sampled for laboratory works.
vii. Processed and packaged seeds lots are sent to storage rooms (cold storage where necessary) pending dispatch to outlets.

The laboratory envisages to carry out the following tests;

- *Quality Control*-Conducting quality control tests to ensure that the processed seeds meet the required standards and specifications, including purity, germination rate, moisture content, and genetic purity.
- *Seed Testing*-Performing seed testing procedures to assess the viability, vigour, and overall quality of the seeds. This may involve conducting germination tests, seed health assessments, and other specialized tests as required.

- *Research and Development*-Supporting research and development activities aimed at improving seed processing techniques, developing new treatments, and evaluating the effectiveness of different seed varieties and traits.
- *Data Analysis and Reporting*-Analysing the collected data and generating reports on seed quality, performance, and compliance with Namibia, SANSCOR & ISTA regulatory standards. These reports will be crucial for internal decision-making, customer satisfaction, and regulatory compliance.

Premised on the above seed processing flow, the following activities are envisaged in the operation phase of the development:

(a) Transportation of raw materials and finished products to and from SPP
The operation of the commissioned SPP will involve receiving raw materials in form of unprocessed seeds (i.e. maize, pearl millet, sorghum and cow peas) for processing and eventual transportation of final packaged seed lots to supply outlets.

(b) Storage and handling raw and final products
Raw seeds and final products will be sent to storage (i.e. normal and cold storage) onsite prior and after processing.

(c) Consumption of resources (energy, water, and materials)
The operation of the plant will involve consumption of water, energy, chemicals and other materials over its lifespan. The plant will store and use chemicals such as fungicides and pesticides of varied toxicity or hazardous levels.

(d) Operating the processing machinery and associated activities
The seed production process involves designated personnel operating machinery as per sequence described. The processing of seeds will be geared towards output production of 1 ton per hour. The number of seed farmers to serve are 58 in Ohangwena Region, 3 in Kunene Region, 147 in Omusati Region and 129 from Oshikoto Region, and thus totalling 337.

(e) Maintenance and servicing of machinery and systems
The operation of machinery and equipment has eventual need for maintenance as breakdowns and faults are likely to occur with their aging.

(f) Procurement of good and material for plant operations
The continued operation of the SPP depends on continued supply of goods and materials for the processing and associated operations along with supporting administrative process activities.

1.3.4 Decommission Phase

(a) De-installation of machinery and equipment and accessories
This will involve the disconnecting of all electrical and other reticulating lines within and to the plant, including the removal of all machinery and equipment.

(b) Breakdown of structures
The SPP civil works will be dismantled and breaking down of all concrete and brick work.

(c) Site clean and Closure
This will involve the clean-up of the site from the demolition and other works with intent to mimic prior use conditions or surrounding land use.

(d) Site handover or alternative use
Land use in a local authority is determined by specific zoning of the local authority, therefore closure and site handover or re-use shall be required to comply with the existing bylaws.

2. Legislative Framework Review

2.1 Review of National/International Instruments

Table 2:1 Review of applicable relevant policies, legislation and international instruments

No.	Legislation/Instrument	Description	Relevance
1	The Constitution of the Republic of Namibia (1990)	The Constitution is the supreme law of the country and sets the foundational governance principles of the Republic of Namibia. The following articles are identified key to the project. *Article 6-The right to life; Article 8-Respect for human dignity; Article 9-Prohibition of slavery and forced labour; Article 10-Equality and freedom from discrimination; Article 15-Children's rights; Article 18-Administrative justice; Article 23-Apartheid and Affirmative Action; Article 89-92- The office and functions of the Ombudsman; Article 95-Promotion of the Welfare of the People; Article 100-Ownership of natural resources.* Emphasis points to Article 95 in its subsections (a, b, i, l) which recognizes the rights regarding matters of gender, health, labour and environment. In this article, the state commits to actively promote and sustain the welfare of the nation by formulating and institutionalizing policies to accomplish the sustainable objectives of: ○ Guarding against overutilization of biological natural resources ○ Limiting over-exploitation of non-renewable resources ○ Ensuring ecosystem functionality ○ Maintaining biological diversity	The Constitution provide the foundation upon which projects and programs reflects to ensure various requirements underscore project development and subsequent phases of realization.
2	Environmental Management Act (No 7 of 2007) and EIA Regulations	The Environmental Management Act (No. 7 of 2007) is a 'principles-based Act' and is an overarching statute regulating various aspects of natural resources use, integrated environmental management and pollution control. The Act provides for the right to an environment that is not harmful to the health and wellbeing of the people, sustainable development, environmental protection, equitable distribution of natural resources and the formulation of environmental management frameworks. The EIA regulations (GN 30 of 2012) implement the broader principles of the environmental management approach. Critical to the EIA Process are sections 21-24 on satisfactory public consultation process. Moreover, Schedule to Annexure (GN 29. 2012) lists projects that cannot be undertaken without an environmental clearance certificate. Section 27 provides for listing of activities and prohibition in respect of listed activities that may	Specific key requirements to the project are outlined in Section 24 on preparation of environmental management plans; Regulation 6 on Application for environmental clearance certificate; Regulation 15 on requirement to prepare and submit an assessment report.

		not be undertaken without an environmental clearance certificate.	
3	National Heritage Act (No. 27 2004)	Through Section 46, prohibition is placed on removing or demolishing, destroying, or despoiling, developing, or excavating all or part of a protected place. Under subsequent sections of the Act, such can only be conducted under provisions of an exemption or under a permit issued by the Heritage Council. Moreover, during conducting of activities, should an object of cultural, historical or heritage significance be uncovered, the operations are to be halted instantly and the required procedure for clearance be undertaken.	The discovery of objects of cultural and heritage interests such as graves, artefacts and objects believed to be older than 50 years, requires that measures are taken to protect these objects until the National Heritage Council of Namibia have been informed, and approval to proceed with the operations after necessary protection measure are in place.
4	The Labour Act (No. 11 of 2007)	The objectives of the labour Act are to ensure the welfare of the various parties in labour related matters. Chapter 2 to 8 prescribes matters relating to the; i. *fundamental rights and protections relating to the prohibition and restriction of child labour, forced labour, discrimination, and sexual harassment in employment and provide for the freedom of association.* *ii. basic conditions of employment and terms termination, remuneration, hours of work, leave and accommodation.* *iii. duties of employers to employees and persons other than employees, as well as employee duties.* *iv. fair and unfair labour practices, and to belong to labour associations* *v. Safety and health in the working environment.*	Compliance to the stipulated requirements of the Act is obligatory and thus contractor, and subcontractors on the project will be required to adhere.
5	Atmospheric Pollution Prevention Ordinance (No. 11 of 1976)	The Act aims towards the prevention of pollution of the atmosphere. The Act sets to ensure activities that produce fumes, dust or smoke take necessary measures to control ensure these are to minimal levels.	Necessary measures need be taken to ensure release of noxious gases and dust is minimized in proximity to human settlement areas and prevent pollution. Dust and noxious gases in prescribed areas such as urban environments.
6	Hazardous Substances Ordinance (No. 14 of 1974)	This Act guides the control of substances which may cause injury or ill-health to or death of human beings by reason of their toxic, corrosive, irritant, strongly sensitizing or flammable nature or the generation of pressure thereby in certain circumstances. It further provides for the prohibition and control of the importation, manufacture, sale, use, operation, application, modification, disposal or dumping of such substances.	Sets restrictions on import, storage, sale and use of certain groups of hazardous substances without a permit for overall human safety and health.
7	The Water Resources Management Act (No. 13 of 2013)	The Water Resources Management Act (No. 11 of 2013) has come into force and provides for the management, protection, development, use and conservation of water resources and the regulation and monitoring of water services. The Act addresses many aspects of water resources use for supply to various scaled activities and quality requirements thereof. Among its requirements are that a person may only abstract and use water from a water	The protection of surface and groundwater from potential pollution is of importance and thus due care needs be taken from project activities.

		resource that exceeds thresholds authorized in terms of a law if the person holds a license issued by the Minister. Furthermore, the Act comes with water quality standards in its regulations, that are to enhance the treatment of safer drinking water.	
8	Biosafety Act 2006	The Act aims at the regulation of genetically modified organisms in Namibia in order to provide an adequate level of protection to the conservation and sustainable use of biological diversity, provide a framework for responsible research, development and the use of genetic engineering. This is to manage the risks posed by or as a result of gene technology by regulating activities involving the development, production, use, import, export, transport, release into the environment, marketing and other uses of genetically modified organisms and genetically modified products.	The seed research and development that considers gene technology for improvement will be required to consider the risks and comply with the requirements of the Act.
9	Seed and Seed Varieties Act 23 of 2018	The Seed and Seed Varieties Act states that the Registrar must register a producer or seed processing unit or renew the registration of a producer or seed processing unit if the producer or unit meets the prescribed specifications in terms of infrastructure, equipment and technical ability and knowledge. Every person registered as a seed producer and any person in charge of a seed processing unit must furnish periodic returns to the Registrar or to any prescribed person or institution in such form and at such time as may be prescribed specifying the quantity of seed of different kinds or varieties produced or processed.	The registration of the seed processing plants will be required for all sites and more so compliance with the requirements of the Act, in terms registration and submission of required information at determined frequency.
10	Agronomic Industry Act (No. 20 of 1992)	The Act provides for the establishment of a Board for the Agronomic Industry in Namibia with powers to regulate the importation and export of agronomic products and the sale of such controlled products.	The intended reduction of importation of seeds once all the seed processing plants are in operation can be achieved through the regulations of the Act.
11	The Plant quarantine Act (No. 7 of 2008).	The Act provides for the prevention, monitoring, controlling and eradication of plant pests, to facilitate the movement of plants, plant products and other regulated articles within and into or out of Namibia. Furthermore it provides for the certification of the phyto-sanitary standards of plants and plant products exported from Namibia.	The movement of plant products such as seeds will be required to comply with the requirements of the Act. Specifically, the requirement to meet phyto-sanitary standards in the movement of seeds.
12	Namibia's Environmental Impact Assessment Policy (1994)	The Environmental Impact Assessment (EIA) Policy of 1995 promotes accountability and informed decision making through the requirement of EIAs for listed programs and projects (activities). The EIA Policy is currently enforced through the Environmental Management Act (No. 7 of 2007 (EMA)) and the EIA Regulations of 6 February 2012.	The Policy sets out the steps required in the process of carrying out environmental assessments.
13	Namibia Seed Policy of 2013	The policy aims at enhancing the availability of good quality seeds, towards enhancing food security at household level. The policy acknowledges the importance of strong research and extension for seed development and agricultural production.	The Policy provides the overall government direction relating to seed research and extension, seed production, processing and quality control, seed marketing and distribution.

14	The National Gender Policy (2010)	The policy aims to achieve gender equality and the empowerment of women in the socio-economic, cultural, and political development of Namibia. The Policy aims towards actualizing the basic human rights enshrined in the Constitution, to eradicate discriminatory practices and allow participation of all genders in the socioeconomic development of the society	The policy calls for fair opportunities to all and empowerment of marginalized sections of the society based on gender roles. It is therefore, important to ensure mechanisms to address gender related discriminatory practices that may arise from implementation of the activities.
15	The National Disability Policy (1997)	The national disability policy points to equal opportunities for persons with disabilities to have a productive and gainful employment in the labour market. Moreover, addresses that person living with disability should be safeguarded from abuse and violence. Such provides that where there is discrimination purported towards persons with disabilities, such causes need for remedy.	The significance of the policy lays in advocating inclusive development where no one is left behind. The policy places requirement for the project to support people affected by disabilities (including those infected or affected by HIV/AIDS) and other relevant groups.
16	National Policy on Climate Change for Namibia (2010)	Namibia's National Climate Change Policy takes a cross-sectoral approach and elaborates on climate change adaptation and mitigation in Namibia. The policy outlines a coherent, transparent, and inclusive framework on climate risk management in accordance with Namibia's national development agenda, legal framework, and in recognition of environmental constraints and vulnerability. Furthermore, the policy pursues the strengthening of national capacities to reduce climate change risk and build resilience for any climate change shocks.	Climate change impacts and mitigation are reflected in the project processes.
17	National Policy On HIV/AIDS (2007)	The policy aims to provide a supportive environment for the implementation of programmes aimed at reducing the infections, improving care and treatment and mitigation of impacts in adeptly supporting vision 2030. Objectives 4, 6 7 and 8 are important to the project in that they drive towards fair opportunities, treatment and access to services that facilitate mitigation for those infected or affected by HIV/AIDS.	The following are requirements from the policy; No discriminatory practices towards people infected or affected by HIV/AIDS in job opportunities or other opportunities that may arise from the implementation of the project; and ensuring that those requiring access to services are provided with such opportunities to access services where needed. These may relate those that live with or are affected to be afforded time to access facilities to obtain medications, attend to family members or obtain information.
18	Convention on Biological Diversity (CBD) including the Nagoya Protocol	Under the Convention, Namibia is obligated to regulate or manage biological resources important for the conservation of biological diversity whether within or outside protected areas, with a view to ensuring their conservation and sustainable use. As a requisite for being under the Convention, Namibia developed a National Biodiversity Strategy and Action Plan which is currently on its second lag (NBSAP2) whose vision is for "Namibia's biodiversity to be healthy and resilient to threats, and for the conservation and sustainable use of biodiversity to be key drivers of poverty alleviation and equitable economic growth, particularly in rural areas."	requires that measures that aim to reduce loss of biodiversity are put in place, specifically those resources that requires special attention due to nature of their conservation status.

19	UN Framework Convention on Climate Change (UNFCCC)	Namibia ratified the United Nations Framework Convention on Climate Change (UNFCCC) as a non-Annex I Party in 1995. The convection acknowledges the vulnerability of all countries to the effects of climate change and calls for special efforts to ease the consequences, especially in developing countries which lack the resources to do so on their own. It is required from countries that they report on their actions both to address climate change and to adapt to its impacts	It is required that in projects and program, measures are adopted that aim to mitigate the impacts of climate change and contribute towards national and global goals.
20	UN Convention to Combat Desertification (UNCCD)	Namibia has taken a proactive approach to combating desertification since the 1990s, and has been implementing programs on the ground since then. Various attempts have been implemented to halt, and reverse, desertification in the context of the UNCCD through raising awareness about causes and effects of land degradation, both on national and local level.	It is required that where there is potential implication of climate change in projects and program, measures are adopted that aim to mitigate the impacts and contribute towards national and global goals.
21	Convention for the Protection of World Cultural and Natural Heritage	The Convention promotes cooperation among nations to protect heritage around the world that is of such outstanding universal value that its conservation is important for current and future generations. In Article 4 and 5 of Part II of the text of the convention, sets the duties of states to protection, conservation, presentation and transmission to future generations of the cultural and natural heritage. Article 5, further requires that parties ensure that effective and active measures are taken for the protection, conservation and presentation of the cultural and natural heritage situated on its territory.	The implementation of the activities of the project are to incorporate adequate measures that align with the country's commitment towards the convention and thus ensure preservation of sites of accorded cultural and heritage status.
22	Convention on the Elimination of all Forms of Discrimination Against Women (CEDAW)	The CEDAW requires countries to eliminate discrimination against women and girls in all areas and promotes women's and girls' equal rights.	steps are taken towards empowerment of women and girls and their participation.
23	AfDBG's ISS	The AfDB developed an Integrated Safeguards System (ISS) updating its safeguards policies and thus consolidated into Operational Safeguards (OS's). The Bank adopted five OS's to achieve goals and optimal functioning of the ISS. These OS's are; ○ The Operational Safeguard 1 (OS1) for environmental and social assessments – governing the process of determining a project's environmental and social category and the resulting environmental and social assessment requirements. ○ The Operational Safeguard 2 (OS2): Involuntary Resettlement - consolidates the policy commitments and requirements set out in the Bank's policy on involuntary resettlement. ○ The Operational Safeguard 3 (OS3): Biodiversity and Ecosystem Services – aims to conserve biological diversity and promote the sustainable use of natural resources, including	The project is co-financed by the AfDB and thus required to incorporate approach that internalise the ISS and the five operational safeguards. The overall project has met OS – 1 through category 2 categorization, however further project process requires internalization of measures that addresses requirements of OS-3, OS-4 and OS-5.

		encompassing commitments on integrated water resources. ○ The Operational Safeguard 4 (OS4): Pollution Prevention and Control, Greenhouse Gases, Hazardous Materials and Resource Efficiency - covers the range of key impacts of pollution, waste, and hazardous materials for which there are agreed international conventions. ○ The Operational Safeguard 5 (OS5): Labour Conditions, Health, and Safety - requirements for its borrowers or clients concerning workers' conditions, rights and protection from abuse or exploitation.	

2.1 Legislative Gap Review

Table 2:2 below take to consider the alignment of the ISS with national legislation, further indication where gaps exist and potential redressal in the project approach.

Table 2:2 Relative gaps of national legislation and the ISS

AfDBG's ISS	ISS key requirements	Parallel National Legislations	Similarity Description	Gap
The Operational Safeguard 1 (OS1) for environmental and social assessments and development of ESMPs	Undertaking of ESIA/ESMP Free informed consultations Increased access to information Community impacts Vulnerable groups and indigenous communities. Grievance Redress Mechanism	Environmental Management Act No 7 of 2007 Environmental Regulations GN 30 of 2012 Environmental Impact Assessment Policy (1996)	The Environmental Assessment policy outlines the steps to an environmental impact assessment. Subsequent, EMA and its regulations identify or lists certain activities that requires environmental clearance prior being undertaken. These align with the OS1, that establish the category of a developmental activity premised on the extent of its environmental and social assessment requirements. Both requirements align in that they provide and requires checks and balances through affording concerned parties to submit views about the project and require that their concerns are satisfactorily addressed prior to the development and throughout.	The requirements in national legislation are not specific to involvement of native and marginalised communities as pointed out in the OS1, however stresses the engagement of potentially affected communities to the proposed development throughout the process. Nonetheless, the project category prescribes merely site concentrated impacts and thus meaningful to consult those in relation to the envisaged activities.
The Operational Safeguard 3 (OS3): Biodiversity and Ecosystem Services	Protection of habitats, ecosystems and species Priority to livelihoods and ecosystems Environmental flows Mitigation hierarchy and offsets	The Constitution of the Republic of Namibia The nature conservation ordinance of 1976 The environmental management Act The water resources management Act no 11 of 2013 The Water resources management act of 2013 Party to the CBD	The national policies and legislations align with the OS3 and provides robust approach to ensure the conservation of biodiversity though requirements for measures to mitigate and where possible offset, inclusive of sustainable use of water resources. The linkage of ecosystem to social systems are explicit in both requirements.	National legislation takes a broader context to addressing issues related to biodiversity conservation, relative to OS3 providing more specifics related to various ecosystems and the level of consideration that are to be afforded. The developmental areas are mostly brownfields where similar relative activities are already being undertaken.

The Operational Safeguard 4 (OS4): Pollution Prevention and Control, Greenhouse Gases, Hazardous Materials and Resource Efficiency	Waste Hazardous materials Usage of pesticides Resource efficiency Greenhouse gases	The EMA The Water Act and WRM Act The Hazardous substances ordinance Climate change policy	The OS4 and national legislation align in areas specified. Coverage comes in the listing of specific activities that are not to be carried out without an ECC. Moreover, the Hazardous substances ordinance regulates acquisition, storage and use of such substances. Further, the Climate Change policy articulates the importance of adopting technologies that reduces GHG emissions	The aspect of resource efficiency is ambiguously addressed in national legislation as specifically articulated in the OS4. However, such can be taken as implied in some legislation where issuance of licenses towards use of certain resources is taken as promoting efficiency in use. Despite the above identified limitations, the EMA allows for inclusion of such matters as it requires measure that address all potential implication from project activities inclusive of resources use.
The Operational Safeguard 5 (OS5): Labour Conditions, Health, and Safety	Protection of workers conditions Workers organizations and rights of collective bargaining Protection from abuse Forced labour and child labour Provision of medical services	The labour Act National disability Policy National Policy On HIV/AIDS (2007) The National Gender Policy (2010) The national health and safety policy (2021) Convention on the Rights of the Child Social Security Act, 1994 (No. 34 of 1999, as amended Employees Compensation Act, 1995 (No.5 of 1995) Regulations relating to the health and safety of employees at work (GN 156 of 1997)	National policy and legislation provide comprehensive alignment with the key requirements of the OS4.	The requirements are in alignment

3. Description of Project Location

3.1.1 Project Site

The proposed SPP development is at Omahenene Agricultural Research Station in the Outapi Constituency of the Omusati Region (See Figure 3:1). The site seats some 50 km northwest of the Outapi Town, the administrative centre of the region. The locality is hot to several facilities including the existing SPP with administrative office of the Directorate of Agricultural Research and Development (DARD), Seed Co facilities, aquaculture facilities of the Ministry of Fisheries. The refurbishments are suited for the locality.

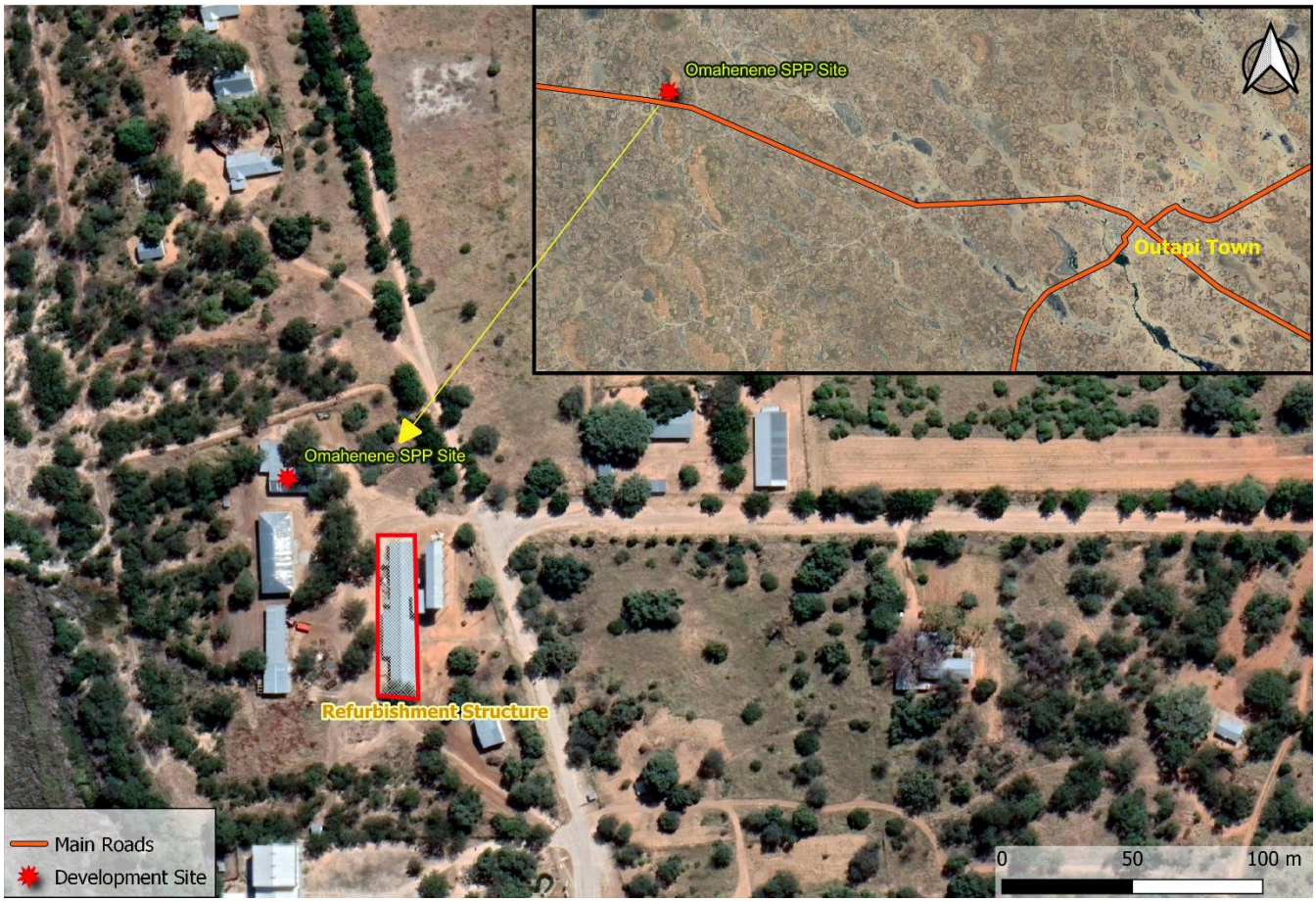


Figure 3:1 Omahenene Site Layout plan

3.1.2 Access to Basic services

(a) Power and potable water supply

Presently, the Omahanene Site hosts the only existing SPP in the country and is connected to power and potable water supply services.

(b) Waste management (liquid and solid)

Wastewater from the facilities of the area is managed through septic system and regularly drained to the treatment system of the nearest town of Outapi for management. Limited solid waste generated is managed through an own informal site within the area, however such is not utilised for hazardous material but only general waste. Management of the site involves regular limited burning of the waste to reduce volume.

(c) Road Infrastructure

The Omahanene site is accessible through the C46, a bitumen paved road that links to Outapi Town in the south-east direction and also connects to Ruacana town in the west. The site is about 650m from the highway.

3.1.3 Site Biophysical Description

The Omahenene SPP development is considered a brownfield development as it involves the refurbishment of the existing structures to fit a modern SPP. Subsequently there are minimal interaction with biodiversity in form of fauna or flora on the area given the constant activeness of the area. There are minimal trees found within the site however, minimal interaction with these are envisaged, except where necessary to expand the dimensions of the plant.

3.1.4 Socio-economic Characteristics

The proposed development on short and long term basis is likely to make a contribution to the socioeconomic development of the locality and its surroundings. The 2011 population census recorded unemployment at 42% within the active population between the ages of 15 to 59. Much of the income is generated from pension pay-outs and wages and salaries. Farming of livestock or crops is substantially as the third source of income. These characteristics are relative to the 94% of the regional population living in rural areas and thus potential that exists in elevating agricultural production.

4. Identification and Evaluation of Impacts

4.1 Introduction

Impacts and risks are predicted from details of an envisaged project's activities and anticipating likely results from interaction with ecological and social-cultural aspects. Identification of the potential impacts and risks is informed from a several streams such as;

i. Public participation and engagement with various stakeholders to the project
ii. An understanding of baseline conditions and potential receptors.
iii. Understanding of the spatial and temporal extent of the project area of influence.
iv. Expert knowledge and experience of the project team in anticipating of impacts and recognizing risks.
v. Guidance material from requirements and checklist of project stakeholders.

All above factors have been applied in identifying potential risks and impacts in this assessment.

4.2 Impacts Identification

4.2.1 Positive Impacts

The following positive impacts are expected from realization of the project;

i. Accessibility of seed processing facilities to seed farmers –given the present status of single a processing plant in the country where all seed farmers send their seeds, the plant will provide ease to supply seeds at a reasonable distance to the seed farmers in the region. This has many advantages including improved delivery time, and preserved storage.

ii. Availability of seeds for crop farmers – the operation of the plant will contribute towards availability of seeds to the local farmers and thus alleviate challenges that relate to late cultivation due seed unavailability.

iii. Seed self-sufficiency for agricultural production- the local production of seeds will lead to self-sufficiency in seed supply to the farmers at local and national level and thus towards attaining project objective of lessening reliance on foreign seed supply.

iv. Potential increased land under agricultural production in the cluster regions – the improved access to seeds for local farms has potential to lead to increased land under production and thus lead to potential increase in yields.

v. Potential creation of business opportunities for the construction industry - the construction and operation phase of the development has potential to serve an opportunity for contractors in the construction industry locally, nationally and internationally.

vi. Creation of employment opportunities – the construction and operation phase of the development has potential to create employment for both skilled and unskilled personnel locally and around the country.

vii. Increase women participation and beneficiation from farming – women play a major role in farming activities and thus the operation of the plant offers opportunities for more women to engage in seed farming but also crop production and thus derive or enhance their income at household levels.

viii. Contribute towards regional and national development agenda – the project has potential to contribute towards the agricultural development aspirations for the Omusati Region and more so to the national development agenda, ingrained in the Harambe Prosperity Plan II, and the fifth National Development Plan, all towards attaining Vision 2030.

ix. Improved efficiency of the current operations

The improvement to the current plant will ensure improved operational efficiency from entirely manual based to inclusion of automated systems.

4.2.2 Potential Adverse Impacts and Risks

The following adverse impacts are expected, momentarily notwithstanding the specific development phase of the project;

i. Strain existing infrastructure capacity to supply basic services – the development has potential to strain the existing infrastructure at the site to continue providing basic services. These services relate to wastewater reticulation and treatment, solid waste management, power and potable water supply.

ii. Wastage of natural resources (water and electricity) – there is potential for onsite personnel to waste resources such as water and electricity.

iii. Potential illness, injuries or fatality to site workers – Incidents of injuries or illness or a fatality are likely to happen onsite from exposure, use or operating an equipment or carrying out a risky task.

iv. Potential Injuries or fatality disaster to public – construction sites form an attraction for onlookers and such can result in exposure to site works and thus threats of injuries or a fatality.

v. Theft and or vandalizing of site materials and property – there is potential for theft of goods and materials that are onsite. This came out gravely in stakeholder consultations that theft of equipment and machinery is of great concern from some members of the public.

vi. Disgruntlement over employment disparities/ opportunities - there is potential for dissatisfaction over employment opportunities and disparities of gender and those with special needs. The lack of involvement of local communities in projects to get jobs towards an income and gain skills is an issue that is concerning from project to project.

vii. Potential rise in gender based violence and harassment – the development has pontifical to attract job seekers into from afar, but also project workers that come to interactions with the local community. These interactions can be with women and girls and may later lead to sexual exploitation, abuse and harassment. Moreover, improved incomes project employed workers especially women may lead to a power balance shift in households and thus lead to increase in gender based violence.

viii. Lack of women empowerment opportunities – there may be disgruntlement over lack of opportunities to assume empowering positions, despite them meeting requirements for qualified positions of leadership.

ix. Pollution of site and surroundings– site works has eventual generation of solid waste in various forms that may affect the site outlook and surroundings and pose a health and safety risk to humans in the vicinity. Examples of these include waste from construction works but also from that can impact the site outlook and alter drainage systems.

x. Dust, noxious and greenhouse emissions - the operations of equipment and machinery in the construction process is likely to produce dust into the surroundings, and further emit greenhouse and noxious gases, impacting the neighbours welfare and the natural environment.

xi. Noise and vibrations – the operations of equipment and machinery is likely to produce noise and vibrations into the surrounding areas and thus impact on neighbours welfare.

xii. Potential pollution of soil and subsurface resources– the use of hazardous substances such as fuel and lubricants in machinery and equipment poses a risk of spillages or leakage onto open ground surfaces, accidentally or through negligence. Additional, there is potential risk of liquid waste discharge to the environment from overflowing sewerage systems, or intentional discharge and thus a cause for a potential health hazard. These have potential to contaminate soils and eventual the subsurface environment.

xiii. Grievances over poor labour conditions or practices (i.e. remuneration)- there may be potential ill-treatment of workers by the contractors or their agents that do not comply with national and/or international labour standards or safety standards and thus lead to disgruntlement or accidents. Such may also include provision of services such as sanitation and accommodation for the site workers.

xiv. Disturbance/or destruction of cultural heritage items– civil works has potential to unearth and disturb matter with cultural heritage value.

xv. Potential pest or disease outbreaks -the process of receiving and processing seeds from various seed farmers may pose a potential risk of introducing and transfer of pests in the seed production and supply chain. Such can further come from unmanaged discarding of bad seeds from the processing or long stored seeds. Laboratory works further poses a potential area of disease outbreaks.

xvi. Operational inefficiencies due to lack or limited operational capacity for the SPP – there is potential for limited or lack of qualified operators and support staff for the effective and efficient operations of the plant once commissioned. This likely poses a redundancy risk to the infrastructure and attaining the overall project objectives.

xvii. Insufficient raw seed supply for operations of the SPP – there is potential that a commissioned plant may not operate at required capacity and may become redundant due to insufficient supply of raw seeds for processing. Such can be due to low number of seed farmers or climate induced effects on farming of seeds.

xviii. Operational inefficiencies due to breakdown of systems – the operations may be interrupted due to breakdowns of equipment and machinery, lessening the production of seeds supply as envisaged and thus inaccessibility to farmers.

xix. Inability to voice concerns over the projects social, environmental and economic aspects-stakeholders and ordinary members of the public may not be able to voice grievance through the established mechanism due to unawareness or legitimacy.

xx. Potential emergencies or disasters – the remains potential to incur unforeseen emergencies that may disrupt activities and pose risks to the property and personnel onsite. Such can come in form of fire or other accidents.

xxi. Destruction of fauna and flora on the project site – the fauna and flora of the target site will be removed and thus may lead to removal and damage to a sensitive environment that includes some of cultural significance to the local communities.

xxii. Disgruntlement over postscript stakeholder communication- Stakeholders may be disgruntled over lack of communication from the project in the implementation phases.

xxiii. Inability to effectively implement the ESMP and associated tools – the ESMP or grievance redress mechanism may be ineffectively implemented due to the implementers lacking required capacity.

xxiv. Increase in communicable diseases such as HIV and other sexually transmitted diseases

The migration of project workers to the area and also potential job seekers from within the region and others has potential to lead to increased cases of infectious diseases in the area.

xxv. Local seed supply and availability crisis - the construction of the plant along with others at the same time affect seed production in the country and thus cause seed availability crisis.

4.3 Impacts Evaluation and Mitigations

4.3.1 Evaluation Methodology

A common tool applied in the evaluation of impacts of proposed developments activities are matrices. These present a set of measurement standards or parameters upon which to determine if a certain impact has significance that is of positive or negative nature. Parameters utilized in the evaluation may include the following; nature of the impact, the extent, duration, intensity, the probability, and significance of a potential impact or risk on the environment, society and economics and whether such effects are positive (beneficial) or negative (detrimental). This section focuses on evaluation of impacts and risks identified.

Each of the parameters (Extent, Intensity, Probability and Significance) are explained in Table 4:1, while Table 4:2 provides the significance measurement.

Premised on the methodology of Tables 4:1 and 4:2, Table 4:3 further evaluates the significance of the identified impacts and risks.

Table 4:1 Description of impact evaluation parameters

Criteria	Rating	Description Of Impact Level
Nature	+Ve	Impact has advantages to the project or receptor
	-Ve	Impact has disadvantageous to the project or receptor
	=	Impact is neither beneficial or adverse to the project or receptor
Extent	4	National to international. Activity has impact of national interest and potential for international
	3	Regional to national Scale: The impacts scale has regional interest with potential for more neighbouring regions
	2	Local Scale: the impact scale is beyond a locality and up to radius of 5km away from site.
	1	The impacts are restricted to a specific site/locality/point
Duration	4	Permanent: The impacts are longer terms lasting beyond human lifetime or in such a time span that the impact cannot be considered transient.
	3	Long-term: The impact will continue/last for the entire operational life of the development or implemented concept but has potential to change should the development cease either by direct human action or by natural processes thereafter.
	2	Medium-term: The impact will last for the period of project implementation, however will be negated upon cessation of project activities.
	1	Short-term: The impacts are negligible and disappear with mitigation or will be mitigated through natural process in a shorter span, or the impact timeframe may be unmeasurable.
Intensity	+3	Major positive benefit. The change becomes part of natural, cultural, and social functions and processes permanently.
	+2	Significant improvement in status quo. the change to natural, social and cultural systems to the extent that they are temporarily altered, and remain reversible if not maintained.
	+1	Improvement in status quo. the impacts have negligible change to social, cultural and environmental systems.
	0	No change in status quo. May be not applicable or measureable
	-1	Negative change to status quo. The impacts have negligible negative change to social, cultural and natural systems.
	-2	Significant negative disadvantage or change. The impacts have considerable change to social, cultural and environmental systems.
	-3	Major disadvantage or change. Natural, cultural, and social functions and processes are altered to extent that they permanently cease or change is harmful.
Probability	4	Definite - Impact will certainly occur

	3	Highly Probable - Most likely that the impact will occur
	2	Possible - The impact may occur
	1	Likelihood of the impact materializing is none existent
Significance		Significance Formula: The calculation of significance first takes to accumulative the scale of Extent and Duration of the impacts and multiply these by intensity of the expected change thus the cumulative Magnitude of the impacts. The accumulated Magnitude is further multiplied by the probability of the impact taking place to determine the Significance of the impacts from a specific activity as below: Cumulative Magnitude [(Extent + Duration) x Intensity] **Significance = Cumulative Magnitude X Probability** The Significance is rated on scale to determine tits level and thus determination of the level of attention through prevention/Reduce/mitigate or other necessary for negative impacts, while on the other hand finds ways to elevate less significant positive impacts.

Table 4:2 Impact significance evaluation

Scale	Significance level	Description
+79 to +96	Extreme Positive Impact	Activity/Impact is critical towards attainment of the overall developmental objectives.
+ 53 to + 78	High Positive Significance	Activity/Impact is very important to achievement of the project objectives.
+ 26 to + 52	Medium Positive significance	Activity/Impact requires no enhancement measures however may be advantageous to achieve project success
+1 to +25	Low Positive significance	Activity/Impact requires some enhancement to ascertain impact towards delivery of project objectives.
0	Neutral	Activity/Impact is indifferent to the outcomes
-1 to -25	Low Negative Significance	Activity/Impact requires no proactive intervention, however may be advantageous where identified.
- 26 to -52	Medium Negative Significance	Activity/Impact requires a minimum of ongoing monitoring to dispel any potential elevation of risks.
- 53 to – 78	High Negative Signficance	Activity/Impacts requires mitigation/prevention, or avoidance measures
-79 to -96	Extreme Negative Significance	The activity requires review for redesign prior the implementation. Any activity which results in a “Extreme Negative impact” is likely to be a fatal flaw.

Table 4:3 Evaluation of Impact and risk significance

No	Specific Activity or Group of Activities	Impact/Risk	Impact/Risk Type {social, economic, environmental}	Project Development Phase {pre-construction, , operational, construction, decomposition}	Impact Nature	Extent	Duration	Intensity	Probability	Significance
1	Commissioning of seed famers on operation of the plant	Accessibility of seed processing facilities to seed farmers.	Socioeconomic	Operation	+Ve	4	4	+3	3	+72
2	Distribution of seeds in cluster regions and countrywide	Availability of seeds for crop farmers.	Socioeconomic	Operation		4	3	+3	3	+63
3	Continued operation of the seed plants	Seed self-sufficiency for agricultural production.	Socioeconomic	Operation		4	3	+2	3	+42
4	Improved availability of seeds	Potential increased land under agricultural production in the cluster regions.	Socioeconomic	Operation		4	3	+2	3	+42
5	Continued operation of the seed plants	Increase women participation and beneficiation from farming.	Socioeconomic	Operation		3	4	+3	3	+63
6	Commissioning of seed famers on operation of the plant	Contribute towards regional and national development agenda.	Socioeconomic	Construction & Operation		4	3	+2	3	+42
7	Procurement of contractor and commissioning of the construction	Potential creation of business opportunities for the construction industry.	Socioeconomic	Construction		4	2	+2	3	+36
8	Sourcing of qualified and unqualified personnel	Creation of employment opportunities.	Socioeconomic	Construction & Operation & Decommission		3	3	+2	3	+36
9	Acquisition and installation of automated processing machinery	Improved efficiency of the current operations	Socioeconomic	Operation		3	3	+3	3	+54
10	Construction of the plant	Strain existing infrastructure capacity to supply basic services.	Social & Economic and Environment	Operation	-Ve	3	3	-3	2	-36
11	Carrying out without provision or regard for safety and health measures	Potential illness, injuries or fatality to site workers.	Socioeconomic	Construction & Operation & Decommission		4	4	-3	2	-48
12	Uncontrolled access to the construction site	Potential Injuries or fatality disaster to public.	Socioeconomic	Construction & Operation & Decommission		4	4	-3	2	-48
13	Lack of secure storage and security measures	Theft and or vandalizing of site materials and property.	Socioeconomic	Construction & Operation		3	2	-2	3	-30
14	Lack of transparent processes for filling of qualified and unqualified employment	Disgruntlement over employment disparities/ opportunities.	Socioeconomic	Construction & Operation		3	3	-3	2	-36
15	Interaction of project staff with local communities.	Potential rise in gender based violence and harassment.	Social	Construction & Operation		4	2	-3	2	-36
16	Lack of transparent processes for	Lack of women empowerment opportunities.	Socioeconomic	Construction & Operation		4	2	-3	3	-54

No	Specific Activity or Group of Activities	Impact/Risk	Impact/Risk Type {social, economic, environmental}	Project Development Phase {pre-construction, , operational, construction, decomposition}	Impact Nature	Extent	Duration	Intensity	Probability	Significance
	elevating employees and negligence to gender disparities.									
17	Littering and lack of sound site management practices	Pollution of site and surroundings.	Social & Environmental	Construction & Operation		3	2	-2	3	-30
18	Construction activities	Dust, noxious and greenhouse emissions.	Social & Environmental	Construction		2	1	-2	2	-12
19	Construction activities	Noise and vibrations.	Social & Environmental	Construction		2	1	-2	2	-12
20	Inconsiderate use of water and electricity	Wastage of natural resources (water and electricity).	Environmental	Construction & Operation		4	2	-1	3	-18
21	Considerate use and storage of hazardous substances and their waste	Potential pollution of soil and subsurface resources and effect om human health	Social & Environmental	Construction & Operation & Decommission		4	3	-3	2	-42
22	Dereliction of basic employment rights and obligations towards workers.	Grievances over poor labour conditions or practices.	Socioeconomic	Construction & Operation & Decommission		4	2	-3	2	-36
23	Accidental release of infestations	Potential pest or disease outbreaks.	Social & Economic and Environment	Operation		3	2	-3	2	-30
24	Stakeholders unaware of local GRM	Inability to voice concerns over the projects social, environmental and economic aspects.	Social & Economic and Environment	Construction & Operation & Decommission		4	2	-2	3	-36
25	lack of provision for emergency response mechanism	Potential emergencies from unforeseen disasters.	Social & Economic and Environment	Construction & Operation & Decommission		4	2	-3	2	-36
26	Project staff possess limited knowledge to Effectively implement ESMP	Inability to effectively implement the ESMP and associated tools	Social & Economic and Environment	Construction & Operation		4	3	-3	2	-42
27	Plant personnel are unqualified to operate machinery and equipment	Operational inefficiencies due to lack or unqualified personnel to operationalize the SPP.	Socioeconomic	Operation		3	3	-3	3	-54
28	Limited seed famers to meet plant seed processing capacity and climate impacts on farming of seeds	Insufficient raw seed supply for operations of the SPP	Socioeconomic	Operation		3	3	-3	2	-36
29	Lack of local capacity to service and repair machinery and equipment.	Operational inefficiencies due to breakdown of machinery and equipment	Socioeconomic	Operation		3	3	-3	2	-36
30	Migration of people into the area for the project or for job seeking.	Increase in communicable diseases such as HIV and other sexually transmitted diseases	Social	Construction		3	2	-3	3	-45
31	Undertake construction of Omahenene SPP simultaneously with other regional	Local seed supply and availability crisis	Socioeconomic	Construction		3	2	-3	3	-45

No	Specific Activity or Group of Activities	Impact/Risk	Impact/Risk Type {social, economic, environmental}	Project Development Phase {pre-construction, , operational, construction, decomposition}	Impact Nature	Extent	Duration	Intensity	Probability	Significance
	plants									

Table 4:4 Identification of mitigation and enhancement measures for significant impacts

No	Impact/Risk	Identified Mitigations/Enhancement measures
1	Accessibility of seed processing facilities to seed farmers	○ Compliance to work agreed work schedules towards completion of design and planning works. ○ Ensure comments and inputs on design are adequately and timely addressed.
2	Availability of locally produced seeds for crop farmers	○ Devise an effective and efficient distribution mechanism/plan for seed products across the country. ○ Devise or review policy framework to enhance sustainability of local produced seeds for crop farming.
3	Seed self-sufficiency for agricultural production	○ Intermittent reviews of operations and the seed production and supply chain to improve inadequacies in production and supply. ○ Review policy framework of the seed production and supply chain to enhance and manage any bottlenecks.
4	Potential increased land under agricultural production in the cluster regions	○ Render continued extension support services to farmers to enhance crop production.
5	Increase women participation and beneficiation from farming	○ Registration of seed farmers to encourage and target the participation of woman and girls.
6	Contribute towards regional and national development agenda	○ Compliance to agreed work schedules towards completion of design and planning works. ○ Timely consideration of draft designs and provision of guidance towards finalization. ○ Ensure comments and inputs on design are adequately and timely addressed. ○ Render support towards project realization.
7	Potential creation of business opportunities for the construction industry	○ Consideration and guidance and approval of plant designs. ○ Completion and approval of documentations for the tendering of the works.
8	Creation of employment opportunities	Processes towards the appointment of a contractor for the works are carried out accordingly to project requirements.
9	Improved efficiency of the current operations	Selection of processing machinery to consider alleviating intensive manual work in seed processing.
10	Strain existing infrastructure capacity to supply basic services	Pre-ascertain infrastructure capacity to absorb additional demand for basic services such as water, power supply and wastewater.
11	Potential illness, injuries or fatality to site workers	○ Employ skilled and provide training on use of specific machinery and equipment for various works. ○ Ensure regular maintenance of machinery and equipment for safety of the operators. ○ Provide necessary Personal Protective Equipment (PPE) as may be required for specific risky works. ○ Discuss safety topics in site meetings to refresh and enhance awareness of safety protocols. ○ Schedule and conduct safety inspections around the site. ○ Establish and maintain a record system of safety incidents and resolutions actions taken.

		○ Erect sign boards and use of danger tapes in various areas to warn of potential hazards. ○ Implement and maintain good housekeeping practices in all areas of the construction site. ○ Establish, publicize and maintain a site emergency plan for the employees. ○ Appoint and ensure update training of the emergency responders to site medical emergencies (first aid). ○ Ensure that emergency care numbers are always available onsite and pasted on notice boards and other conspicuous places further indicating contact persons (first aid representatives on duty).
12	Potential Injuries or fatality disaster to public	○ Present access control protocols to restrict random access without guidance. ○ Provide warning on access through signage on of construction sign and activities and dangers. ○ Specific visit to the construction site for stakeholders to be pre-arranged.
13	Theft and or vandalizing of site materials and property	○ Implement and maintain an inventory record system of all incomings and outgoings or used goods and material for the construction works. ○ Employ guards specific to ensure security good and materials, especially in inactive times such as night-time and weekends. ○ Report vandalism or theft incidences from members of the public to community leadership. (see local grievance redress mechanism).
14	Disgruntlement over employment disparities/ opportunities	○ Unskilled labour shall restricted to local community. Engage community leadership structures for process of acquiring unskilled labour. ○ Ensure the hiring process for skilled positions complies to required national (where necessary international) transparency requirements. Including publicizing in widely circulated media platforms. ○ The local participation requirements are imbedded in the tender bid documentations in appointing a contractor.
15	Potential rise in gender based violence and harassment	○ All project employees are to sign a code of conduct to adhere to required conduct and behaviour appropriate to the local community and all subordinates at all times. ○ Implement a project-level GRM. ○ Invite specialist in gender based issues to conduct awareness sessions among the project employees.
16	Lack of women empowerment opportunities	○ The project to develop a Gender Action Plan to outline opportunities for gender and women empowerment. ○ Entrench conditions to promote the hiring of marginalized and people with disabilities in qualifying positions.
17	Pollution of the site and surroundings	○ Carry out Identification and demarcation of waste collection points for different types of waste. ○ All areas shall be kept free of waste through adherence to use of demarcated areas/points for storage of waste. ○ Carry out regular inspection of areas to ensure adherence to good housekeeping practices in various construction areas. ○ Construction waste such as building rubble, planks and rubber with no reuse potential are to be transported to the appropriate disposal site and disposed accordingly. ○ Recyclables such as metals to be transported to collectors in town or in the local community. ○ Uncured concrete shall be returned to the batching plant or area. ○ Concrete batching works to be supervised as well as pouring of concrete to minimize wastage. No concrete mixing on the ground surface shall be allowed. ○ Restrict batching plant and operations to demarcated area. ○ No burying or burning of redundant construction packaging materials or allow scattering onsite. All waste of packaging to be appropriately disposed in demarcated areas to be disposed appropriately. ○ The use of waste skip container for collection and storage of construction waste onsite is highly recommended where possible.

		○ Demarcate adequate points for collection of domestic waste, specifically in area of food preparation and consumption. ○ As far as practically possible, implement waste management hierarchy through promoting avoidance, minimization, differentiation of waste into tins, bottles, papers, kitchen waste, office waste for potential recycling or reuse. Where encountered waste of electronics shall be differentiated to provide opportunities to waste recyclers or reuse.
18	Dust, noxious and greenhouse emissions	○ Use of modern equipment and machinery that meet appropriate emissions standards. ○ Implement speed controls in the surroundings of the site to prevent excessive dust generation. ○ Avoid excavation or related works during heavy windy days. ○ Apply dust suppression measures such as water sprays onsite and surrounding roads towards the site. ○ Provide employees with constant high exposure to dust with adequate appropriate PPE. ○ Barricading of sections of the construction area that may generate excessive dust towards potential sensitive receptors such as presence of households or offices. ○ Transportation of dust producing materials offsite or onsite such as building rubble to utilize covers where feasible or the waste to be sprayed with water prior loading and haul. ○ Establish and maintain a complaints logbook ○ No equipment or machinery is kept running unnecessary when not required for use. These includes all vehicles, generators, compactors, compressors, welding torches. ○ All machines observed to release excessive smoke to be switched off and necessary repairs be implemented before reused. ○ Conduct site walkabout to monitor adherence to dust and noxious gases mitigation measures. ○ Regular maintenance of equipment and machinery be implemented to prevent release of noxious gasses.
19	Noise and vibrations	○ Provide PPE to the workers exposed to excessive noise levels such as ear muffs ○ Stationary vehicles and machines must be switched off at all times. ○ Machinery with excessive noise shall not be used until such a time that faults are repaired, or alternative are availed for usage. ○ All construction works to be conducted during normal working hours (07h00 – 17h00 during working days of the week, 07h00 – 13h00 during weekends). ○ All machinery should be kept in good working conditions to prevent incidents of producing excessive noise. ○ Care should be taken when unloading or loading vehicles to avoid unnecessary noise. All deliveries to be conducted during normal working hours (07h00 – 17h00 during working days of the week, 07h00 – 13h00 during weekends). It shall be ensured that all materials delivered to site are not dropped but safely lowered to surfaces when unloading. ○ All incidents of complaints of noise to be recorded and addressed to satisfaction.
20	Wastage of natural resources (water and electricity)	○ Carry out inspection to identify and monitor areas of possible wastage of water and power (leakages, open taps, unnecessary lighting during daytime) ○ Site workers are made aware of the following rules; - Water taps are to be fasted when not in use. - Lights, and electrical equipment and machinery are to be switched off when not in use. ○ Monitor the usage if resources such as electricity to determine areas of excessive use and potential savings.
21	Potential pollution of soil and subsurface resources	○ Establish and demarcate a chemical storehouse onsite. ○ Ensure appropriate signage should be placed to indicate activities allowed and not allowed in proximity to the storage area. Such will include any activities with potential to ignite a fire.

		○ The floor area of the chemical storehouse should be built of impermeable base or bunded. ○ A Material Safety Data Sheet (MSDS) should be kept and placed convenient point in the storage room. This MSDS should be constantly updated as may be required due to operations of the storehouse. ○ Devise and maintain records of chemical inflow and outflow from storehouse and purposes. ○ Conduct inspections of storage areas for any signs of leakages or spills. ○ The storehouse to contain a spill containment kit (i.e. among items included are gloves, disposable bags, absorbent pads/blanket, and absorbent socks, danger cones and or hazard warning tape and bucket or marked waste bin). In case of spillages, the following procedure to take effect; - The source of the spill / leak shall be isolated, to be contain discharging. Halting discharge shall include the cause of spillage or leakage, this may include replacement of caps to prevent further discharge of the chemical. - Condon/mark the area of coverage of the spill with danger cones. - Apply appropriate spill containment material for the spill such as an absorbent to clean up spillages - Fill/complete an incident report slip on the observation and submit to supervisor/SHEO/SM. - Investigation of the cause of the spill and take necessary corrective action to avoid recurrence. - Consolidate all information on the incident and report (i.e., Spillages of over 200 litres are required to be reported to the regulatory authority (i.e., Ministry of Mines and Energy)). - All materials used shall be disposed at the contaminated soil site. ○ Ensure awareness of the spill containment standard operating procedure (SoP) to all those accessing and using chemicals onsite. ○ All large vehicles such as earth moving machinery to be fuelled using a fuel bowser. Trucks to be fuelled in areas demarcated and lined with impermeable surfaces and with spillage drains connecting to a sump. ○ The use of drip trays be applied at all times to prevent spillages or where there are leakages from machinery or vehicles. ○ Servicing of vehicles shall be carried out in designated areas with impermeable surfaces.
22	Grievances over poor labour conditions or practices	○ The Project Implementing Unit (PIU) to issue works that complies with national legislations and accepted international labour standards. ○ No children shall be employed by service providers on all project issued works. ○ No discrimination of any form shall be practiced in the recruitment process for any project issued works.
23	Potential pest or disease outbreaks	○ Certification of the laboratory to international standards to ensure compliance to good and responsible practices. ○ Ensure laboratory personnel maintain high standard of adherence to required code of conduct. ○ Developed codes of conduct to be availed at conspicuous points in the laboratory. ○ Visitors to the laboratory to be provided with induction on expected code of conduct. ○ Handling and disposal of waste substances from laboratory shall be carefully carried out and not mixed with domestic waste. ○ Maintain a proactive checking system for stored products for signs of development of infestation and ensure timely management.
24	Inability to voice concerns over the projects social, environmental and economic aspects	○ Familiarize stakeholders with the GRM and purpose it serves to the project. ○ Maintain a schedule for stakeholder engagement to establish concerns towards project development and progress.
25	Potential emergencies and disasters	○ Implement the overall project emergency response plan. ○ Infrastructure planning and designs provide for emergency risks such as fire. ○ Develop an emergency response plan for laboratory related risks
26	Inability to effectively implement the ESMP and	○ The project has employed a qualified safeguard officer.

	associated tools	○ ESIA Consultant to render support in the construction phase towards implementation and compliance to ESMP.
27	Operational inefficiencies due to lack or unqualified personnel to operationalize the SPP.	○ Integrated planning on specific plant machinery to ensure harmony of required skills capacity envisaged for the operation. ○ Ensure manual on operations of machinery are developed and delivered. ○ Provide necessary training to potential plant operators. ○ Develop and supply a maintenance guide.
28	Insufficient raw seed supply for operations of the SPP	○ Implement a continual registration process of seed growers. ○ Carry out awareness through media platforms such as radio and social media on registration of seed growers. ○ Engage international cooperating partners in partnership with local stakeholders towards providing support to seed growers to enhance seed farming (i.e. provision of fertilizers, drought coping incentives, among others).
29	Operational inefficiencies due to breakdown of systems	○ Consider machinery and equipment with a service warranty plan for a reasonable duration. ○ Support training in basic plant machinery service and maintenance. ○ Consider accessibility of parts and accessories for machinery and equipment in selection for the SPP.
30	Increase in communicable diseases such as HIV and other sexually transmitted diseases	○ Provide awareness materials on sexual health to employees in conspicuous points on the project site ○ Encourage the project workers to visit nearest health care centre for information, counselling and testing ○ Provide for free dispensary for sexual health and prevention materials ○ Arrange information sessions on sexual health where possible ○ Arrange counselling and information sessions at project site.
31	Local seed supply and availability crisis	○ SPPs construction implementation plan to consider the continued operation of existing plant to abate shortage of production and supply of seeds.

4.4 Re-Evaluation of Significant Impacts

Based on assumptions of implementing the measures in Table 4:4, the significance level of level of impacts is re-evaluated in Table 4:5. It is clear that the identified measures are if applied can adequately prevent or reduce the impacts significance to manageable levels.

Table 4:5 Re-evaluation of impact post mitigation

No	Impact/Risk	Impact Nature	Pre-Mitigation Significance	Extent	Duration	Intensity	Probability	Post Mitigation Significance
1	Accessibility of seed processing facilities to seed farmers.	+Ve	+72	4	4	+3	4	+96
2	Availability of seeds for crop farmers.		+63	4	4	+3	4	+96
3	Seed self-sufficiency for agricultural production.		+42	4	4	+3	3	+72
4	Potential increased land under agricultural production in the cluster regions.		+42	4	4	+3	3	+72
5	Increase women participation and beneficiation from farming.		+63	3	4	+3	4	+84
6	Contribute towards regional and national development agenda.		+42	4	4	+3	4	+96
7	Potential creation of business opportunities for the construction industry.		+36	4	2	+3	4	+72
8	Creation of employment opportunities.		+36	3	3	+3	3	+54
9	Improved efficiency of the current operations		+54					
10	Strain existing infrastructure capacity to supply basic services.	-Ve	-48	1	1	-1	1	-2
11	Potential illness, injuries or fatality to site workers.		-48	1	1	-1	2	-4
12	Potential Injuries or fatality disaster to public.		-48	1	1	-1	2	-4
13	Theft and or vandalizing of site materials and property.		-30	1	1	-1	2	-4
14	Disgruntlement over employment disparities/ opportunities.		-36	1	1	-1	2	-4
15	Potential rise in gender based violence and harassment.		-36	1	1	-1	2	-4
16	Lack of women empowerment opportunities.		-54	1	1	-1	2	-4
17	Pollution of site and surroundings.		-30	1	1	-1	2	-4
18	Dust, noxious and greenhouse emissions.		-12	1	1	-1	3	-4
19	Noise and vibrations.		-12	1	1	-1	2	-4
20	Wastage of natural resources (water and electricity).		-18	1	1	-1	2	-4
21	Potential pollution of soil and subsurface resources and effect on human health.		-42	1	1	-1	2	-4
22	Grievances over poor labour conditions or practices.		-36	1	1	-2	1	-4
23	Potential pest or disease outbreaks.		-30	1	1	-1	1	-2
24	Inability to voice concerns over the projects social, environmental and economic aspects.		-36	1	1	-1	1	-2
25	Potential emergencies from unforeseen disasters.		-36	1	1	-1	2	-4
26	Inability to effectively implement the ESMP and associated tools		-42	1	1	-1	2	-4
27	Operational inefficiencies due to lack or unqualified personnel to operationalize the SPP.		-54	1	1	-1	2	-4
28	Insufficient raw seed supply for operations of the SPP		-36	1	1	-1	1	-2
29	Operational inefficiencies due to breakdown of machinery and equipment		-36	1	1	-1	1	-2
30	Increase in communicable diseases such as HIV and other sexually transmitted diseases		-45	1	1	-1	2	-4
31	Local seed supply and availability crisis		-45	1	1	-1	2	-4

5. Environmental and Social Management Plan

5.1 Objective

This Environmental and Social Management Plan (ESMP) establishes a framework consolidating requirements towards implementation of the proposed project on the development of a Seed Processing Plant at Omahenene in Omusati Region. The ESMP provides a systematic approach required towards mitigation of adverse impacts and risks whilst enhancing benefits from the proposed project.

5.2 Institutional Framework

The Proponent of this project is the Ministry of Agriculture, Water and Land Reform (MAWLR) and therefore, retains the overall responsibility to ensure that the ESMP is implemented. The Namibia Agricultural Mechanisation and Seed Improvement Project (NAMSIP) is implemented through the Directorate of Agricultural Research and Development (DARD), and thus a key unit in sustaining the framework established through this document beyond duration project level.

Further to above, it is obligatory that all structures or collaborating institutions take-up designated roles and responsibilities.

5.2.1 Key Institutions and Designations

The following institutions are key to the implementation of the ESMP.

(a) The Department of Environmental Affairs and Forestry (DEAF)

The Environmental Management Act (No. 7 of 2007) empowers the Environmental Commissioner (EC) in the MEFT as the designated authority responsible for approval of ESMPs. Once approved, an ESMP is a legally binding document and carries the obligation for implementation by the Proponent. The EC has the authority to enforce legal action towards the Proponent, subsequent to perpetuity of non-compliance after inspections and issuance of compliance orders.

(b) The Proponent

While the DARD retains the role of the Proponent of the Ministry, on behalf of the Proponent, the Project Implementing Unit of the NAMSIP is the custodian of this ESMP in pre-construction and construction phases. Subsequently the roles of Proponent and PIU will be retained distinctly in the ESMP. During the operation phase, the term Proponent shall revert to the Ministry under the identified DARPD. The obligations for implementation resides in these structures in the respective phases. These designated structures shall play a critical role in ensuring the implementation of the plan, through providing the necessary resources. The following responsibilities will reside with the PIU:

i. Ensure implementation of all requirements of the ESMP, inclusive of legislative and financial requirements to ensure that the Proponent is compliant at all times with the entire scope of measures prescribed.
ii. Keep the Proponent (i.e. the Ministry) constantly informed of the implementation of the ESMP and all matters relating to monitoring, review, and update.
iii. Lobby and secure resources required for comprehensive implementation of the ESMP.
iv. Keep and maintain a monitoring, review, and update schedule on the progress of implementing the ESMP.
v. Ensure other relevant stakeholders are updated and informed on the implementation of ESMP. (i.e. the AfDB, seed and crop farmers, and other interested stakeholders).
vi. Participate in grievance redressal process to seek swifter resolution in the interest of project progress and satisfactory remedy to affected parties.
vii. Assist in the assessment and review of the performance contractors or service providers related to management of environmental and social issues.

viii. Supervise the dedicated officer designated to manage project identified environmental and social aspects.
ix. Regularly liaise with the other parties involved in the implementation of the EMP to ensure compliance to approved plans and designs on prescribed environmental and social safeguards.

The PIU will be assisted by the designated projects Social and Environmental Safeguard Officer (SESO).

(c) The Social and Environmental Safeguard Officer

The Social and Environmental Safeguard Officer (SESO) is the functional position under the PIU, designated with management of all the project's environmental and social aspects. Specific responsibilities shall include;

i. Monitor activities and processes to ensure that established protocols and standards are adhered by contractors, subcontractors and other parties to the project.
ii. Verifying that all the required environmental licenses and permits have been obtained where required.
iii. Establish and maintain project information and record system on incidents, corrective actions, grievances process and outcomes.
iv. Liaise with relevant authorities and contractors regarding compliance to legislation requirements.
v. Ensure compliance to health and safety standards and requirements.
vi. Conduct environmental inspections, audits and monitoring of environmental factors as established in ESMP.
vii. Providing recommendations for remedial action in the event of any non-compliance.
viii. Always ensure the availability of the Grievance Redress Mechanism (GRM), whilst facilitate and participate in the redressal process.
ix. Ensure a grievance logbook is established, maintained, updated and ensuring confidentiality of the information submitted.
x. Investigation as so necessary of grievances or incidents towards the resolution process.
xi. Produce reports on environmental and social performance as per monitoring plan at stipulated intervals.
xii. Identify and review new impacts from unforeseen activities and recommend necessary measures for avoidance, or mitigation.

(d) The ESIA Consultant

The Environmental and Social Impact Assessment Consultant (ESIA Consultant) is contracted to the assessment and the development of the ESMP. The obligations of the consultant are towards project environmental and social clearance and ensuring participation of stakeholders in the proposed project. The ESIA Consultant shall further carry out required scheduled monitoring of the implementation of the environmental and social (E&S) requirements to ensure compliance during the applicable phases of the project.

(e) Site Manager

The Site Manager shall be designated to an individual acting on behalf of the Contractor as responsible for site management, overseeing implementation of site activities during the construction phase of the project.

(f) Resident Engineer

The Resident Engineer (RE) shall be designated to an individual acting on behalf of the ZCEC as responsible for continuous supervision of the construction, irrespective of specific expertise (i.e. civil. Mechanical, electrical or accessory works).

(g) The Consulting Engineers

Consulting Engineers (CEs) refers to the designated ZCEC consulting team responsible for the design of the SPP in the pre-construction phase (i.e. includes civil, mechanical, electrical, architectural and quantity surveyors).

(h) Contractor/Service Providers

The contractor or Service providers (SPs) refers to those that render services to the project, whose activities may have potential social and environmental impacts as identified and evaluate. Such services may be for a short or long-term duration, however requiring that certain operational protocols be maintained or adhered to. It is expected of SPs that they;

i. Implement all management requirements and provisions relating to environmental and social to as prescribed in this ESMP.
ii. To report incidents of non-compliance to the Site Manager or SESO.
iii. Ensure adherence to safety and health requirements in the working environment.
iv. The SPs may appoint a compliance officer on the behalf to ensure compliance to environmental to timeously advice on adherence to the requirements of the ESMP.

5.2.2 Collaborating Institutions and Organizations

(i) The Ministry of Gender Equality, Poverty Eradication and Social Welfare

The Ministry of gender equality, poverty eradication and social welfare (MGEPESW) is responsible for matters relating to implementation of national policies on inclusivity. It is therefore through the mandate they hold; may be require to engage or be required on matters relating to gender, special needs, women empowerment, and children.

(j) Ministry of Labour, Employment Creation and Industrial Relations

The mandates of the Ministry of labour, industrial relations and employment creation (MLECIR) focuses on matters of welfare of both workers and employers. The scope relating to these matters includes occupational health and safety, industrial relations and work practices among others.

(k) The Omusati Regional Authorities

The Omusati Regional Authorities include the Regional Council as the overall administrative organ of the State overseeing regional development. Further, included are the Constituency and the traditional authorities with jurisdiction over the area. These need to be constantly kept updated of progress and challenges to facilitate successful implementation. These further have a link to communities and the public and thus a channel through which information can effectively flow.

(l) Farmers and Social Organizations

These stakeholder group includes seed and crop famers and their cooperatives with potential to play an important role in the operation of the SPP once commissioned.

5.3 Implementation Framework

Table 5:1 below consolidates all requirements of mitigation and enhancement measures for the implementation of the envisaged project, to address social and environmental impacts and risks.

Table 5:1 ESMP implementation schedule

No	Impact/Risk	Identification of Mitigations/enhancement measures	Project Development	Duration/Frequency	Entity/Position Responsible	Budget Implication/Provision
1	Accessibility of seed processing facilities to seed farmers	○ Compliance to work agreed work schedules towards completion of design and planning works.	Preconstruction	Throughout Phase	○ Consulting Engineers ○ ESIA Consultant	Covered under Consultancy Fees
		○ Ensure comments and inputs on design are adequately and timely addressed.				
2	Availability of locally produced seeds for crop farmers	○ Devise an effective and efficient distribution mechanism/plan for seed products across the country.	Construction into Operation	Once-off and intermittent reviews	Proponent	Under Capacity Development of NAMSIP
		○ Devise or review policy framework to enhance sustainability of local produced seeds for crop farming.				Under Ministerial Operations
3	Seed self-sufficiency for agricultural production	○ Intermittent reviews of operations and the seed production and supply chain to improve inadequacies in production and supply.				
		○ Review policy framework of the seed production and supply chain to enhance and manage any bottlenecks.	Construction into Operation	Once-off and intermittent reviews	Proponent	
4	Potential increased land under agricultural production in the cluster regions.	○ Render continued extension support services to farmers to enhance crop production.	Operation	Continuous	Proponent	
5	Increase women participation and beneficiation from farming	○ Registration of seed farmers to encourage and target the participation of woman and girls.	Construction into Operation	As per devised Program	Proponent	
6	Contribute towards regional and national development agenda	○ Compliance to agreed work schedules towards completion of design and planning works.	Preconstruction	Throughout Phase	○ Consulting Engineers ○ ESIA Consultant	Covered under Consultancy Fees
		○ Timely consideration of draft designs and provision of guidance towards finalization.			○ PIU ○ Proponent	Under project Implementation.
		○ Ensure comments and inputs on design are adequately and timely addressed.			○ Consulting Engineers ○ ESIA Consultant	Covered under Consultancy Fees
		○ Render support towards project realization.		ESIA Stakeholder Participation	ESIA Consultant	Covered under Consultancy Fees
7	Potential creation of business opportunities for the	○ Consideration of draft designs to provide guidance towards approval of plant designs.	Preconstruction	Throughout Phase	Proponent	Under project Implementation.

No	Impact/Risk	Identification of Mitigations/enhancement measures	Project Development	Duration/Frequency	Entity/Position Responsible	Budget Implication/Provision
	construction industry	○ Completion and approval of documentations for the tendering of the works.		Once off	○ PIU ○ Proponent	Covered under Consultancy Fees
8	Creation of employment opportunities	○ All necessary processes for appointment and commissioning of construction are met		As necessary	○ Consulting Engineers ○ ESIA Consultant	Covered under Consultancy Fees
9	Improved efficiency of the current operations	○ Selection of processing machinery to consider alleviating intensive manual work in seed processing.	Preconstruction	As necessary	○ Consulting Engineers	Proponent
10	Strain existing infrastructure capacity to supply basic services	○ Pre-ascertain infrastructure capacity to absorb additional demand for basic services such as water, power supply and wastewater.	Preconstruction	As necessary	○ Consulting Engineers	Covered under Consultancy Fees
12	Potential illness, injuries or fatality to site workers	○ Employ skilled and provide training on use of specific machinery and equipment for various works.	Construction	Throughout Phase	Contractor	To be incorporated by bidders for the works
		○ Ensure regular maintenance of machinery and equipment for safety of the operators.		As necessary	Site Manager	
		○ Provide necessary Personal Protective Equipment (PPE) as may be required for specific risky works.				
		○ Discuss safety topics in site meetings to refresh and enhance awareness of safety protocols.		Throughout Phase		
		○ Schedule and conduct safety inspections around the site.				
		○ Establish and maintain a record system of safety incidents and resolutions actions taken.				
		○ Erect sign boards and use of danger tapes in various areas to warn of potential hazards.				
		○ Implement and maintain good housekeeping practices in all areas of the construction site.				
		○ Establish, publicize and maintain a site emergency plan for the employees.				
		○ Appoint and ensure update training of the emergency responders to site medical emergencies (first aid).		As necessary	Contractor	
		○ Ensure that emergency care numbers are always available onsite and pasted on notice boards and other conspicuous places further indicating contact persons (first aid representatives on duty).		Throughout Phase	Site Manager	No envisaged cost implications
13	Potential Injuries or fatality	○ The present access control protocols to restrict random	Construction	Throughout Phase	Contractor	To be incorporated by

No	Impact/Risk	Identification of Mitigations/enhancement measures	Project Development	Duration/Frequency	Entity/Position Responsible	Budget Implication/Provision
	disaster to public	access without guidance.				bidders for the works
		○ Provide warning on access to the gate through signage of construction activities and potential dangers.			Site Manager	
		○ Specific visit to the construction site for stakeholders to be pre-arranged.				
14	Theft and or vandalizing of site materials and property	○ Implement and maintain an inventory record system of all incomings and outgoings or used goods and material for the construction works.	Construction	Throughout Phase	Site Manager	To be incorporated by bidders for the works
		○ Employ guards specific to ensure security good and materials, especially in inactive times such as night-time and weekends.			Contractor	
		○ Report vandalism or theft incidences from members of the public to community leadership. (see local grievance redress mechanism).			Site Manager SESO	No envisaged cost implications
15	Disgruntlement over employment disparities/ opportunities	○ Unskilled labour shall restricted to local community. Engage community leadership structures for process of acquiring unskilled labour.	Construction	Throughout Phase	Contractor	+9-To be incorporated by bidders for the works
		○ Ensure the hiring process for skilled positions complies to required national (where necessary international) transparency requirements. Including publicizing in widely circulated media platforms.	Construction & Operation			
		○ The local participation requirements are imbedded in the tender bid documentations in appointing a contractor.	Preconstruction	Preparation of bidding documents	ESIA Consultant	Covered under Consultancy Fees
		○ Monitor the implementation of employment of locals	Construction	Throughout Phase	Contractor	+9-To be incorporated by bidders for the works
16	Potential rise in gender based violence and harassment	○ Entrench requirements for affirmation to expected code of conduct for the all employees working on behalf of a contractor	Preconstruction	Preparation of bidding documents	ESIA Consultant	To be incorporated in bidding for works
		○ All project employees are to sign a code of conduct to adhere to required conduct and behaviour appropriate to the local community and all subordinates at all times.	Construction	Throughout Phase	Contractor PIU	Under NAMSIP Implementation.
		○ Implement a project-level GRM.			SESO	Under NAMSIP Implementation (monitoring and evaluation)

No	Impact/Risk	Identification of Mitigations/enhancement measures	Project Development	Duration/Frequency	Entity/Position Responsible	Budget Implication/Provision
		○ Invite specialist in gender based issues to conduct awareness sessions among the project employees. Provide for training of trainers for internal refreshers.		Annual	Site Manager	To be incorporated by bidders for the works
		○ Encourage the reporting of gender based incidents or harassment		Throughout Phase	Site Manager	No envisaged cost implications
17	Lack of women empowerment opportunities	○ The project to develop a Gender Action Plan to outline opportunities for gender and women empowerment.	Preconstruction	Once off	SESO	5,000.00
		○ Entrench conditions to promote the hiring of marginalized and people with disabilities in qualifying positions.		Preparation of bidding documents	ESIA Consultant	Covered under Consultancy Fees
18	Pollution of the site and surroundings	○ Carry out Identification and demarcation of waste collection points for different types of waste.	Construction	Throughout Phase	Site Manager	No envisaged cost implications
		○ All areas shall be kept free of waste through adherence to use of demarcated areas/points for storage of waste.		Weekly	Site Manager SESO	
		○ Carry out regular inspection of areas to ensure adherence to good housekeeping practices in various construction areas.		Throughout Phase	Site Manager	
		○ Construction waste such as building rubble, planks and rubber with no reuse potential are to be transported to the appropriate disposal site and disposed accordingly.		Once-off	Site Manager	To be incorporated by bidders for the works
		○ Recyclables such as metals to be transported to collectors in town or in the local community.				
		○ Uncured concrete shall be returned to the batching plant or area.				
		○ Concrete batching works to be supervised as well as pouring of concrete to minimize wastage. No concrete mixing on the ground surface shall be allowed.				
		○ Restrict batching plant and operations to demarcated area.				
		○ No burying or burning of redundant construction packaging materials or allow scattering onsite. All waste of packaging to be appropriately disposed in demarcated areas to be disposed appropriately.		Throughout Phase	Site Manager	No envisaged cost implications

No	Impact/Risk	Identification of Mitigations/enhancement measures	Project Development	Duration/Frequency	Entity/Position Responsible	Budget Implication/Provision
		○ The use of waste skip container for collection and storage of construction waste onsite is highly recommended where possible.	Construction & Operation		Site Manager	To be incorporated by Contractor in bidding for the works
		○ Demarcate adequate points and erect waste bins for collection of domestic waste, specifically in area of food preparation and consumption.	Construction	Weekly	Site Manager SESO	To be incorporated by Contractor in bidding for the works
		○ As far as practically possible, implement waste management hierarchy through promoting avoidance, minimization, differentiation of waste into tins, bottles, papers, kitchen waste, office waste for potential recycling or reuse. Where encountered waste of electronics shall be differentiated to provide opportunities to waste recyclers or reuse.	Construction & Operation	Throughout Phase	SESO	To be incorporated by Contractor in bidding for the works
19	Dust, noxious and greenhouse emissions	○ Use of modern equipment and machinery that meet appropriate emissions standards.	Construction	Throughout Phase	Contractor	To be incorporated by bidders for the works
		○ Implement speed controls in the surroundings of the site to prevent excessive dust generation.	Construction Construction	As necessary	Site Manager	No envisaged cost implications To be incorporated by bidders for the works
		○ Avoid excavation or related works during heavy windy days.				
		○ Apply dust suppression measures such as water sprays onsite and surrounding roads towards the site.				
		○ Provide employees with constant high exposure to dust with adequate appropriate PPE.				
		○ Barricading of sections of the construction area that may generate excessive dust towards potential sensitive receptors such as presence of households or offices				
		○ Transportation of dust producing materials offsite or onsite such as building rubble to utilize covers where feasible or the waste to be sprayed with water prior loading and haul.				
		○ Establish and maintain a complaints logbook		Throughout Phase	○ Site Manager ○ SESO	To be incorporated by bidders for the works
		○ No equipment or machinery is kept running unnecessary when not required for use. These includes all vehicles, generators, compactors, compressors, welding torches.				No envisaged cost implications

No	Impact/Risk	Identification of Mitigations/enhancement measures	Project Development	Duration/Frequency	Entity/Position Responsible	Budget Implication/Provision
		○ All machines observed to release excessive smoke to be switched off and necessary repairs be implemented before reused.				To be incorporated by bidders for the works
		○ Conduct site walkabout to monitor adherence to dust and noxious gases mitigation measures.		Weekly Monthly	Site Manager SESO ESIA Consultant	No envisaged cost implications
		○ Regular maintenance of equipment and machinery be implemented to prevent release of noxious gasses.				To be incorporated by bidders for the works
20	Noise and vibrations	○ Provide PPE to the workers exposed to excessive noise levels such as ear muffs	Construction and Operation	As necessary	○ Contractor ○ Proponent ○ Site Manager	To be incorporated by bidders for the works
		○ Stationary vehicles and machines must be switched off at all times.	Construction and Operation	Throughout Phase		No envisaged cost implications
		○ Machinery with excessive noise shall not be used until such a time that faults are repaired, or alternative are availed for usage.				To be incorporated by bidders for the works
		○ All construction works to be conducted during normal working hours (07h00 – 17h00 during working days of the week, 07h00 – 13h00 during weekends).	Construction	Throughout Phase	Site Manager	
		○ All machinery should be kept in good working conditions to prevent incidents of producing excessive noise.				No envisaged cost implications
		○ Care should be taken when unloading or loading vehicles to avoid unnecessary noise. All deliveries to be conducted during normal working hours (07h00 – 17h00 during working days of the week, 07h00 – 13h00 during weekends). It shall be ensured that all materials delivered to site are not dropped but safely lowered to surfaces when unloading.				
		○ All incidents of complaints of noise to be recorded and addressed to satisfaction.			Site Manager SESO	To be incorporated by bidders for the works
21	Wastage of natural resources (water and electricity)	○ Carry out inspection to identify and monitor areas of possible wastage of water and power (leakages, open taps, unnecessary lighting during daytime.	Construction	Weekly	Site Manager SESO	To be incorporated in bidding for works
		○ Site workers are made aware of the following rules; - Water taps are to be fasted when not in use. - Lights, and electrical equipment and machinery are to be switched off when not in use.	Operation	Quarterly	Proponent	No envisaged cost implications

No	Impact/Risk	Identification of Mitigations/enhancement measures	Project Development	Duration/Frequency	Entity/Position Responsible	Budget Implication/Provision
		○ Monitor the usage of resources such as electricity to determine areas of excessive use and potential savings.	Construction	Weekly	Site Manager	To be incorporated in bidding for works
22	Potential pollution of soil and subsurface resources	○ Establish and demarcate a chemical storehouse onsite.	Construction and Operation	Throughout Phase	Site Manager	No envisaged cost implications
		○ Ensure appropriate signage should be placed to indicate activities allowed and not allowed in proximity to the storage area. Such will include any activities with potential to ignite a fire.				To be incorporated in bidding for works
		○ The floor area of the chemical storehouse should be built of impermeable base or bund.				
		○ A Material Safety Data Sheet (MSDS) should be kept and placed convenient point in the storage room. This MSDS should be constantly updated as may be required due to operations of the storehouse.			○ Site Manager ○ SESO	
		○ Devise and maintain records of chemical inflow and outflow from storehouse and purposes.			Site Manager	
		○ Conduct inspections of storage areas for any signs of leakages or spills.			○ Site Manager ○ SESO	No envisaged cost implications
		○ The storehouse to contain a spill containment kit (i.e. among items included are gloves, disposable bags, absorbent pads/blanket, and absorbent socks, danger cones and or hazard warning tape and bucket or marked waste bin). In case of spillages, the following procedure to take effect; - The source of the spill / leak shall be isolated, to be contain discharging. Halting discharge shall include the cause of spillage or leakage, this may include replacement of caps to prevent further discharge of the chemical. - Condon/mark the area of coverage of the spill with danger cones. - Apply appropriate spill containment material for the spill such as an absorbent to clean up spillages - Fill/complete an incident report slip on the observation and submit to supervisor/SHEO/SM. - Investigation of the cause of the spill and take			Site Manager	To be incorporated in bidding for works

No	Impact/Risk	Identification of Mitigations/enhancement measures	Project Development	Duration/Frequency	Entity/Position Responsible	Budget Implication/Provision
		necessary corrective action to avoid recurrence. - Consolidate all information on the incident and report (i.e., Spillages of over 200 litres are required to be reported to the regulatory authority (i.e., Ministry of Mines and Energy)). - All materials used shall be disposed at the contaminated soil site.				
		○ Ensure awareness of the spill containment standard operating procedure (SoP) to all those accessing and using chemicals onsite.			○ SESO ○ Site Manager	No envisaged cost implications
		○ All large vehicles such as earth moving machinery to be fuelled using a fuel bowser. Trucks to be fuelled in areas demarcated and lined with impermeable surfaces and with spillage drains connecting to a sump.				To be incorporated in bidding for works
		○ The use of drip trays be applied at all times to prevent spillages or where there are leakages from machinery or vehicles.				
		○ Servicing of vehicles shall be carried out in designated areas with impermeable surfaces.				
		○ All hazardous waste to be demarcated a controlled store area and only disposed to a site provision for hazardous substances.				
23	Grievances over poor labour conditions or practices	○ The Project Implementing Unit (PIU) to issue works that complies with national legislations and accepted international labour standards.	Preconstruction	As necessary	○ PIU ○ Proponent	Under Project implementation
		○ No children shall be employed by service providers on all project issued works.	Construction and Operation and Decommission	Throughout Phases	Contractor	No envisaged cost implications
		○ No discrimination of any form shall be practiced in the recruitment process for any project issued works.				
24	Potential pest or disease outbreaks	○ Certification of the laboratory to international standards to ensure compliance to good and responsible practices.	Operation	As necessary	Proponent	Under Ministerial Operations
		○ Ensure laboratory personnel maintain high standard of adherence to required code of conduct.				
		○ Developed codes of conduct to be availed at conspicuous points in the laboratory.		Once off and intermittent review		Under Ministerial activities

No	Impact/Risk	Identification of Mitigations/enhancement measures	Project Development	Duration/Frequency	Entity/Position Responsible	Budget Implication/Provision
		○ Visitors to the laboratory to be provided with induction on expected code of conduct.		Continuously		Under Ministerial Operations
		○ Handling and disposal of waste substances from laboratory shall be carefully carried out and not mixed with domestic waste.				Under Ministerial Operations
		○ Maintain a proactive schedule for monitoring stored products for signs of development of infestation and ensure timely management.		As per schedule		
25	Inability to voice concerns over the projects social, environmental and economic aspects	○ Familiarize stakeholders with the GRM and purpose it serves to the project.	All Phases	Throughout phases	○ SESO ○ ESIA Consultant	Under Monitoring , Evaluation and Supervision
		○ Maintain a schedule for stakeholder engagement to establish concerns towards project development and progress.	Construction	As per stakeholder engagement plan	SESO	
25	Potential emergencies from unforeseen disasters	○ Implement the overall project emergency response plan.	Construction and Operation	Throughout Phases	○ Contractor ○ Proponent	To be incorporated in bidding for works Under Ministerial Operations
		○ Infrastructure planning and designs provide for emergency risks such as fire.	Preconstruction	Review of Designs	○ Consulting Engineers ○ ESIA Consultant	Covered under Consultancy Fees
		○ Develop an emergency response plan for laboratory related risks	Operation	As necessary	Proponent	Under Ministerial Operations
26	Inability to effectively implement the ESMP and associated tools	○ The project has employed a qualified safeguard officer.	Preconstruction	Completed.	PIU	Under NAMSIP Implementation.
		Secure ESIA Consultant to render support in monitoring and review of the construction phase towards implementation and compliance to ESMP.	Operation	Monthly	ESIA Consultant	Covered under Consultancy Fees
27	Operational inefficiencies due to lack or unqualified personnel to operationalize the SPP.	○ Integrated planning on specific plant machinery to ensure harmony of required skills capacity envisaged for the operation.	Preconstruction	Completed.	PIU	Under NAMSIP Implementation.
		○ Ensure manual on operations of machinery are developed and delivered.	Operation	Monthly	ESIA Consultant	Covered under Consultancy Fees
		○ Provide necessary training to potential plant operators.	Preconstruction	Completed.	PIU	Under NAMSIP Implementation.

No	Impact/Risk	Identification of Mitigations/enhancement measures	Project Development	Duration/Frequency	Entity/Position Responsible	Budget Implication/Provision
		○ Develop and supply a maintenance guide.	Operation	Monthly	ESIA Consultant	Covered under Consultancy Fees
28	Insufficient raw seed supply for operations of the SPP	○ Implement a continual registration process of seed growers.	Operation	As per ministerial programs	Proponent	Under Ministerial Operations
		○ Carry out awareness through media platforms such as radio and social media on registration of seed growers.				
		○ Engage international cooperating partners in partnership with local stakeholders towards providing support to seed growers to enhance seed farming (i.e. provision of fertilizers, drought coping incentives, among others).				
29	Operational inefficiencies due to breakdown of machinery and equipment	○ Consider machinery and equipment with a service warranty plan for a reasonable duration.	Preconstruction	Machinery selection and review stage	○ Consulting Engineers ○ Proponent	No Cost Implications
		○ Support training in basic plant machinery service and maintenance.	Operation	As necessary	PIU Proponent	Under Capacity Development of NAMSIP
		○ Consider accessibility of parts and accessories for machinery and equipment in selection for the SPP.	Preconstruction	Machinery selection and review stage	○ Consulting Engineers ○ Proponent	No cost Implications
30	Increase in communicable diseases such as HIV and other sexually transmitted diseases	○ Provide awareness materials on sexual health to employees in conspicuous points on the project site ○ Encourage the project workers to visit nearest health care centre for information, counselling and testing ○ Provide for free dispensary for sexual health and prevention materials ○ Arrange information sessions on sexual health where possible ○ Arrange counselling and information sessions at project site.	Construction	Throughout Phase	Construction	To be incorporated in bidding for works
31	Local seed supply and availability crisis	○ SPPs construction implementation plan in the regions to consider the continued operation of the existing plant to abate shortage of production and supply of seeds.	Preconstruction	Once off and review as necessary	Proponent	Under the review of designs. No funding requirement

5.4 Grievance Redress Mechanism

The following process is recommended for local level resolution of the grievances prior escalation as per the provision of the NAMSIP developed GRM.

(a) Members of the public are freed to register a concern or grievance with the following designation or platforms:
   i. Area headmen or traditional leader of the area
   ii. Constituency Councillor
   iii. Project site suggestions boxes
   iv. Ministry NAMPSIP focal persons

(b) All registered or reported grievances except those already registered with the area headmen shall be brought to the attention of the referred designation (i.e. Headmen/traditional leader).

(c) The headmen through customary systems shall engage the resolution process for the registered grievance. The presence of at least two members (i.e. Site Manager, SESO and or Ministry NAMSIP focal person) shall be necessary at the hearing of the grievance as facilitated by the area headmen.

(d) The Project Team (SESO, Site Manager, Proponent) shall seek consensus on the customary led process on the resolution arrived at.

(e) The SESO/Site Manager/Proponent shall consolidate a report on the customary process for the resolution of the matter and communicate to the Project Steering Committee.

(f) Should it be considered that consensus was not reached on resolution of a grievance, the matter shall be escalated and taken through the NAMSIP developed grievance redress mechanism (GRM), however this shall be done after consent is issued by the local traditional structures.

5.4.1 Social and Environmental Monitoring Framework

Table 5:2 below presents a monitoring plan of the specific requirements established from mitigation measures to ensure compliance in the implementation of the HWC-WC Management Project.

Table 5:2 Environmental and Social Monitoring Requirements for Implementation of the ESMP

No.	Variable	Objective	Requirement (s)	Monitoring frequency /phase	Reporting	Responsible
1	Safety, health and labour practices.	Implementation and compliance to established safety and health practices.	Basic PPE is provided to the employees.	As necessary	. Incident logbook . Scheduled Project Progress reports	SESO Site Manager
			Specific PPE is provided as necessary (dust or gas masks, ear plugs etc.,)	As necessary		
			Workers use provided PPE	Monthly		
2	Unskilled labour is sourced from local environment	Ensure local participation in the project	All unskilled labour requirements are met from local environment	Monthly	. Environmental and Social (E&S) audit reports. . Scheduled Project Progress reports	SESO Site Manager ESIA Consultant

3	Implementation of ESMP	Ensuring practice and adherence to measures of the ESMP	All measures in the ESMP are implemented as per particular activity in the various phases of the development.	Monthly	. Monthly E&S audit reports.	SESO ESIA Consultant
4	Compliance to legislative requirements	All necessary reporting and required approvals are in place.	Compliance to all applicable legislations.	Monthly	. Monthly E&S audit reports. . Scheduled Project Progress reports	SESO
5	Implementation of the ESMP	Reporting to regulatory authority (i.e. Environmental Commissioner)	Compliance to required standard monitoring	Bi-Annual	. ESMP implementation Progress Report	SESO
6	Noise and vibration levels	Ensure compliance to established control measures	Implementation of established mitigations measures	Continuous	. Incident logbook	SESO Site Manager
7	Dust and Emissions					
8	GRM implementation	Ensure the effectiveness of the GRM	Submitted grievances are addressed to completion.	Monthly	. Environmental and Social (E&S) audit reports.	SESO

5.5 Capacity Development and Training

Table 5:3 below consolidates required capacity development in the implementation of the ESMP for the HWC-Management Project.

Table 5:3 Capacity development plan for the implementation of the ESMP

No	Required training and or capacity development	Objective	Recipient(s)	Cost/Provision (US$)	Responsible
1	Operation of the SPP machinery and equipment	Sustainability of the SPP	SPP designated Ministerial staff	Under Component 2 of the project	PIU Proponent
2	Gender mainstreaming and empowerment in project activities	To ensure fair opportunities for gender equity in the project implementation	SESO PIU	Under project monitoring and evaluation	PIU
3	Handling and resolution of gender related grievances.		SESO PIU	Under project monitoring and evaluation	PIU
			Total	-	**PIU**

5.6 Stakeholder Participation and Engagement Plan

5.6.1 Participation Approach and Stakeholders Identification

The approach taken undertaken for the site considered that the envisaged development involves refurbishment (i.e. brownfield development) to the existing structures. The approach therefore considered to engage the operators of the existing plant and the immediate authority in the community and where possible seed or local farmers. Therefore, the target stakeholders were as follows;

- The community leadership of immediate areas
- The Ministry personnel operating the existing plant
- Constituency office representative

Invitation to these stakeholders were undertaken through the Ministry's Department of Agriculture Research and Development responsible for the Omahenene SPP. This approach was adopted as it facilitates and comes with recognition of project ownerships under the Ministry and not an isolation to ongoing activities.

5.6.2 Stakeholder Participation Outcomes

Stakeholder consultation were held on the 02 February 2024 at proposed project location at Omahenene (See Figure 5:4). Table 5:4 below provides a summary of the key issues presented and feedback provided.

Table 5:4 Summary of issues raised during stakeholder consultation process

Comment/Concerns	**Feedback**
Overall, the project is well supported and seen as a welcome development. The following questions or comments were presented; i. Given the current dependency on Omahenene Crop Research Station and the anticipated works to the current plant, how will the processing and local seed production arrangement be, to avert a seed crisis? It is suggested that the Omahenene works only commence after the other seed plants under the project have begun operation so as to prevent a crisis. ii. How will it be ensured that people from the community benefit from employment opportunities that might arise in the implementation of the processing plant? iii. Suggestion for the project to employ someone to ensure transparency in the selling of seeds as well as to ensure that security measures are tightened to prevent theft of both seeds and equipment. iv. Project stakeholders seem few here, why is this the case? *Response on appropriate local level GRM Approach*: various methods that include a suggestion box availed at local ministry offices for deposition of grievances and also allow people to go to the traditional leaders of the community or constituency office are acceptable. however, the involvement of local leaders in resolution is key prior to any issues escalated or reported to police if need be.	*Seed production crisis comment:* it is well acknowledged that without some consideration of approach to construction of all plants is implemented this could undermine national seed production and seed availability. The concern is very important and well received and will be communicated to the proponent to consider in implementation planning. *Community benefits:* the benefits arise from what the public here outline as what is required for community to be involved in the development. The level of local involvement needs be stated by the community. In many cases though unskilled work is required that is benefit the locals. In the operation phase, casuals (bird scaring and seed grading) are usually from the communities as is the case.

Figure 5:1 Key Site Stakeholder engagement meeting at Omahehene

5.6.3 Stakeholder Engagement Plan

Table 5:5 below provides the external stakeholder communication and engagements plan in the implementation of the proposed development.

Table 5:5 Stakeholder communication and engagement plan

Stakeholder	Purpose	Mode of Consultation /Engagement	Frequency	Responsible
Omusati Regional Council	○ Communication of project progress ○ Commissioning of the completed Plant ○ Assistance with support as may be needed. ○ Support to reach out to constituency authorities (Councillor and traditional authorities)	○ Formal correspondence letters ○ Targeted information sharing presentations ○ Progress reports ○ Newsletter and other project success and challenges materials	Quarterly	SESO/ NAMSIP Focal Person
Constituency Office and Traditional Leaders and local development committees	○ Project on to commissioning of the plant for operation ○ Notifications of available support to farmers and potential farmers	○ Targeted face to face engagements ○ Formal correspondences	Quarterly and as necessary	SESO/NAMSIP Focal Person
	○ Employment opportunities information	○ Notifications	As becomes available	Site Manager
Farmers Cooperatives and their members	○ Notifications of available support to farmers and potential opportunities ○ Information sharing on project progress through Ministry extension services offices	○ Radio notifications of notices ○ Prepared information on the project at farmer's meetings ○ Notice board notifications at extension offices	Continuously and at Scheduled Farmers Meetings	NAMSIP Focal Person SESO

5.7 Management of Non-Compliance

In managing on-compliance, it is not intended to deviate from a redressal mechanism for public or stakeholder concerns or grievance relating to the project, However such remains under the scope of the GRM. Non-compliance therefore, focuses on those related to expected implementation of the requirements of the ESMP. It is thus required for a process of receiving and addressing such non-compliance.

5.7.1 Reporting and Receipt of Incidents

Site workers and potential visitors to the site are expected and required to report observed or incurred incidents relating to the following:

i. safety and health incidents
ii. environmental breaches
iii. sexual related harassment in the workplace

A report card shall be provided at conspicuous places for access by site workers and public where applicable. An incident card shall be completed by the observer or on behalf of the observer where required. Annexure 3 to this report provides the incident report card. provides the following information; area of observation within the site or surrounding date of observation or incident, observer/reporter, and description of the specific observation or report (i.e. environmental or social variable). The name of the observer or reporter shall be optional for anonymity where deemed necessary to ensure confidentiality.

5.7.2 Handling Non-compliance

As a legally binding document, incidents involving deviation or non-compliance by SPs that trigger contract terms and conditions shall be addressed by the PIU in line with applicable procurement protocols. In terms of the noncompliance to the projects E& S requirements, these shall cover the following:

i. Undertake an act that has social or environmental impacts without having obtained necessary authorization or licenses or clearances.
ii. Not implementing necessary measures specified towards addressing an environmental or social impact emanating from an activity under the project.

Procedure for handling non-compliance to E & S requirements shall involve the following steps, administered through the SEO:

i. Each incident observed or reported shall be in documentary form (i.e. incident card) and where possible photographic evidence be acquired.
ii. Timely communication and instruction for the SPs to halt non-compliance and thus lessening aggravation of subsequent impact.
iii. Scrutinize the submitted incident to determine cause and extent of non-compliance
iv. Establish and advance required corrective actions to mitigate future occurrence.
v. Timely communication where such has immediate contractual implications. and report to the PIU.

The following levels of addressing compliance shall be implemented;

- *Level 1*: A written notice to the SPs on the incident reported or observed. The SPs shall provide proof of implementing measures for corrective action towards redressing the reported incident.

- *Level 2:* A second written warning on repeat of a similar or other E&S requirements. The SPs shall further provide proof of implementing measures for corrective action towards redressing the reported incident.

- *Level 3*: Notice shall be served of the occurrence of the third breach of E&S requirements. After investigations and determined that this remains negligence that associates to prior incidents, the PIU shall be notified and report submitted or contractual management, including potential forfeit of the contract.

6. Conclusions and Recommendations

Conclusion

The objective of this report was to examine the environmental and social context envisaged for implementation of the envisaged development of the SPP in Omahenene. It was thus undertaken to (i) describe the envisaged project, (ii) review legislative and other requirements that underpin the project activities and implementation, (iii) define the characteristics setting proposed for implementation of the project, (iv) engage site stakeholders on the project to seek participation and ensure project reflects their context, (iv) identify potential impacts associated with implementation of the various activities and the entire development and establish practical mitigation or enhancement measures for significant impacts.

The report therefore details numerous beneficial and adverse impacts and risks identified in the developmental phases of the project. Positive impacts include;

i. Creation of business opportunity in the construction industry
ii. Improving access and availability to stakeholders
iii. Potential increase in crop production
iv. Employment opportunities through the project
v. Contribution to the local, regional and national development agenda.

Identified adverse impacts include;

i. Potential disparities towards gender and women empowerment in project activities.
ii. Risks of safety, health and security to workers and the public
iii. Adverse changes in conditions of the site and surroundings.
iv. Potential sustainability risks to the envisaged infrastructure development

The assessment undertook to identify measures for mitigation of these significant impacts at various scales, towards a sustainable development approach to the envisaged project. These mitigations include provisions in structural designs, development of operational protocols and standards, and required capacity development. These measures have been further developed into an environmental and social management contained in this report. The Proponent through the established structures, shall be liable for the implementation of the ESMP and complementary tools to achieve required the level of implementation. Non-compliance shall be subject to legislative requirements and subsequent measures by the Environmental Commissioner.

Recommendation

This assessment report therefore recommends for consideration and approval of the environmental and social management plan as developed for the design and construction of the Omahenene Seed Processing plant in the Omusati Region. The ESMP shall at all times underpin all activities under this project. The Proponent and their agents are liable for deviation or non-compliance from implementation of the ESMP.

References

Christelis, G. & Struckmeier, W. (Editors) (2011). Groundwater in Namibia - an Explanation to the Hydrogeological Map.

The Constitution of the Republic of Namibia (1990) and all various dated policies, legislation and developmental plans and strategies.

Lohe, C., Amste, R. and Swartz, B. (editors). 2023. Groundwater in Namibia- explanation of the hydrogeological map. Ministry of Agriculture, Water and Land Reform, Windhoek.

Mendeloson, J., el Obeid, S. & Roberts, C. (2000). A profile of central Namibia. Directorate of Environmental Affairs, Windhoek, Namibia.

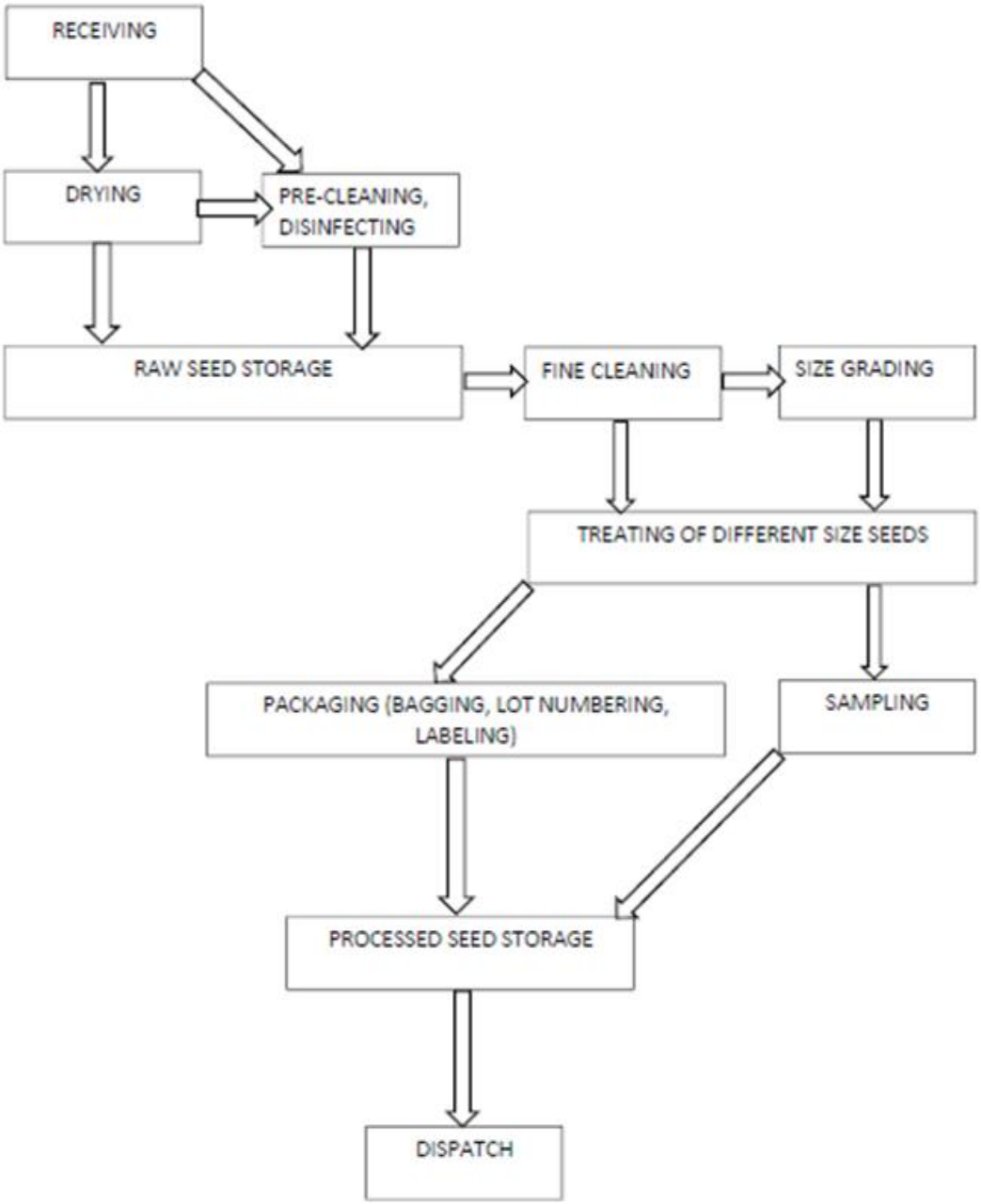
Terms of reference on the Procurement of Consultancy Services for the Design and Construction Supervision for the Seed Processing Plants

Government of the Republic of Namibia, Various Legislation and policies.

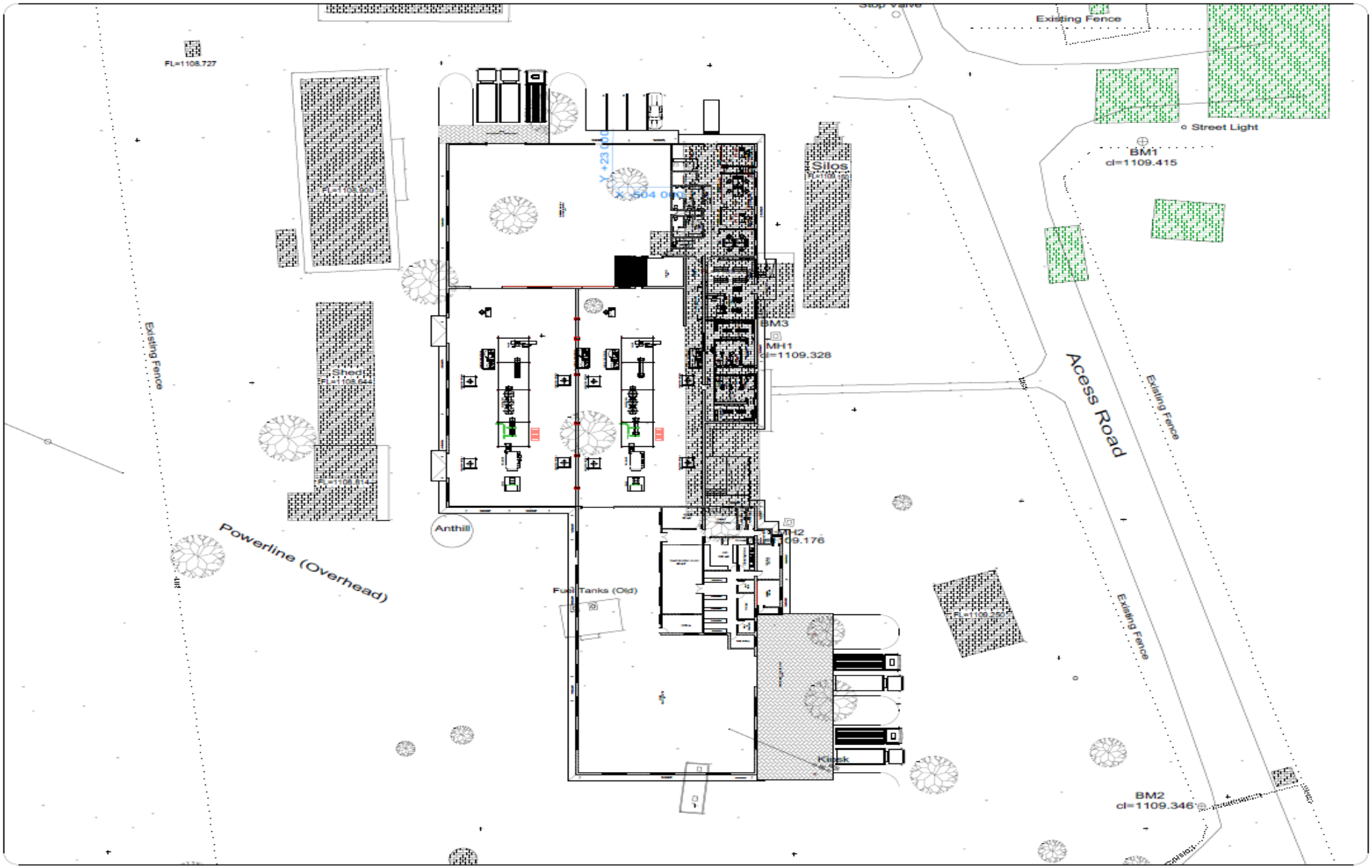
List of Annexures

Annexure 1: Environmental and Social Management Plan
Annexure 2 (A): Omahenene Site Layout Plan
Annexure 2 (B): Plant Layout
Annexure 3: Grievance/Incident Form
Annexure 4: Minutes of the Stakeholder Meeting
Annexure 5: Stakeholder Meeting Register

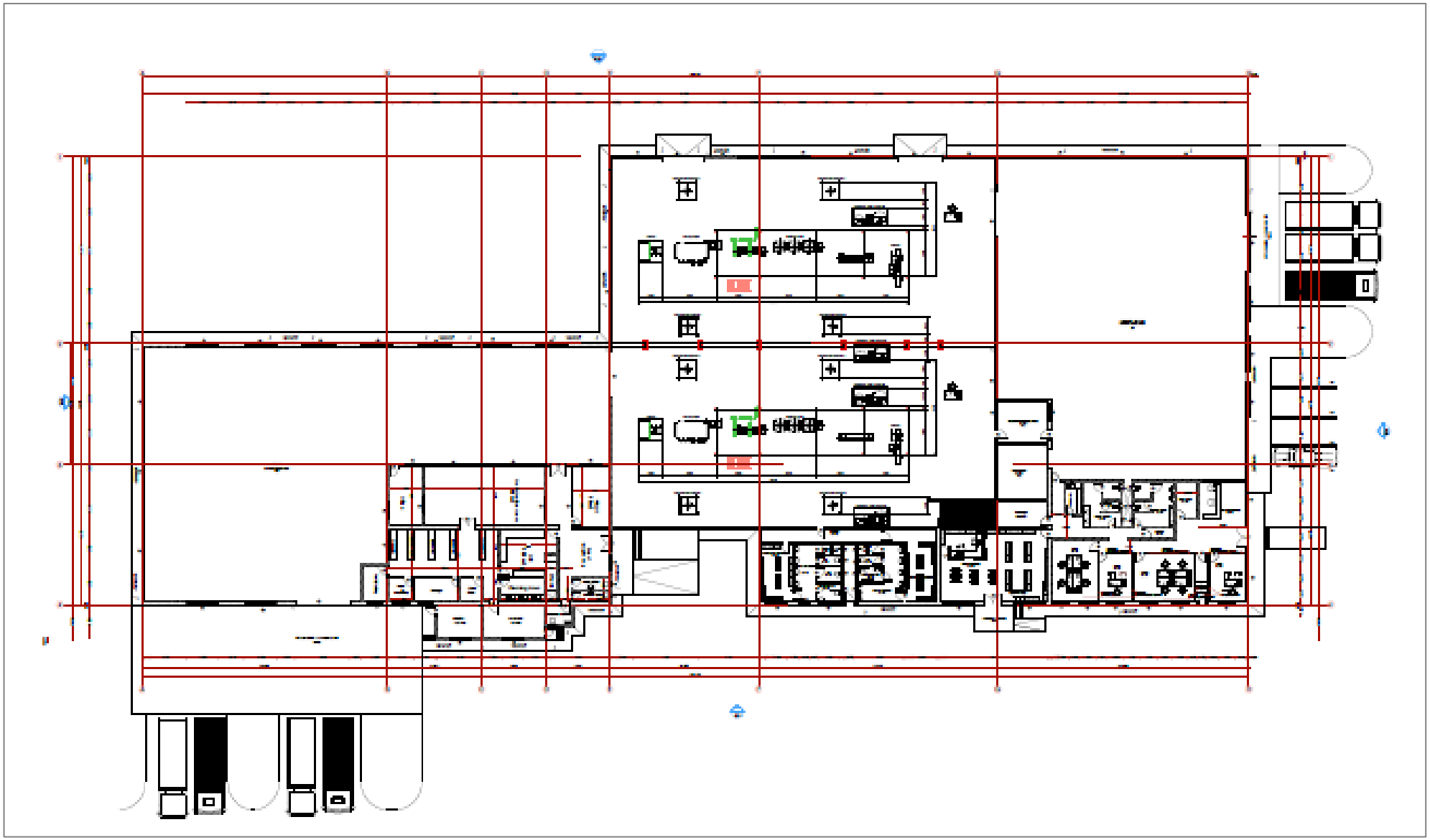
Annexure 1: Environmental and Social Management Plan



Annexure 2 (A): Omahenene Site Layout Plan



Annexure 2 (B): Plant Layout



Annexure 3: Grievance/Incident Form

Grievance/Complaint Submission Form for Construction and Operation and Decommission of a Seed Processing Plant at Omahenene, Omusati Region				
1. Name of aggrieved Person or Representative (if applicable)*			2. Telephone*	
3. Organization/Institution Represented **(**If Any**)**			4. Email or alternative mode of contact	
5. Preferred language of communication and feedback*			6. Location or area of residence	
7. Title of Concern/**Incident** Title*				
8. Description of the grievance				
9. Do you have supportive evidence to submit with the matter?	Yes	No	10. If no, are you willing to assist obtain evidence on your concern?	Yes / No
11. Are you willing to be directly contacted by the project?				Yes / No
12. Date of observation of incident or Submission	.			
13. Signature				
If space not adequate for description, please use additional paper				

Annexure 4: Minutes of the Stakeholder Meeting

Meeting No.	**2**
Date	30 January 2024
Time	09h30
Venue	Omahenene Crop Research Station
Attendance Register	Register included
Comment/Concerns	Feedback
Overall, the project is well supported and seen as a welcome development. The following questions or comments were presented; v. When will the plant be in operation as there is urgent need for operations to start because the current machinery operates manually and are inefficient? vi. How will the project employees at the site be receiving their remuneration, specifically the casuals, as the current system is highly disadvantageous to them due to delayed payments? Payment of employees should not run as it is currently being done because it takes a long time and this may tempt the employees into theft of the property on the plant. vii. Given the current dependency on Omahenene Crop Research Station and the anticipated works to the current plant, how will the processing and local seed production arrangement be, to avert a seed crisis? It is suggested that the Omahenene works only commence after the other seed plants under the project have begun operation so as to prevent a crisis. viii. How will it be ensured that people from the community benefit from employment opportunities that might arise in the implementation of the processing plant? ix. Suggestion for the project to employ someone to ensure transparency in the selling of seeds as well as to ensure that security measures are tightened to prevent theft of both seeds and equipment. x. Project stakeholders seem few here, why is this the case? *Response on appropriate local level GRM Approach*: various methods that include a suggestion box availed at local ministry offices for deposition of grievances and also allow people to go to the traditional leaders of the community or constituency office are acceptable. however, the	*Plant construction comment:* the project is going through phases, now being the design and leading to procurement and later the construction, that is when the works will commence and later commissioning of the operations. The timelines are impacted by various processes that ensure accountability and transparence at all levels and thus cannot be accurately anticipated at the moment. *Remuneration of employees, theft and lack transparency*: the procurement of a contractor will consider compliance to national and international standards for labour practices and thus these ensure that issues of remuneration are well addressed in acceptable ways. We understand improper remuneration arrangements are the cause to stealing of seeds to sell and therefore a lesson we take seek improvement in this envisaged activity of the NAMSIP. A GRM is also being reviewed to accord people means of submitting grievances. *Seed production crisis comment:* it is well acknowledged that without some consideration of approach to construction of all plants is implemented this could undermine national seed production and seed availability. The concern is very important and well received and will be communicated to the proponent to consider in implementation planning. *Community benefits:* the benefits arise from what the public here outline as what is required for community to be involved in the development. The level of local involvement needs be stated by the community. In many cases though unskilled work is required that is benefit the locals. In the operation phase, casuals (bird scaring and seed grading) are usually from the communities as is the case. *Stakeholder Comment:* Working with the ministry the stakeholder list invited included constituency office, cooperatives, ordinary farmers and seed farmers. This has been an expansion from the methodology proposed for Omahenene as it is an existing facility that was envisaged only for refurbishment and thus ESIA efforts

involvement of local leaders in resolution is key prior to any issues escalated or reported to police if need be.	devoted mainly towards development of the ESMP with the project officers onsite to guide the design process of refurbishment works, based on operations of the current plant. Nonetheless, further to this the consultant remains ready to conduct online consultations including the sharing of the presentations for further sharing at various platforms and receive comments.